



Addressing emotionally based school avoidance: causes, consequences, and interventions

Edited by

Joanna Anderson, Carolina González and Trude Havik

Coordinated by

Sümeyye Ulaş

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Addressing emotionally based school avoidance: causes, consequences, and interventions

Topic editors

Joanna Anderson — University of Cambridge, United Kingdom

Carolina González — University of Alicante, Spain

Trude Havik — University of Stavanger, Norway

Topic coordinator

Sümeyye Ulaş — Erzurum Technical University, Türkiye

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EDITED AND REVIEWED BY
David Cohen,
Sorbonne Universités, France

*CORRESPONDENCE
Joanna K. Anderson
✉ jpa44@cam.ac.uk

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Editorial: Addressing emotionally based school avoidance: causes, consequences, and interventions

Joanna K. Anderson^{1*}, Trude Havik² and Carolina González³

¹University of Cambridge, Cambridge, United Kingdom, ²Universitetet i Stavanger, Stavanger, Norway,
³Universitat D'Alacant Facultat D'Educacio, Alicante, Spain

KEYWORDS

bioecological model, emotionally based school avoidance (EBSA), mental health, school absence, school attendance problems

Editorial on the Research Topic

[Addressing emotionally based school avoidance: causes, consequences, and interventions](#)

School attendance problems (SAPs) are a rapidly growing concern across many countries, with rates rising further in the aftermath of the COVID-19 pandemic (1, 2). SAPs are not a unitary construct but encompass multiple forms, each shaped by interacting factors across individual, relational, organisational, and societal levels (3). Emotionally based school avoidance (EBSA) refers to severe and persistent emotional distress associated with attending school, resulting in significant avoidance and prolonged absence (4). EBSA is one of the most complex forms of SAPs and is rapidly rising in prevalence, typically associated with co-occurring mental health needs and school-related stressors, with the school environment factors often acting as triggering conditions.

High levels of school absence, regardless of underlying causes, are associated with a broad range of negative outcomes. These include low academic attainment, school dropout, impaired social functioning, and, in the longer term, reduced employment prospects, financial instability, poorer physical and mental health, and higher risk of engaging in antisocial or delinquent behaviours (5–7). Vulnerable children and young people are disproportionately affected, exacerbating existing inequities.

This Research Topic aims to disseminate novel research and emerging theoretical frameworks that advance our understanding of the complex drivers of EBSA and inform practical, evidence-based responses and interventions. In addition, it explores how EBSA relates to other forms of SAPs, identifying overlaps and distinctions, and their implications for prevention and intervention efforts.

Across contributions, a consistent message emerges: EBSA and SAPs are driven by multiple interacting factors rather than a single, distinct cause. They are shaped by multi-level, dynamic processes in which attendance emerges from interacting influences across individual, relational, institutional, societal, and temporal levels. Therefore, bioecological frameworks are particularly relevant, as they conceptualise development as the product of ongoing interactions between individuals and the systems in which they are embedded (8).

While the papers in this special issue address influences across multiple system levels, the largest number focus on individual-level factors, particularly emotional distress and cognitive-motivational processes. Multiple studies identify internalising symptoms,

particularly anxiety and depression, as primary drivers. Using network analysis, [Alanko et al.](#) demonstrate that depression and social anxiety occupy central positions within symptom and function networks of SAPs. [Krause et al.](#) present longitudinal evidence from Canada showing a bidirectional relationship between mental health difficulties and poor attendance, while trajectory modelling by [Brittain and Vaillancourt](#) indicates that mental health and attendance are “co-developing intertwined trajectories.” Several studies highlight the role of internal psychological mechanisms. [Perez-Marco et al.](#) show that learned helplessness—a pattern in which students believe they cannot succeed academically—has strong predictive and discriminative value in identifying students at high risk of SAPs. Similarly, [Sorrenti et al.](#) show an association between students’ lower awareness and acceptance of present thoughts, feelings, and social experiences (mindfulness) and increased peer and emotional difficulties, which contribute to school refusal. [Sasso](#) reports that for autistic students, absenteeism often functions as their coping response to sensory overload, exhaustion and social interaction.

Research focusing on microsystem-level factors emphasises the role of relationships. Trusting relationships are identified as key factors supporting regular attendance. [Ekornes et al.](#) highlight that teachers identify students of concern by assessing deviations from the individual child’s ‘typical’ functioning rather than relying solely on general age norms, emphasizing the value of close teacher-student knowledge. [Hamadi et al.](#) highlight how difficulties in the student-teacher relationship and delayed or mismatched professional responses can drive feelings of alienation and SAPs. Parent- focused studies by [Hansen et al.](#) and [Knollmann and Reissner](#) underscore the importance of respectful relationships between parents and professionals; interventions succeed when parents feel empowered and are included in decision- making.

Furthermore, a systematic review by [Alaimo et al.](#) underscores that school staff’s conceptualisation of non-attendance varies widely, distinguishing among “within-child”, “home”, and “school-related” factors that directly shape the support strategies they employ. [Enderle et al.](#) demonstrate that while professionals often focus on procedures, students prioritise emotional safety and being understood. Practice-focused studies demonstrate how relational approaches support attendance. [Alaimo and Kelly](#) demonstrate how participatory, school-owned relational models support attendance, while [Karel et al.](#) reports that outcomes of the @School intervention, a modular, developmentally sensitive Cognitive Behavioral Therapy (CBT) program designed to support neurodiverse adolescents with emotion-related school attendance challenges, improve when families and schools collaborate around shared attendance goals. [Bania et al.](#) evaluation of the pilot of Back2School intervention, also a modular CBT that draws on core components from the @School program, developed to address a broader range of problematic school absenteeism, indicates that teachers are vital partners, and their involvement needs to be clearly defined.

At the exosystem level, research highlights the role of school-level structures. [Heyne et al.](#) draw attention to the often-

overlooked category of authorised absence. Their action research in the Netherlands reveals that schools exert significant influence over authorised leave, suggesting that addressing school-initiated absences is critical.

School belonging emerges as a key protective factor in multiple studies, including [Whitley et al.](#), and trajectory research by [Brittain and Vaillancourt](#), while transition points are consistently identified as risk accelerators. [Whitley et al.](#) further identified unmet support needs and school-initiated exclusion as systemic factors that undermine inclusive education. Transition points, particularly entry into secondary school, are consistently identified as risk accelerators in longitudinal modelling.

Systematic review evidence from [Middleton et al.](#) shows mixed but promising effects of school-based interventions, including mentoring, counselling, family-linked approaches, and school-health integrated approaches. [Neumann et al.](#) address the critical gap between clinical care and education by presenting the protocol for “SchuTIng-stAR”, a seamless stepwise rehabilitation program designed to support sustainable reintegration following psychiatric inpatient treatment.

At the macrosystem level, the special issue underscores that SAPs are fundamentally equity issues. [Whitley et al.](#) document disproportionately high levels of absence among students with disabilities and those from lower-income households. Complementing this, [Chen](#) uses computational text analysis to demonstrate how national and societal expectations regarding academic performance in China shape attitudes, pressures, and institutional practices that influence EBSA. Comparative contributions across Europe, North America and Asia further illustrate how policy frameworks shape attendance responses. A key conceptual contribution by [Kearney](#) reframes chronic absenteeism as a public health issue, calling for cross-sector responses.

Studies framed within the chronosystem highlight that SAPs are developmental outcomes that are progressive and cumulative. [Hamadi et al.](#) describe a gradual onset of SAPs rather than a sudden withdrawal. Developmental trajectory work by [Brittain and Vaillancourt](#) further shows co-evolving patterns of attendance and academic achievement, with school transitions emerging as periods of elevated risk. In addition, [Krause et al.](#) analyses of longitudinal data during the COVID-19 pandemic highlight shifting patterns of absence.

The articles in this special issue demonstrate that SAPs and EBSR are complex, developmentally embedded phenomena. Effective responses cannot be achieved through isolated or child-focused interventions alone. The findings point to the need for integrated, multi-tiered approaches that align supports across education, mental health, and social care systems (9, 10). Schools play a pivotal dual role as sites of both risk and protection and therefore require sustained support to implement equitable, preventative, and data-informed attendance practices. Collectively, the contributions in this Research Topic call for a paradigm shift in understanding emotionally based school avoidance. Future progress depends on cross-sector collaboration, early and developmentally

informed prevention, and policies that enable flexible and inclusive school responses.

Author contributions

JA: Writing – original draft, Writing – review & editing. TH: Conceptualization, Writing – review & editing. CG: Conceptualization, Writing – review & editing.

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EDITED BY

Carolina González,
University of Alicante, Spain

REVIEWED BY

Tara Čirić,
Maynooth University, Ireland
Mariola Giménez-Miralles,
Valencian International University, Spain

*CORRESPONDENCE

Martin Knollmann
✉ martin.knollmann2@lvr.de

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Validation of the parent version of the inventory of school attendance problems (ISAP-P)

Martin Knollmann* and Volker Reissner

LVR Clinic Duesseldorf, Department for Child and Adolescent Psychiatry, Psychosomatics, and Psychotherapy, Clinics of the Heinrich-Heine-University, Duesseldorf, Germany

This study presents the validation of the parent version of the Inventory of School Attendance Problems (ISAP-P), which assesses a broad spectrum of symptoms associated with school attendance problems. A model with 49 items loading on 13 factors derived from the child version showed an acceptable fit ($N = 296$). Correlations with other measures indicated convergent and discriminant validity of the scales, but associations with the extent of school absences were not detected. Concordant scales of the child vs. parent version were correlated in the expected directions, but some scales showed low interrater agreement. Albeit these initial results support the validity of the ISAP parent version, further studies on its psychometric properties as well as on children's and parents diverging views on SAPs are needed.

KEYWORDS

school absenteeism, school refusal, truancy, assessment, questionnaire

Introduction

Students who are absent from school to a problematic degree have been found to have an elevated risk for mental illnesses, unemployment, drug misuse, school dropout, and many other psychosocial problems across the lifespan (1–3). School attendance problems (SAPs) can occur in many different forms. Recent conceptualizations (4) distinguish between school exclusion (school absences initiated by the school, e.g., because of misbehavior), parental withdrawal (parent motivated absences, e.g., keeping the child at home in order to help there), truancy (child-motivated, generally unexcused school absence due to a lack of motivation and without knowledge of the parents, often accompanied by externalizing symptoms) and school refusal (child-motivated, generally excused school absence with knowledge of the parents because of internalizing symptoms such as anxiety, psychosomatic complaints, or depression).

While consensus regarding these definitions has fostered research into SAPs in the recent years, most researchers acknowledge that these constructs can overlap, coexist, or influence one another. E.g., initial truancy can develop into school refusal, and school absences due to depressive symptoms such as loss of energy and interest can be misinterpreted as a part of truant behavior or a conduct disorder (4, 5). Without a thorough and differentiated assessment of the heterogeneous nature of SAPs, interventions cannot be tailored according to the individual needs of school absent youths. Therefore, several instruments with different foci have been developed to obtain a more detailed picture of SAPs [see (6), for a comprehensive review]. The School Non-Attendance Checklist [SNACK (4)] is a short screening tool which can be used to categorize SAPs according to their reasons (parent report) and is the only measure that

not only assesses child-motivated SAPs (truancy, school refusal), but also includes items for school exclusion and parental withdrawal. The majority of the available questionnaires, though, focusses on child-motivated SAPs. Instruments like the widely used SRAS-R [School Refusal Assessment Scale Revised; (7, 8)] or the ARSNA [Assessing Reasons for School Non-Attendance; (9)] subsume different aspects of SAPs under rather broad categories or dimensions (e.g., avoidance of negative affect, escape from aversive social situations, pursuit of attention, and pursuit of tangible reinforcement as functions of SAPs in the SRAS-R). The SCREEN [School Refusal Evaluation Scale (10)] and the SEQ-SS [Self-efficacy Questionnaire for School Situations (11)], on the other hand, can be used for an in-depth assessment of selected features of SAPs (e.g., SCREEN-subscale “Anxious Anticipation” as a facet of school refusal).

The Inventory of School Attendance Problems [ISAP, (12)] complements and extends the range of the existing measures by offering both a comprehensive and differentiated screening of SAPs. It incorporates the most relevant aspects of SAPs as separate scales, which assess specific symptoms often associated with SAPs such as depression, social phobia, separation anxiety, and somatic complaints as well as the impact of common stressors associated with SAPs (e.g., bullying, intrafamily problems; see Table 1). Its items were constructed inductively based on answers of patients of a specialized outpatient unit for SAPs during clinical exploration. It offers an integrative assessment of both the presence of a given symptom prior to or at school and its impact on school attendance. In the left column, under the heading “Before or in school/school time...”, the items are presented (e.g., “...I feel sad.”). In the middle column, students first rate how good an item applies to them (heading “Applies to me”). Then, in the right column, students rate how strongly this item is connected to their SAPs (heading “That’s why I miss school/attending school is hard for me”; response scale for both questions: never—sometimes—often—most of the time). Separate scores for symptom presence and symptom impact can be calculated for each scale, which enables practitioners to rank symptoms according to their impact on the student’s SAPs and thus to identify the most pivotal targets for

interventions. For the statistical analyses, however, testlets were formed for each item by aggregating the values of both response scales (13).

Explorative factor analyses ($N=245$ patients, item pool: 124 items/testlets) resulted in 48 items loading on 13 factors. These 13 scales assess externalizing and internalizing symptoms as well as emotional distress resulting from stressors in the school and family context (see Table 1). The pattern of the scales’ associations with the Youth Self Report (YSR), a German version of the SRAS, and with the extent of school absenteeism supported their construct validity. For example, internalizing symptoms in the YSR and SRAS (e.g., scale “Avoidance of Negative Affect”) were associated with ISAP-scales measuring internalizing symptoms, while the scales aggression and school aversion showed stronger correlations with externalizing symptoms (YSR) and the SRAS-scale “Pursuit of Tangible Rewards”. Furthermore, most of the scales showed weak to moderate positive associations with the extent of school absenteeism.

Up to date only a child version of the ISAP is available, so that the perspective of the parents on their child’s SAPs is missing. The multi-informant assessment approach is the gold standard in child psychology (14), and models and studies on SAPs empathize their embeddedness in interacting social contexts (15, 16). Parents are one of the most important proximal factors of SAPs; thus, the aim of this study is to validate the parent version of the ISAP (ISAP-P). As a content analysis of clinical parent interviews about their perception of their child’s SAPs during the construction phase of the ISAP-P (see below) yielded the same categories than the child interviews for the youth version (12), we expected

- A confirmation of the 13 factors for the parent version (factorial validity).
- Associations with the CBCL (discriminant validity), the parent version of the SRAS (convergent validity), and the extent of school absenteeism (criterial validity) comparable to those obtained for the ISAP child version with respective child versions of the measures mentioned above.

TABLE 1 Scales of the inventory of school attendance problems (ISAP, child version).

Scale (Number of Items)	α	Item Examples: “Before or in school...”
Depression (6)	.86	“...I am sad.”; “...I feel tired or without energy.”
Social Anxiety (5)	.86	“...I am afraid to say something when other students are around.”
Performance Anxiety (3)	.87	“...I am afraid of exams.”; “...I worry about my school grades.”
Separation Anxiety (4)	.85	“...I worry that something terrible might happen to my parents.”
Agoraphobia/Panic (4)	.75	“...I am afraid of not being able to leave the classroom when I feel bad.”
Somatic Complaints (3)	.82	“...I have pain (e.g., stomachache, headache, ...)”; “...I feel sick.”
School Aversion/Attractive Alternatives (4)	.81	“...I want to do something outside rather than being in school.”; “...I just don’t feel like going to school or attending specific courses.”
Aggression (3)	.88	“...I get aggressive easily.”
Problems with Peers (4)	.83	“...I feel excluded by my classmates.”; “...I am afraid of being teased or bullied by other students.”
Problems with Teachers (3)	.81	“...I feel put under pressure by one or more teachers.”
Problems with Parents (3)	.85	“...I feel treated unfairly by my parents.”
Problems within the Family (3)	.88	“...I feel bad because of the problems in my family.”
Dislike of Specific School (3)	.85	“...I think that I am in a bad school.”; “...I don’t like my school.”

Method

Participants

Approval by the ethics committee of the University of Duisburg-Essen and written informed consent from patients and their parents was obtained prior to data collection. Criteria for inclusion were being a parent with sufficient language and reading skills of a child with SAPs, age ≥ 8 , an IQ > 69 , and no severe mental illness (e.g., psychosis). Only questionnaires with no missing answers were included.

The final sample consisted of 296 parents of patients of a specialized outpatient unit for children and adolescents with SAPs of the Department of Child and Adolescent Psychiatry, Psychosomatics, and Psychotherapy, University Hospital Essen, University of Duisburg-Essen, Germany. Either a single parent or both parents together filled out the ISAP. (only one questionnaire per child). 56% of their children were male; their mean age was 14.4 years ($SD = 3.51$, range 8–18). 3.1% reported school absences between 0 and 4 school days during the last 12 school weeks, 18.6% up to 12, 27.7% up to 36, and 10.8% up to 48 school days. 15.2% reported that their child missed more than 48 days and 23.3% stated that their child did not attend school at all (1.3% missing values).

Measures

ISAP-P

The construction of items of the parent version followed the procedure used for the child version. Content analysis of clinical parent interviews prior to item construction ($N = 162$) yielded twenty-five aspects of SAPs identical to those obtained for the child version (12). For each aspect, three to five items were generated, resulting in an item pool of 124 items parallel to those of the child version. Out of these, the 48 items parallel to those of the final ISAP child version were used for the analyses.

Other measures

A modified German version of the parent version of the School Refusal Assessment Scale (ESV-P-R) was administered (17). Its three scales measure three symptom clusters of SAPs and their associated functions in terms of positive or negative reinforcement: Separation Anxiety/Attention Seeking Behavior, School Anxiety/Avoidance of Negative Affect, and Alternative Activities/Tangible Rewards. The German version of the Child Behavior Checklist was used to assess general psychopathology [CBCL; (18), scales: Withdrawn, Somatic Complaints, Anxiety and Depression, Social Problems, Thought Problems, Attention Problems, Aggressive Behavior, Delinquent Behavior]. The extent of school absence during the last twelve weeks was measured by a question on the first page of the ISAP-P (0–4 days—all days, see above). For a comparison of the child and the parent version of the ISAP, $N = 145$ ISAP child versions were available.

Data analysis

In order to test if the factor structure of the ISAP child version can be replicated for the parent version, we used explorative structural equation modelling (19). This approach integrates the advantages of explorative and confirmative factor analysis. It is recommended for testing the structure of measures at a rather early stage of development with high numbers of assumed factors, as it allows integrating cross loadings in the model specification (20). This approach was chosen as the current stage of development of the ISAP-P is somewhere between exploration (parents as different source of information, high probability of necessary changes compared to the child version) and confirmative validation of its structure (approach to data analysis informed by the results of the child version, preselected items, 13 factors expected). The characteristics of the resulting scales and their construct validity were analyzed using descriptive statistics, T -tests, and correlations.

Results and discussion

Internal structure

Initial analyses of the 48 items parallel to those of the child version showed an inadequate fit of the model. Items with ambiguous loading patterns were deleted or tentatively replaced by other items from the item pool generated for the same SAP aspect or scale (see Table 2 for details). E.g., the item “...my child feels unhappy.” of the scale “Depression” was replaced by the item “...my child does not like him-/herself.”. Furthermore, one item was added to each of the scales “Problems within the Family” and “Performance Anxiety” because they showed an insufficient differentiation with regard to other scales (“Problems with Parents” and ‘Social Phobia’, respectively, see Table 2). Following the modification indices, ten covariances between error terms of items from the same scale, with identical item stems, and very similar wording were modelled. These modifications led to an acceptable model fit ($CFI = .93$; $RMSEA = 0.05$) and clear loading patterns (see Table 2), while other tested model specifications with less or more factors showed an unacceptable fit (e.g., models with 9, 10, 11, or 14 factors: $CFI < .85$). Despite the small item numbers, for all scales Cronbach’s α was $\geq .75$. As expected, the integration of cross loadings resulted in decreased scale intercorrelations compared to those of the child version (12). While the pattern of most scale intercorrelations mirrored the respective scales’ affiliation to the internalizing vs. externalizing spectrum, the scales measuring stressors in the family or school context showed weak to moderate associations with both internalizing and externalizing scales.

Construct validity

The correlations between the ISAP, the CBCL, the ESV-P-R, and the extent of school absences are depicted in Tables 3, 4.

TABLE 2 Results of the ESEM-model.

Item	Factor/ISAP-P Scale												
	Social Phobia	Depression	Separation Anxiety	Problems w. Peers	School Aversion	Aggression	Problems w. Parents	Somatic Complaints	Performance Anxiety	Problems w. spec. School	Problems w. Family	Agoraphobia/ Panic	Problems w. Teachers
...my child is afraid to say something when other students are around (e.g., during the breaks).	.40			.35									
...my child is afraid to speak to other people or that others might speak to me.	.45												
...my child is afraid of having to say something in front of the entire class (e.g., giving presentations, being called to respond).	.44												
...my child worries that he/she might embarrass him-/herself.	.40												
...my child is afraid of being asked about the reasons for his/her former absences from or coming too late to school.	.84												
...my child does not like him-/herself. ^b		.43											
...my child is sad.		.87											
...my child feels down or depressed.		.71											
...my child has no hope anymore that his/her situation in school will improve.		.46											
...my child feels tired or without energy.		.58			.31			.32					
...y child longs for his/her parents and wants to stay with them.			.82										
...my child misses his/her parents.			.79										
...my child is afraid of being in school for such a long time instead of being with his/her parents.			.59										
...my child worries that something terrible might happen to his/her parents.			.57										
...my child feels bad because he/she gets into arguments with one or more of his/her classmates.				.74									
...my child feels excluded by his/her classmates.				.97									
...my child feels unhappy because he/she only has a few friends at school.				.71									
...my child is afraid of being teased or bullied by other students.				.73									
...my child wants to do something at home that is more fun than school.					.76								
...my child wants to do something outside rather than being in school.					.49								
...my child just does not feel like going to school or attending specific courses.					.74								
...my child thinks that it is OK if he/she skipped school once in a while.					.82								

(Continued)

TABLE 2 Continued

Item	Factor/ISAP-P Scale												
Before or in school...	Social Phobia	Depression	Separation Anxiety	Problems w. Peers	School Aversion	Aggression	Problems w. Parents	Somatic Complaints	Performance Anxiety	Problems w. spec. School	Problems w. Family	Agoraphobia/ Panic	Problems w. Teachers
...my child gets aggressive easily.						.84							
...my child gets irritable easily.						.73							
...my child is easily provokable.						.86							
...my child feels rejected by his/her parents.							.83						
...my child feels that his/her parents do not care about him/her.							.80						
...my child thinks that his/her parents do not like him/her. ^a							.79						
...my child has pain (e.g., stomachache, headache, ...)								.87					
...my child feels sick.								.84					
...my child feels sick to his/her stomach, has to throw up, or has diarrhea.								.65					
...my child worries about his/her school grades.									.54				
...my child is afraid of exams.									.97				
...my child worries about doing bad in school.									.40				
...my child is afraid of tests. ^b									.83				
...my child would prefer to attend another school. ^a										.99			
...my child wants to go to another school. ^a										.96			
...my child does not like his/her school.										.53			
...my child is concerned about problems or incidents in his/her family.											.86		
...my child feels bad because of the problems in his/her family.											.78		
...my child is worried or sad because he/she cannot handle the problems in his/her family.											.81		
...my child is worried or sad because of family issues. ^b											.84		
...my child is afraid of vomiting or wetting his/her pants before he/she is able to leave the classroom.												.72	
...my child is afraid that he/she will not be able to leave the classroom in time before something embarrassing happens to him/her.	.30											.66	
...my child is afraid of not being able to leave the classroom when he/she feels bad.												.68	
...my child is afraid about losing control over his/her body. ^a												.58	
													.94

(Continued)

TABLE 2 Continued

Item	Factor/ISAP-P Scale												
	Social Phobia	Depression	Separation Anxiety	Problems w. Peers	School Aversion	Aggression	Problems w. Parents	Somatic Complaints	Performance Anxiety	Problems w. spec. School	Problems w. Family	Agoraphobia/ Panic	Problems w. Teachers
...my child feels treated unfairly by his/her teachers. ^a													
...my child does not feel well because of his/her problems with one or more teachers.													.78
...my child thinks that one or more teachers are against him/her.													.93
Correlations	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Social Phobia (1)													
Depression (2)	.43												
Separation Anxiety (3)	.24	.32											
Problems w. Peers (4)	.27	.38	.17										
School Aversion (5)	-	-	-	-									
Aggression (6)	-	.33	.21	.24	.45								
Problems w. Parents (7)	.24	.35	.19	.23	.36	.46							
Somatic Complaints (8)	-	.43	.19	-	-	-	.19						
Performance Anxiety (9)	.36	.38	.18	-	-	.19	.24	-					
Problems w. spec. School (10)	-	-	-	.39	-	.22	-	-	-				
Problems w. Family (11)	.34	.49	.48	.24	.19	.29	.47	.22	-	-			
Agoraphobia/Panic (12)	.27	.21	.26	-	-	-	-	.33	.16	-	-		
Problems w. Teachers (13)	.24	-	-	.29	.27	.32	.32	-	.26	.36	-	-	

Only loadings ≥ .30 and significant correlations ($p < .05$) are depicted. Loadings ≥ .40 are in bold.
Comparison with child version:
^aItem exchanged.
^bItem added. Items without equivalent in the parent version: "...I feel unhappy."; "...I think that I will never be able to solve my school problems".

TABLE 3 Correlations of the ISAP-P scales with scales of the CBCL.

ISAP Scales	CBCL Social Withdrawal	CBCL Somatic Complaints	CBCL Anxious- Depressed	CBCL Social Problems	CBCL Attention Deficit	CBCL Dissocial Behavior	CBCL Aggressive Behavior	CBCL Inter- nalizing	CBCL Exter- nalizing	CBCL Total Score
ISAP Depression	.46**	.26**	.47**	.17*	.12**	.19**	.15*	.51**	.18**	.40**
ISAP Problems with Parents	.27**	.16*	.32**	.15*	.24**	.39**	.39**	.33**	.39**	.37**
ISAP Aggression	.15*		.25**	.17*	.25**	.56**	.62**	.23**	.62**	.46**
ISAP Problems with specific School			.15*	.21**		.27**	.23**		.24**	.19**
ISAP Separation Anxiety		.17*	.24**	.23**				.22**	.16*	.23**
ISAP Agoraphobia Panic	.23**	.27**	.31**	.19**				.35**		.23**
ISAP Problems with Teachers			.15*	.14*	.18*	.26**	.20**	.15*	.23**	.23**
ISAP Social Phobia	.44**		.40**	.36**	.17*			.40**		.28**
ISAP School Aversion	.16*				.23**	.49**	.36**		.43**	.30**
ISAP Somatic Complaints	.34**	.75**	.35**	.16*	.17*			.57**		.34**
ISAP Performance Anxiety	.24**		.33**	.20**	.21**			.31**		.26**
ISAP Problems with Peers	.25**		.52**	.52**	.17*	.18**	.23**	.34**	.23**	.34**
ISAP Problems within the Family	.25**	.18*	.31**	.19**		.15*		.31**	.15*	.19**

CBCL, Child Behavior Checklist; German Version (18).

***p* < .001.

**p* < .05.

TABLE 4 Correlations of the ISAP-P scales with the scales of the ESV-P-R.

ISAP Scales	ESV-P-R School Anxiety	ESV-P-R Separation Anxiety	ESV-P-R Alternative Activities
ISAP Problems within the Family	.22**	.29**	
ISAP Problems with Peers	.59**	.16*	
ISAP Performance Anxiety	.32**		
ISAP Somatic Complaints	.29**	.22**	-.20**
ISAP School Aversion	-.16*		.57**
ISAP Social Phobia	.62**	.17*	
ISAP Problems with Teachers	.29**		.25**
ISAP Agoraphobia Panic	.43**	.25**	
ISAP Separation Anxiety	.24**	.68**	
ISAP Problems with specific School	.23**		.26**
ISAP Aggression			.39**
ISAP Problems with Parents	.18**		.19**
ISAP Depression	.36**		

ESV-P-R, German version of the parent version of the School Refusal Assessment Scale.

* $p < .05$.

** $p < .001$.

Regarding convergent validity, the expected pattern of associations was obtained. E.g., school anxiety as measured by the ESV-P-R correlated strongly with the ISAP-P scales “Social Phobia” and “Peer Problems”, the ESV-P-R scale “Alternative Activities” was associated with the ISAP-P scales “School Aversion”, and the separation anxiety scales of both measures were highly correlated. ISAP-P scales measuring internalizing symptoms such as depression and anxiety showed marked correlations with the respective CBCL scales, while the ISAP-P scales “School Aversion” and “Aggression” showed strong associations with the CBCL scales measuring externalizing symptoms. The discriminant validity was supported by the magnitude of these associations, which was only moderate (vs. high). Furthermore, for the ISAP-P scales measuring stressors in the family and school context, which have no equivalent in the CBCL, the weakest associations were observed.

In contrast to the ISAP child version and to findings regarding the scales of the parent version of the SRAS (8), none of the ISAP-P scales showed significant associations with the extent of school absenteeism. Since a parent rating of school absences has been used in this study, these findings could be attributable to a lack of parental knowledge about the real extent of school absenteeism of their child (21). Furthermore, other parental factors that were not assessed and that are known to be associated with school absences (e.g., socioeconomic status) could mediate or moderate the association between the ISAP-P and school attendance rates (22).

The analysis of the interrater agreement in terms of associations between parallel scales of the parent vs. child version of the ISAP yielded mostly moderate to strong correlations (see Table 5). However, for some scales (e.g., Problems within the Family, Performance Anxiety), only weak to moderate correlations were obtained. Comparisons of the means of concordant parent vs. child scales showed significantly higher means of the scales of the parent version in all cases (T values between 4.49 and 14.31, all $p < .0001$). This could reflect parents’ high levels of worries and distress due to their child’s SAPs,

possible dissimulation of some children, or conflicts between parent and child (23).

Questions regarding the differences between child and parent version remain to be answered by future research, which should also address the major limitations of this study. Besides the low validity of the measure of school absences mentioned above, important information about the sample is missing (e.g., diagnoses, socioeconomic status), and due to its clinical nature (predominantly youths with severe SAPs) conclusions regarding the factor structure and the construct validity of the ISAP in the general student population cannot be drawn. The factor structure of the child version, however, has recently been confirmed in community samples (24, 25).

Although preliminary, the first results of the evaluation of the ISAP-P indicate that it is a reliable and valid tool for assessing the parent perspective on students’ SAPs. Integrating the parents’ view in the diagnostic process is essential. Possible “blind spots” or biases of the children’s reports can be detected (and vice versa); furthermore, the parent’s reports can shed light on their subjective theories about the nature of the problems of their child. Discrepancies between the child’s and the parents’ conceptualization of the SAP can be detected and integrated into a shared model, which is the prerequisite for the establishment of a treatment plan that both child and parents can agree on (26). Furthermore, results of the ISAP-P can inform psychoeducation and sensitization of parents with regard to their child’s problems as well as the design and implementation of parent- or family-centered treatment modules for SAPs. Future studies should cross-validate the ISAP-P in community or school samples and across different cultural contexts. Beyond that, longitudinal studies could use the ISAP and the ISAP-P to investigate the development of SAPs throughout childhood and adolescence from different perspectives, whereas interventional studies could address the potential of the ISAP and the ISAP-P to inform the development of multimodal treatments for SAPs and to evaluate their effectiveness.

TABLE 5 Correlations between ISAP-P and ISAP child version (N = 145).

Child Version Parent Version	Depression	Problems w. Parents	Aggression	Problems w. spec. School	Separation Anxiety	Agoraphobia/ Panic	Problems w. Teachers	Social Phobia	School Aversion	Somatic Complaints	Performance Anxiety	Problems w. Peers	Problems w. Family
Depression	.42**		.21*	.24**			.20*	.22**		.26**	.29**	.22**	.21*
Problems w. Parents	.24**	.42**	.30**	.20*					.27**				
Aggression	.26**	.37**	.51**						.26**				.19*
Problems w. spec. School				.67**			.21*		.21*				
Separation Anxiety					.50**	.18*							
Agoraphobia/Panic					.19*	.40**		.17*	-.18*	.23**			
Problems w. Teachers			.25**	.37**			.42**		.27**				
Social Phobia	.29**					.17*	.19*	.38**			.26**	.25**	
School Aversion		.22**	.24**	.18*		.30**			.34**	.54**		.18*	
Somatic Complaints	.21*						.25**	.18*			.28**		
Performance Anxiety								.17*			.19*	.57**	
Problems w. Peers	.25**			.34**									
Problems w. Family		.20*	.21*										.27**

* $p < .05$.
** $p < .001$.

Data availability statement

The datasets presented in this article are not readily available. Requests to access the datasets should be directed to martin.knollmann2@lvr.de.

Ethics statement

The studies involving humans were approved by the Ethics Committee of the Medical Faculty of the University of Duisburg-Essen. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent from patients and their parents was obtained prior to data collection.

Author contributions

MK: Writing – original draft, Writing – review & editing, Investigation. VR: Conceptualization, Methodology, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Joanna Anderson,
University of Cambridge, United Kingdom

REVIEWED BY

José Manuel García-Fernández,
University of Alicante, Spain
Mariola Giménez-Miralles,
Valencian International University, Spain

*CORRESPONDENCE

Luana Sorrenti
✉ sorrentil@unime.it

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The role of student's awareness of current experiences on peer and emotional problems and school refusal

Luana Sorrenti^{1*}, Carmelo Francesco Meduri²,
Concettina Caparello², Angelo Fumia² and Pina Filippello¹

¹Department of Clinical and Experimental Medicine, University of Messina, Messina, Italy, ²Department of Health Sciences, University Magna Graecia of Catanzaro, Catanzaro, Italy

Introduction: Several studies have shown that awareness of present experiences/events can play a key role in promoting relational and emotional well-being as well as motivation to attend school. However, no study to date has analyzed whether a student's awareness of current experiences (mindfulness) may contribute to peer and emotional problems and thus promote or reduce school refusal (Anxious Anticipation, Difficult Transition, Interpersonal Discomfort and School Avoidance).

Methods: A cross-sectional study (362 Italian high school students) was conducted to evaluate the mediating role of peer problems and emotional problems in the association between students' awareness of their current experiences (mindfulness) and school refusal. In order to evaluate the association between variables, was to carry out a structural equation model (SEM) with latent variables [$\chi^2_{(188)} = 372.163$, $p = 0.000$, CFI = 0.94, SRMR = 0.04, RMSEA (90%CI) = 0.052 (0.044, 0.060)].

Results: Mediation analysis indicated that peer problems and emotional problems full mediate the association between mindfulness and Anxious Anticipation (peer problems: $\beta_- = -0.19$, $p = \leq 0.001$; emotional problems: $\beta_- = -0.10$, $p = \leq 0.05$) and Interpersonal Discomfort (peer problems: $\beta_- = -0.35$, $p = \leq 0.001$; emotional problems: $\beta_- = -0.14$, $p = \leq 0.01$). Moreover, peer problems fully mediate the association between mindfulness and School Avoidance ($\beta_- = -0.14$, $p = \leq 0.01$).

Discussion: The study extends knowledge of the factors involved in school refusal, with application implications from a preventive point of view, relating to the components of emotional, relational and current experience awareness that may be related to motivation to attend school.

KEYWORDS

school refusal, mindfulness, peer problems, emotional problems, school wellbeing

Introduction

Scientists' interest in mindfulness practises and experiences has increased in recent years; this is probably associated with the benefits it brings in different aspects of psychophysical well-being (Grossman et al., 2004; Veneziani and Voci, 2015). Mindfulness, a practise that has its origins in Eastern Buddhist culture, today has a particularly meaningful connotation in the psychological sphere, as it represents a state of awareness of oneself, one's surroundings and individual experiences, paying attention to each individual moment. This moment-by-moment concentration is done without judgement and allows the individual to live their experience to the full (Kabat-Zinn, 2003). Mindfulness, described as a receptive attention and awareness of present events and experiences (Brown et al., 2007), today represents a dispositional

characteristic, an individual difference that is particularly related to a person's well-being (Baer et al., 2006). When the mind is trained to remain in the present, open, calm and alert, it is possible to better contemplate the present moment and better perceive the elements of the world around the individual (Bodhi, 1984). Through this process of awareness, the individual slowly becomes aware of who he or she really is, and trains himself or herself to see reality exactly as it is. This is the central concept of mindfulness, which emphasises the importance of living in the present, without judgement, accepting what is happening inside and outside of you. This state of presence and acceptance reduces stress and anxiety and promotes greater well-being (Kabat-Zinn, 2003). In fact, being mindful allows to face life's challenges with greater serenity and clarity, thus improving mental and emotional health, promoting subjective well-being and reducing symptoms of anxiety, emotional and behavioural difficulties (Keng et al., 2011). Brown and Ryan (2003a) and Brown and Ryan (2003b) show that this is probably because a good, open and attentive awareness of the present moment allows the person both to reduce rumination and negative thoughts, and to develop greater emotional skills that allow them to cope better with different life situations. Such awareness and acceptance of experience without judgement is a powerful practise that can effectively counteract some forms of psychological discomfort such as anxiety, fear, anger and especially emotional, social and relational difficulties (Hayes and Feldman, 2004).

Several studies have explored at the central role that good self-awareness, awareness of one's own experiences and feelings, plays in well-being, particularly at school (Veneziani and Voci, 2015; Bennett and Dorjee, 2016; Felver et al., 2019; Duan, 2016). In fact, most of these studies show that good self-awareness can be correlated with good school performance, low levels of anxiety and social-relational difficulties. This has important implications in the school context, as mindfulness has a positive impact on student behaviour and attendance, thereby improving both interpersonal relationships and academic success (Osteen and Smith, 2021; Nichols et al., 2021; Amitani et al., 2022). In order to respond appropriately to the demands of school each pupil should have a good understanding of his or her own strengths and difficulties (Goodman, 1997). In fact, it is important to consider students' strengths when they are faced with particular school situations that require specific cognitive and emotional efforts, such as those used in learning processes, and relational efforts, useful in interactions with peers and teachers (Goodman, 1997). Understanding their behavioural, emotional and interpersonal profiles enables students to be more aware of their potential and the possible difficulties associated with their development (Marzocchi et al., 2002). A balanced understanding of their own psychosocial functioning, analysing both strengths and difficulties, allows children to have a more complete view of themselves, thus facilitating their own growth process. Among the strengths and difficulties that play a central role in a child's psychological functioning are emotional problems and problems related to peer relationships. Indeed, Goodman (1997) emphasises that emotional difficulties, characterised by anxiety, somatactivity and difficulty in coping emotionally, appear to have a direct impact on the child's daily well-being. Peer problems, such as a tendency towards isolation, difficulties in forming friendships, the possibility of becoming a victim of bullying, often result in children having difficulties in forming positive relationships and learning social skills that are crucial for their development (Sorrenti et al., 2024a; Goodman, 1997).

Previous studies have investigated how behavioural, and emotional problems in school-age children can often affect their transition from home to school (Eivers et al., 2010), resulting in

problems that affect school performance (Bierman et al., 2013). Children's social behaviour in the early years of schooling predicts later academic performance, as several studies show that students who are characterised by social difficulties in their relationships with peers (e.g., aggressiveness, poor peer interaction, etc.) require more educational support and are more likely to abandonment of school (Schwartz et al., 1998; O'Brien et al., 2007). Although most of the research on school attendance problems has been carried out mainly among early school-age children, in recent years some researchers have focused on examining this issue among adolescents (Sorrenti et al., 2024b; Gallé-Tessonneau and Gana, 2019; González et al., 2019). Understanding one's own difficulties in relating to peers, in building friendships, in managing conflicts with peers, and again, difficulties in managing one's own emotions related to anxiety and sadness, could help students cope with everyday difficulties at school (Goodman, 1999).

Consistent with the findings of some recent studies (Balakrishnan and Andi, 2019; Reid, 2005), prosocial behaviour, characterised by a good awareness of one's peer relationship skills, is an essential skill for students to prevent peer relationship problems and problems related to school attendance. In particular, peer problems due to poor social interactions and relationships with peers can lead to school refusal (Teasley, 2004). Among the different forms of school attendance problems, school refusal (SR) is a clinical form of emotion-based absenteeism that characterises students who experience strong negative emotions when they have to go to school (Gallé-Tessonneau and Gana, 2019). SR may take various forms, including regular tardiness, frequent trips to the health clinic or school nurse, and repeated requests to call parents to leave school early (Alford, 2022; Gallé-Tessonneau and Dahéron, 2020).

Gallé-Tessonneau and Gana (2019) have identified different aspects of school refusal, such as: anxious anticipation (AA), which manifests itself in students just before they face a school situation; difficult transition (DT), characterised by difficulties in moving between home and school; interpersonal discomfort (ID), characterised by students' discomfort with social interactions; and school avoidance (SA), characterised by avoidance of school due to anxiety, stress or other difficulties (Gallé-Tessonneau and Gana, 2019; Amitani et al., 2022). In particular, students with school refusal often show emotional difficulties and anxiety that make it difficult to get to school, to participate actively, to stay in school for the whole day and to interact with other school actors (Gallé-Tessonneau and Heyne, 2020). According to Berg (1997), school refusal is characterised by strong negative emotions that manifest themselves at the moment when a young person is in school or has to go to school. In fact, students with SR often experience reluctance or difficulty in attending school, emotional distress at the prospect of going to school, difficulties in responding to peers and teachers, and other problems that characterise relationships with peers or the demands of school (Gallé-Tessonneau and Heyne, 2020).

It is important to highlight that school attendance problems are increasingly seen as problems related to social, emotional and/or behavioural difficulties in school-age children. In particular, emotional problems such as anxiety and social difficulties at school, both with peers and teachers, play a crucial role in school refusal. In fact, children who experience school refusal often show anxiety or restlessness related to stressful events at home and at school (González et al., 2020). In addition, these children can show poor

sociability, which makes it more difficult for them to integrate into the school context (Okuyama et al., 1999). These characteristics are frequently associated with a lack of self-awareness and attention to one's own emotions and the surrounding environment. In fact, recent studies have shown that introducing mindfulness techniques in schools could help to stabilise the mind and promote greater awareness of the present moment and one's own strengths (Alford, 2022; Amitani et al., 2022), and this, in turn, improves emotional awareness and regulation, enhances relationships with others, and subsequently boosts academic performance. The promotion of mindfulness-based educational interventions is critical, as they not only enhance emotional awareness and regulation, but also promote improved interpersonal relationships and academic performance, thereby addressing key factors that contribute to a child's overall psychological well-being and success in the school setting (Figure 1).

Recent researches have highlighted the importance of self-awareness, particularly understanding one's strengths and difficulties, in promoting prosocial behaviour and positive school relationships (Lewis et al., 2021; Goodman, 1997). Emotional and peer problems, such as anxiety, social withdrawal, social relationship difficulties and peer pressure, contribute significantly to school refusal (Sorrenti et al., 2024a; Buzzai et al., 2022; Gallé-Tessonneau and Gana, 2019). Mindfulness, defined as non-judgmental awareness of the present moment, has been shown to improve well-being, social-emotional skills and consequently school performance and attendance (Nichols et al., 2021). Therefore, mindfulness can reduce mood problems and absenteeism, suggesting that mindfulness can help address school refusal related to emotional and peer difficulties (Bennett and Dorjee, 2016; Amitani et al., 2022).

Even though some studies have mostly highlighted how mindfulness-based interventions can be helpful for school attendance problems (Amitani et al., 2022; Biery, 2022; Osteen and Smith, 2021), to the best of our knowledge, no study has examined the relationship

between students' perceptions of their current experiences, emotional and peer problems, and school refusal in a single model. The literature has examined these variables separately, often highlighting the role of self-awareness in promoting adolescents' psychological well-being (Felter et al., 2019; Hwang et al., 2018; Zoogman et al., 2015), the role of mindfulness in addressing school attendance problems (Amitani et al., 2022), and the impact of peer difficulties and emotional problems in the school context (Sorrenti et al., 2024a; Teasley, 2004; McLeod et al., 2007; Jones and Suveg, 2015). Despite these studies, literature still lacks a comprehensive model that explains the relationships between students' awareness of their current experience, peer problems, emotional problems and SR. Therefore, the purpose of this study was to examine the mediating role of peer problems and emotional problems in the association between students' awareness of their present experience (mindfulness) and SR (Anxious Anticipation, Difficult Transition, Interpersonal Discomfort, and School Avoidance) in a sample of adolescent students. The research on adolescent students is of interest precisely because of the increased attention in recent years to problematic issues in this age group. Indeed, it is important to consider both that adolescence is a critical period characterised by profound social, cognitive and emotional changes, and that students in this age group face greater academic pressures, social challenges and emotional fluctuations that may make them more vulnerable to emotional, social and educational problems (Lee and Song, 2017; Gallé-Tessonneau and Gana, 2019). Furthermore, tackling early school leaving in this age group is essential to prevent long-term negative outcomes such as school failure and social isolation. Based on prior research, and in accordance with Veneziani and Voci (2015) model of Mindfulness, and Gallé-Tessonneau and Gana's (2019) model of SR, we expected that mindfulness would have a direct relationship with peer problems and emotional problems and, in turn, an indirect relationship with SR.

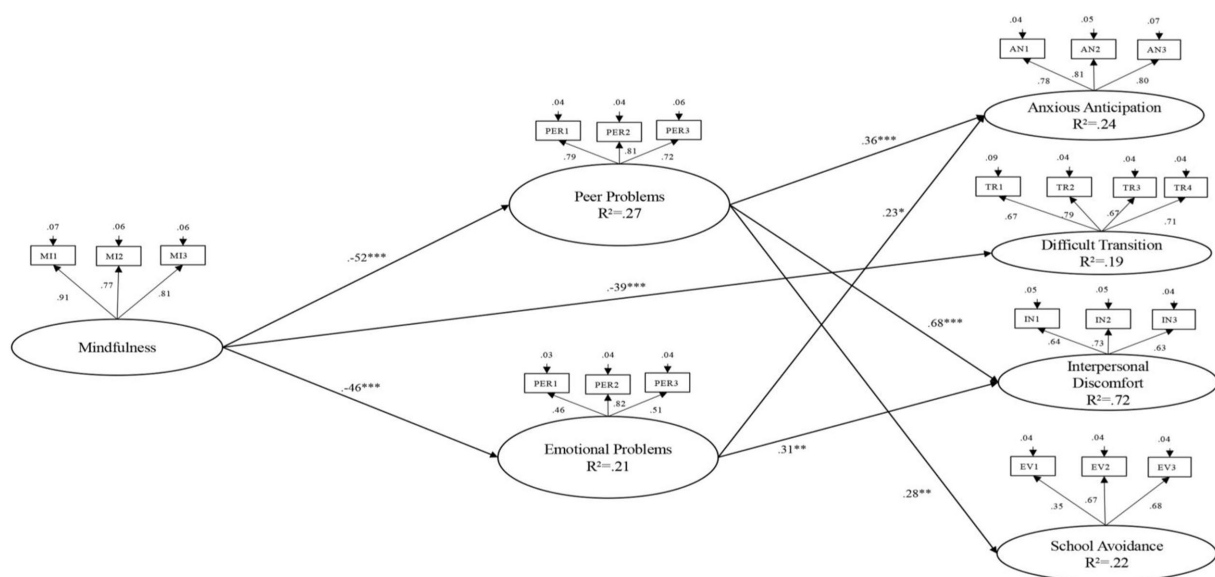


FIGURE 1

Full mediation model. $^{***}p \leq 0.001$, $^*p \leq 0.01$, $p \leq 0.05$. Coefficients shown are standardized direct path coefficients. The insignificant paths have not been inserted. Coefficients 'Correlation: Anxious Anticipation ↔ Difficult Transition: 0.62^{***} ; Anxious Anticipation ↔ Interpersonal Discomfort: 0.45^{***} ; Anxious Anticipation ↔ School Avoidance: 0.68^{***} ; Difficult Transition ↔ School Avoidance: 0.46^{***} ; Peer Problems ↔ Emotional Problems: 0.30^{***} .

Materials and methods

Participants

The participants in this study comprised 362 Italian high school students. The mean age was 15.9 years ($SD = 1.02$). 152 are males (42%), 207 are females (57.2%) and 3 (0.8%) not declare their sex. Regarding the number of absences, the mean number of made absences is 20.83 ($SD = 10.98$) and the mean number of unexcused absences is 1.75 ($SD = 7.35$). Regarding students' socioeconomic status (SES), 28% of the students belonged to a low SES (one or both parents held a lower secondary education diploma), 45.5% belonged to a medium SES (one or both parents held a high school diploma), 26.5% belonged to a high SES (one or both parents held a university degree). Furthermore, 99% of the students had Italian nationality and all participants spoke Italian. Students with intellectual disabilities or special educational needs did not participate in the research.

Instruments

A demographic questionnaire gathered basic demographic information from participants, including their age, gender, nationality, educational level, and socioeconomic status (SES).

The Italian version of the Mindful Attention Awareness Scale (MAAS; [Veneziani and Voci, 2015](#)) was used to measure states of awareness over time. It consists of 15 items on a unidimensional scale of 7 points Likert (from 1 = almost always to 7 = almost never), all of which are aimed at investigating the child's awareness and attention by detecting a lack of attention and awareness in specific everyday situations. In fact, as [Brown and Ryan \(2003a\)](#); [Brown and Ryan \(2003b\)](#) point out, states of unawareness are more common and easier to detect than states of awareness, so the scale is designed to detect states of unawareness in relation to states of awareness. Examples of voice: "I find it difficult to stay focused on what is happening in the present" and "I do work or tasks automatically without being aware of what I am doing." The MAAS demonstrated acceptable reliability and construct validity in previous studies ([Veneziani and Voci, 2015](#)). In this study, the questionnaire has good internal reliabilities ($\alpha = 0.87$).

The Italian version of the Strengths and Difficulties Questionnaire (SDQ; [Marzocchi et al., 2002](#)) is a short self-report used to identify children who need support to manage their behavioural and emotional problems. To assess peer problems (PP; e.g. "I am usually on my own; I have one good friend or more") and emotional problems (EP; e.g. "I am often unhappy; I worry a lot") we used two subscales of the Italian version of the test. The test provides a behavioural, relational and cognitive profile of the child. There are three versions of the test, one for parents, one for teachers and one for self-assessment. Each consists of 25 items based on a 3-point Likert scale ('not true', 'partly true', 'absolutely true') indicating the level of manifestation of a particular behaviour. Each subscale consisted of 5 items often used worldwide to identify children who need support to manage their behavioural and emotional problems. To assess peer problems (PP) and emotional problems (EP) we used two subscales of the Italian version of the test. In this study, the peer problems subtest has a moderate alpha value ($\alpha = 0.72$), while the emotional problems subtest has a fairly high alpha value. ($\alpha = 0.79$).

The School Refusal Evaluation (SCREEN; [Gallé-Tessonneau and Gana, 2019](#)) is an 18-item self-report questionnaire designed to measure different dimensions of school refusal: Anticipatory Anxiety (AA) (e.g., "I feel like I have a mental block when it comes to going to school, like I'm not able to do it"), Transition Difficulties (TD) (e.g., "I tell my parents that I do not want to go to school and that I want to stay at home"), Interpersonal Distress (ID) (e.g., "I'm afraid of what others in my class think of me"), and School Avoidance (SA) (e.g., "I'm absent more often this year than last year"). Each item is rated on a 5-point Likert scale ranging from 1 ("It does not affect me at all") to 5 ("It affects me completely"). The SCREEN has demonstrated acceptable reliability and construct validity in previous studies ([Boudouda et al., 2024](#); [Gallé-Tessonneau and Gana, 2019](#); [Gallé-Tessonneau and Heyne, 2020](#); [Gallé-Tessonneau et al., 2018](#)). In the present study, the Cronbach's alpha value of the individual subtests is good overall. In particular, the Anticipatory Anxiety (AA) subtest has a robust alpha value ($\alpha = 0.83$); the Transition Difficulties (TD) subtest has a high alpha value ($\alpha = 0.80$); the Interpersonal Distress (ID) subtest has a reasonable alpha value ($\alpha = 0.69$); and the School Avoidance (SA) subtest has a relatively high alpha value ($\alpha = 0.70$) ([Taber, 2018](#)).

The instruments were selected for their validity and reliability in measuring the key variables of the study. In particular, the MAAS proved to be particularly useful in assessing awareness and unawareness in everyday experiences, while the SDQ, due to its concise and effective structure, allows for the reliable measurement of emotional problems and peer difficulties. Furthermore, the SCREEN was chosen for its ability to specifically analyse the four main dimensions of school refusal ([González et al., 2021](#)).

Procedure

This study was performed following the recommendations of the *Ethical Code of the Italian Association of Psychology (AIP)* and all subjects were given written informed consent following the Declaration of Helsinki (2013). The protocol was approved by University of Alicante [UA-2023-06-29-4].

Study participants were recruited through the participation of schools in the study. After obtaining ethical approval and securing the schools' adherence to the research project, all students in second, third, and fourth classes were informed of the project's aims and given the opportunity to participate voluntarily and anonymously. However, only students who obtained and returned informed consent from their parents, if they were minors, or who sent their signed consent, if they were of age, were included in the research. After consent collection, the students completed the questionnaires online in a single session during school hours. The administration session, supervised by experienced staff, lasted approximately 1 hour, after which the digital questionnaires were collected and stored securely using a system of unique codes.

Data analysis

Different software was used for the analyses. Specifically, Jamovi 2.3.28 software was used to calculate descriptive statistics and Cronbach's alpha, while RStudio with the *lavaan* package ([Rosseel,](#)

2012) was used to perform structural equation modelling (SEM) with latent variables. By overcoming traditional univariate and multivariate methods (Iacobucci et al., 2007; Kline, 2023), the SEM approach makes it possible to reduce the likelihood of Type I errors. In addition, SEM can be used to specify latent variables that are generally assumed to be free of error (Coffman and MacCallum, 2005).

By requiring multiple indicators for each construct, SEM treats the measured constructs as latent variables. Each latent construct was measured through the specific creation of groups of items by aggregating the mean responses on a common scale of the relevant items of the questionnaire. The different groups of items for all the constructs studied allowed the structuring of the parcels that were used as main indicators (Little et al., 2007).

The parcelling procedure used in this study improves the commonality between indicators, increasing modelling efficiency and reducing random error (Bagozzi and Edwards, 1998; Coffman and MacCallum, 2005; Hau and Marsh, 2004; Kishton and Widaman, 1994; MacCallum et al., 1999; Matsunaga, 2008).

By using parcelling, model fit indices tend to be more satisfactory due to their greater psychometric and estimation advantages. In this study, calculated confidence intervals for direct and indirect effects were determined using 5,000 bootstrap replication samples. In line with the recommendations of Wu and Jia (2013), Preacher and Hayes (2008) and Shrout and Bolger (2002), a 95% bias-corrected confidence interval (CI) was used in the study. In addition, the analysis performed focused on the evaluation of the different fit indices, including the chi-square value, χ^2/df , the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) with its 90% confidence interval (CI) (Hair et al., 1998). The criteria for a good model fit were CFI values above 0.90 and RMSEA below 0.08 (Kline, 2023).

Results

To investigate the mediating role of peer and emotional problems in the association between Mindfulness and school refusal (anxious anticipation, difficult transition, interpersonal distress and school avoidance), a structural equation model (SEM) with latent variables was used. The estimation of this model produced a good fit [$\chi^2(188) = 372.163$, $p = 0.000$, CFI = 0.94, SRMR = 0.04, RMSEA (90%CI) = 0.052 (0.044, 0.060)].

Results showed that PP and EP were negatively predicted by mindfulness (PP: $\beta = -0.52$, $p \leq 0.001$; EP: $\beta = -0.46$, $p \leq 0.001$). AA was positively predicted by PP ($\beta = 0.36$, $p \leq 0.001$) and EP ($\beta = 0.23$, $p \leq 0.05$). DT (difficulties in moving from home to school) was negatively predicted by mindfulness ($\beta = -0.39$, $p \leq 0.001$). ID was positively predicted by PP ($\beta = 0.68$, $p \leq 0.001$) and EP ($\beta = 0.31$, $p \leq 0.01$). SA was positively predicted by PP ($\beta = 0.28$, $p \leq 0.001$). The following significant indirect relationship of mindfulness on SR were found: from mindfulness to AA via PP ($\beta = -0.19$, $p \leq 0.001$) and via EP ($\beta = -0.10$, $p \leq 0.05$); from mindfulness to ID via PP ($\beta = -0.35$, $p \leq 0.001$) and via EP ($\beta = -0.14$, $p \leq 0.01$); from mindfulness to SA via PP ($\beta = -0.14$, $p \leq 0.01$).

The results show a direct relationship between mindfulness and DT, while indirect relationships appear between mindfulness and SR (AA, ID and SA) as a result of the mediating role of PP and

PE. Therefore, good awareness of the present and one's own feelings and emotions can reduce problems with peers and emotions, which in turn can reduce SR due to AA and ID.

Discussion

Recent studies have highlighted the importance of self-awareness, particularly in recognising one's strengths and difficulties, in promoting pro-social behaviour and positive relationships at school (Bennett and Dorjee, 2016; Felver et al., 2019). Indeed, mindfulness, defined as non-judgmental awareness of the present moment, plays a important role in improving individual and social well-being, especially in school setting. By increasing awareness of one's own potential and abilities, mindfulness fosters social-emotional and behavioural skills, reduces anxiety, and thus improves school performance and attendance (Nichols et al., 2021; Amitani et al., 2022). Focusing on and becoming aware of oneself, emotions and experiences can improve interpersonal relationships and increase emotional competence (Osteen and Smith, 2021). In fact, students who are aware of their interpersonal, social and emotional competencies are more likely to feel good about themselves and their peers and perform well in school (Sorrenti et al., 2024a; Whelan-Berry and Niemiec, 2021; Bennett and Dorjee, 2016; Pickerell et al., 2023; Van de Weijer-Bergsma et al., 2014). The increased awareness of these students enables them to better manage and self-regulate the various demands of school, thus reducing problems that could affect school performance and attendance (Amitani et al., 2022).

Although several studies have analysed the relationship between mindfulness, school wellbeing and school problems such as absenteeism, no single study has analysed in a single model how awareness of oneself, one's own experiences, emotions and feelings, can impact on different dimensions of school refusal. Therefore, this study aimed to provide preliminary support for the indirect relationship between the mindfulness and the four dimensions of school refusal through peer and emotional problems. Based on our hypotheses, we expected that mindfulness could reduce peer and emotional problems and consequently reduce the different components of school refusal. The results partly confirmed our hypotheses.

From data obtained using latent variable SEM, this study found that students with good mindfulness could have fewer peer and emotional problems, and could be less likely to experience anxiety about going to school (Anxious Anticipation), and to have difficulties with interpersonal relationships in the school setting (Interpersonal Discomfort). Conversely, students with low awareness could manifest problems with peers and could be more likely to have difficulty managing and regulating emotional and psychological distress expressed in avoidant and somatic symptoms (School Avoidance). Thus, our results thus demonstrated an association between receptive attention and awareness of current events and experiences and a reduction in emotional and peer problems, confirming previous studies (Brown et al., 2007). This is in line with the literature showing that mindfulness is positively correlated with emotional competence and stability (Veneziani and Voci, 2015) and the promotion of pro-social behaviour among peers (Balakrishnan and Andi, 2019; Reid, 2005).

In addition, our results show a direct relationship between peer and emotional problems and two dimensions of SR (Anxious Anticipation; Interpersonal Discomfort). According to Lee and Song

(2017), adolescent students with difficulties in peer relationships and emotional management and regulation tend to have higher levels of anxiety related to the school experience and greater difficulties in managing school life related to interactions with peers and teachers, thus these students appear to be at greater risk of school refusal. Teasley (2004) also identifies peer problems, characterised by inadequate social interactions and relationships, as factors that characterise the avoidance behaviour typical of students with school refusal. Indeed, our research showed a direct relationship between peer problems and school avoidance. Students with emotional problems are often unable to interact effectively with others and are exposed to negative experiences (such as exclusion, peer pressure, school punishments, etc.) that increase their emotional distress and thus their disengagement from school (Teasley, 2004). When students feel safe, they feel more comfortable in the school environment, are better able to learn and promote their academic, emotional and social development. In contrast, feelings of insecurity and anxiety can often interfere with these aspects and have a negative impact on their overall wellbeing and performance (Balakrishnan and Andi, 2019).

Finally, there is a direct relationship between mindfulness and Transition Difficulties (TD); in fact, we found that students who tend to have a good level of self-awareness tend to have less difficulty transitioning from home to school. This is in line with the literature, which shows that students who perceive themselves as having a good awareness of themselves, their feelings, emotions and experiences, are able to develop specific tools that enable them to better manage the stress and anxiety factors arising from the transition from the family environment to the school environment (Boivin and Melito-Conners, 2021).

Regarding indirect effects, our study highlights the mediating role of peer and emotional problems in the relationship between mindfulness and certain dimensions of SR. In particular, we observed that good self-awareness can reduce peer and emotional problems by addressing both anxious anticipation and interpersonal discomfort. These findings may indicate that students with a good awareness of their own skills, particularly social and emotional skills, tend to have less difficulty in managing and regulating their emotions, less difficulty in relationships with peers, and this in turn may reduce school refusal problems related to anxiety and social relationships at school. In fact, according to the literature, students who have a good awareness of themselves, their environment and their individual experiences, focusing on each moment of life, tend to reflect more on themselves, experience more positive emotions, and interact well with others by building good social relationships (Schonert-Reichl et al., 2015).

Students' perceptions of their own individual and contextual factors affecting their school life may be well related to their behaviour at school. Indeed, according to Havik and Ingul (2021), young people's perceptions of themselves, their social relationships and their emotional abilities influence their school life, sometimes leading to negative emotions and avoidance behaviours typical of SR. The fact that peer and emotional problems play a key role in SR is also supported by Ingul et al. (2019) study, which confirms this relationship. Indeed, the way in which young people regulate their emotions (i.e., monitor, evaluate and address emotional reactions) and manage their relationships with peers is of interest because both emotional difficulties and social problems with peers are essential features of SR. In fact, while self-awareness is important in recognising one's own feelings and behaviour, it is not necessarily accompanied by the ability to manage and resolve emotional or relational problems. Developing concrete tools to deal with emotional difficulties or to improve social skills can help to manage school life, success and attendance (King and Bernstein, 2001). Finally, another important indirect effect is the mediating role of peer problems in the association between mindfulness and school avoidance. Our findings are consistent with studies by Dube and Orpinas (2009) who show that students who manifest school avoidance are often characterised by behavioural difficulties such as conduct problems, hyperactivity and problems with peers. Probably, self-awareness, by adopting a non-judgmental attitude towards oneself, tends to reduce socio-relational difficulties with peers and provides students with the tools they need to cope with the demands of school, which in turn reduces school avoidance (Table 1).

Limitations and future directions

This study has several limitations that need to be considered when interpreting the results. One of the main limitations is that the survey has a cross-sectional design, which means that data were collected at a single point in time. This design limits our ability to draw conclusions about causality: whether awareness directly affects peer problems and emotional problems, which in turn affect school rejection, or whether other factors may be at play. To establish causal relationships and better understand the long-term effects of awareness on school refusal, future research should use experimental and longitudinal designs. Longitudinal experimental studies of consciousness, such as self-awareness training programmes or guided meditation practises, could help to understand how increasing self-awareness leads directly to the well-being of adolescents by reducing school refusal. In addition,

TABLE 1 Path estimates, standard errors (SE), and 95% confidence intervals (CIs).

Indirect Effect Path	β	SE	95% CI (Lower BC)	95% CI (Upper BC)	p-value
Indirect effect via peer problems					
Mindfulness → Anxious Anticipation	−0.19	0.02	−0.15	−0.04	≤ 0.001
Mindfulness → Interpersonal Discomfort	−0.35	0.03	−0.24	−0.10	≤ 0.001
Mindfulness → School Avoidance	−0.14	0.01	−0.07	−0.01	≤ 0.01
Indirect effect via emotional problems					
Mindfulness → Anxious Anticipation	−0.10	0.02	−0.11	−0.01	≤ 0.05
Mindfulness → Interpersonal Discomfort	−0.14	0.02	−0.12	−0.02	≤ 0.01

longitudinal studies could follow students over time, allowing for a more thorough and comprehensive investigation. In fact, such studies would make it possible to observe how self-awareness and related psychological, social and environmental factors associated with school refusal develop at different stages of school life. Another limitation of the study concerns the use of a convenience sample consisting of high school students from southern Italy, which may limit its representativeness compared to the general population. Furthermore, the sample does not exhibit a homogeneous distribution with respect to both educational levels and gender differences. For this reason, future studies should include students from various educational levels and countries to conduct a cross-cultural analysis. Additionally, it would be beneficial to consider more homogeneous samples or to conduct targeted analyses to explore gender differences in greater detail. Cultural and demographic differences may also play a crucial role in understanding the phenomenon of school refusal, as factors such as the school climate, peer and teacher relationships, family expectations, and available school resources vary across different cultural contexts, shaping students' school experiences. The use of self-report questionnaires is another limitation, as participants may respond in ways that are expected or socially acceptable, rather than giving honest answers. To overcome this limitation, future research should include additional tools such as direct observation. In addition, interviews or focus groups with students, teachers and parents could provide richer and more qualitative insights into the complex dynamics between awareness and school refusal. Furthermore, it is important to recognise the possible presence of potential confounding variables, such as individual differences in the experience of awareness. Future studies should include more detailed measures to assess and control such differences in order to examine more precisely their impact on the process under investigation.

Despite these limitations, our study contributes to the growing interest in school awareness and refusal and highlights how awareness of one's problems with peers and emotions plays a key role in this association.

First, to the best of our knowledge, given the current interest of researchers in mindfulness, this is the first study to examine the role of awareness, particularly of social problems with peers and emotional problems, in coping with school refusal. In addition, the study focuses on a sample of adolescents, a particular stage of development often characterized by problems with school attendance (Kearney et al., 2020). Adolescence is a crucial period for the growth and development of social and emotional skills. It is a phase in which young people may be more vulnerable to difficulties such as anxiety, stress management and a sense of belonging in the school context (Feiss et al., 2019). Given the benefits of mindfulness interventions for individual and social well-being in the school context, it would be appropriate to promote programs in schools aimed at enhancing social, emotional and cognitive skills that promote greater self-awareness. While previous research have highlighted the usefulness of mindfulness interventions based on promoting greater attention to the present in increasing psychological well-being (Felver et al., 2019; Hwang et al., 2018; Zoogman et al., 2015), our research has focused on examining the role of awareness of one's strengths and weaknesses in the relationship between mindfulness and school refusal. Recent studies have confirmed that mindfulness significantly contributes to reducing stress and school problems, thereby improving the psychological well-being of adolescents (Amitani et al., 2022; Felver et al., 2019; Hwang

et al., 2018; Zoogman et al., 2015). In particular, mindfulness interventions realised in presence, such as the Learning to BREATHE programme (Felver et al., 2019) and implemented in an online environment (Biery, 2022), have been found to be particularly effective in improving students' well-being, performance and school behaviour. In addition, mindfulness yoga interventions have recently been developed to support children in coping with anxiety related to school refusal (Amitani et al., 2022). Considering these findings, our study illustrates how the implementation of such mindfulness interventions, by designing activities aimed at increasing awareness of one's strengths, in this case by paying attention to one's emotional and relational problems with peers, could contribute to improving students' school attendance and well-being. Indeed, encouraging students to become aware of their strengths by paying attention to their relational, social and emotional skills is crucial to promoting their well-being and improving their academic performance (Whelan-Berry and Niemiec, 2021; Bennett and Dorjee, 2016). In line with Bennet and Dorjee's research (2016), having a good awareness of current events, different experiences, and even one's own feelings and emotions promotes well-being and reduces school-related problems, particularly mood, social and emotional problems such as absenteeism. This heightened awareness enables individuals to develop better management and self-regulation skills, allowing them to respond adaptively to the different demands of school, and thus reducing negative symptoms. Moreover, mindfulness practises, by fostering greater awareness of one's abilities and the learning process, can facilitate the development of effective academic strategies, supporting students in cultivating advanced academic competencies while promoting increased engagement and attendance at school (Osteen and Smith, 2021; Buzzai et al., 2021).

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

All procedures performed in studies involving human participants were in accordance with the recommendations of the Ethical Code of the Italian Association of Psychology (AIP) and all subjects were given written informed consent in accordance with the Declaration of Helsinki (2013). The protocol was approved by the Ethics Committee of the University of Alicante [UA-2023-06-29-4]. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

LS: Conceptualization, Data curation, Funding acquisition, Investigation, Writing – original draft, Writing – review & editing. CM: Conceptualization, Data curation, Investigation, Visualization, Writing – original draft. CC: Conceptualization, Data curation,

Formal analysis, Investigation, Methodology, Writing – review & editing. AF: Conceptualization, Data curation, Investigation, Writing – review & editing. PF: Conceptualization, Data curation, Investigation, Supervision, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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EDITED BY

José Manuel García-Fernández,
University of Alicante, Spain

REVIEWED BY

Lucía Granados Alos,
Valencian International University, Spain
Miriam Martín Galán,
Valencian International University, Spain

*CORRESPONDENCE

Selina Eckhoff Hamadi
✉ selina.e.hamadi@uis.no

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“Too little, too late”: youth retrospectives on school attendance problems and professional support received

Selina Eckhoff Hamadi^{1*}, Trude Havik¹ and Solveig Holen²

¹Norwegian Centre for Learning Environment and Behavioral Research in Education, University of Stavanger, Stavanger, Norway, ²Regional Centre for Child and Adolescent Mental Health, Eastern and Southern Norway, Oslo, Norway

Introduction: School attendance problems (SAPs) are a vexing issue that pose significant challenges for youth, families, and professional stakeholders. Despite growing research efforts, studies that explore the perspectives of youth on SAPs remain limited, particularly in Nordic countries. This qualitative study investigated Norwegian youths’ retrospectives on the development and persistence of SAPs and the support they received from professionals in addressing their challenges.

Methods: Semi-structured interviews were conducted with 10 youth (aged 12–22) with a history of SAPs in compulsory education. Participants were recruited by professionals from the educational-psychological service and alternative provisions in three Norwegian municipalities. Data were analyzed using reflexive thematic analysis.

Results: The results indicate that lacking positive relationships with peers and teachers along with falling behind academically lead to school alienation and contributes to the onset or maintenance of SAPs. Similar experiences of gradual onset of SAPs, anxiety and depression, emotional and somatic distress, and conflicting feelings around avoidance were outlined. The youths’ initial experiences of support within the school setting were described as inappropriate, insufficient, or initiated too late, while attending alternative provisions appeared as a primary intervention that had enduring positive effects on attendance and engagement in academic and social activities.

Conclusion: The findings highlight the need for early intervention, coherence between initiatives across support services and effective collaboration between youth, families, schools, and external services.

KEYWORDS

school attendance problems, school refusal, truancy, youth perspectives, anxiety, alternative provision

1 Introduction

Regular school attendance is associated with academic, language, and social and emotional development (1, 2). However, some students struggle with school attendance problems (SAPs), which broadly refers to difficulties in attending or remaining in school or class, as well as different types of absences (3). Research often differentiates SAPs into categories including school withdrawal (SW), school exclusion (SE), school refusal (SR), and truancy (TR). SW is generally characterized as parent-initiated absences, while SE is related to school-based decisions (4). SR and TR encompass

student-initiated absences, wherein SR is often linked to internalizing and emotional difficulties (1), and TR is associated with externalizing difficulties (4). However, the symptoms of SR and TR may significantly overlap, and youth may transition between these characteristics over time (5). Thus, a broad definition of SAPs was adopted in the current study (3).

The development of SAPs is influenced by various individual and contextual factors, including emotional difficulties and symptoms of anxiety and depression (5–7), neurodevelopmental disorders (8), poor school climate (9, 10), negative relationships with teachers (5, 11), and difficulties in peer relationships and bullying (5, 11–14).

In recent years, research has increasingly focused on the role of contextual factors contributing to SAPs, and several frameworks which draw on ecological theory have been proposed to understand how SAPs emerge and develop [(e.g., (2, 15))]. One notably framework by Havik and Ingul (16) combines a systemic integrated cognitive approach, which theorizes the interplay between individual and environmental factors on youths' development (17), and the school alienation (SAL) theory (18) to understand the emergence and establishment of SR. This framework may also be relevant for the development of other types of SAPs.

According to the SAL theory, students may be alienated from three interrelated aspects of school: the learning domain, the peer domain, and the teacher domain (18). Alienation can occur in one or in all three domains, resulting in negative cognitive and affective attitudes toward schooling. Alienation from learning relates to the academic aspect of school and may involve experiencing a lack of interest or boredom during learning (19). Havik and Ingul (16) suggest that this domain is less relevant to emerging SR, as these students often enjoy and master learning. However, alienation from learning may be relevant to other types of emerging SAPs, such as TR, which is typically associated with boredom or disengagement in learning activities [(e.g., (20, 21))]. The peer domain relates to the social aspect of school and involves peer relationships. Alienation from peers is associated with feelings of loneliness, isolation, and withdrawal from classmates (19). This domain is significant, as research indicates that students with SAPs often struggle in peer- and friendship relationships (13, 14, 22). Lastly, the teacher domain encompasses both social and academic aspects of schooling. The social aspect involves supportive or non-supportive teacher-student relationships, while the academic aspect is related to instructional modes in teaching activities (19). The lack of emotional and academic support from teachers has been identified as a contributing factor to SAPs (13, 14, 22). A gradual development of SAPs may align with a SAL process, potentially reinforcing SAPs. This, in turn, could establish a vicious cycle of school avoidance, ultimately leading to prolonged absenteeism (16, 23).

In previous years, research on interventions for youth with SAPs has primarily centered on clinical approaches based on cognitive behavioral therapy (CBT), thus often delivered by services external to the school [(e.g., (24))]. However, it is recognized that SAPs may emerge from an interplay between various factors related to the youth, family, or school, and early

identification and intervention is crucial to avoid problems from exacerbating (4, 25). A multidimensional multi-tiered systems of support (MD-MTSS) model has been proposed in the field of school attendance and absenteeism (26). The MD-MTSS model is based on a preventive whole-school approach and includes interventions at the universal, targeted, and intensive levels while considering the various aspects of SAPs and functioning, thus aiming to avoid what Kearney and Graczyk (26) refer to as a “wait to fail approach”.

Teachers and school staff play a key role in recognizing changes in attendance, making them essential in early identification of SAPs (27). However, a recent systematic scoping review highlighted the current lack of research focusing on school-based approaches that can be delivered and adapted by school staff themselves, instead of external professionals (28). Moreover, in their meta-analysis, Eklund et al. (29) found small effects for all attendance interventions, suggesting that existing practices are ineffective. In addition, a practitioners' review of the literature in the area of SR indicated little progress in knowledge attainment over the past decade that could assist practitioners, despite the increase in conducted studies during this time (1). This suggests a further need for studies to provide evidence to support responses to SAPs (1, 29).

Youth perspectives and inclusion in decisions that affect them are stated in Article 12 of the United Nations Convention on the Rights of the Child (UNCRC). This principle is essential for developing a full understanding of SAPs, applying to both practice and research. Existing research on youth perspectives includes a recent meta-ethnographic review from the UK (30) and a systematic review from New Zealand (31), along with additional studies from Europe and the US. Most of these studies have concentrated on risk factors related to SAPs, identifying factors related to individual, relational, and contextual domains. Individual factors included low emotional well-being, sleep difficulties, and anxiety (13, 30, 32). Regarding relational factors, experiences of poor teacher-student relationships, inconsistent adult support, poor peer relationships, peer detachment and bullying were prevalent (12, 21, 30, 31, 33–35). Among contextual factors, negative school environments, unsafe and unwelcoming classrooms, teaching quality, lack of engagement, and poor school response were emphasized as contributive (21, 31, 33, 34, 36). In addition to risk factors, some studies have identified protective factors to encourage school attendance, including a positive school climate, positive teacher-student relationships, positive peer relationships, and tailored support (20, 21, 35, 37–39).

Previous qualitative studies conducted on youth's perspectives offer important insight into the underlying dynamics of the various types of SAPs. However, the majority of existing studies center around youths' perspectives on contributive factors to SAPs while overlooking experiences of received support that could inform practitioners about effective intervention strategies. In addition, further research is required to identify commonalities among youths' experiences.

While three of the studies referenced above originate from Sweden (21, 35, 38), research that focus solely on youth

perspectives on SAPs in compulsory education remains limited across the Nordic region (40). This gap is important to address as the Nordic Education Model is based on the concept of “Education for All”, emphasizing free and universal access to education, equity, equal opportunities, inclusion, and adapted learning as fundamental goals of schooling, thus differing from educational systems across other regions (41–43).

To address this, the current study conducted individual interviews with Norwegian youth who previously struggled with SAPs. The study was guided by the following research questions: (1) What reasons do youth who previously struggled with SAPs attribute to their development and persistence, and how do they interpret their experiences? And (2) How do youth who previously struggled with SAPs perceive the support they received from professionals?

2 Methods

2.1 Participants

This study used a convenience sampling strategy. Youths were recruited by professionals from the educational-psychological service (EPS) and alternative provisions in three Norwegian municipalities. In Norway, alternative provisions refer to educational settings outside mainstream schools for students requiring adapted learning environments (e.g., outdoor schools, farms, workshops). Access to these arenas is based on an individual assessment from EPS and a formal decision by the municipality in accordance with the Education Act (44), §§11-6, 11-7). Professionals in these services were selected for their ability to locate participants appropriate for the study.

To be eligible for participation, the youths had to have experienced SAPs during compulsory education (age 6–16 in Norway) to a degree that resulted in absences severe enough to necessitate external support beyond the schools’ efforts. Participants were required to be over 12 years of age and to have completed primary school. Additionally, they needed to be capable of reflecting retrospectively on their experiences, either because they had overcome their challenges or because enough time had passed since compulsory education. The retrospective approach was chosen to collect youths’ reflective insights into difficult past experiences with SAPs and the support they received, offering a deeper understanding of how these challenges were navigated over time.

The sample included 10 adolescents and young adults, comprising 5 girls, 4 boys, and 1 non-binary individual, aged between 12 and 22 years. All youths had experienced SAPs to a degree that included periods of complete school absenteeism, lasting between 2 and 7 years (Table 1). This diversity emerged naturally from the inclusion criteria.

2.2 Data collection

Semi-structured interviews were carried out individually with each youth by the first author. An interview guide with open-ended questions was collaboratively developed by all authors

TABLE 1 Participant characteristics.

Youth	Age	Duration of SAPs
Y1	12	2 years
Y2	19	3 years
Y3	17	2 years
Y4	16	2 years
Y5	19	3 years
Y6	19	4 years
Y7	17	5 years
Y8	18	2 years
Y9	22	7 years
Y10	18	2 years

based on previous research. Prior to data collection, the interview guide was pilot tested with a youth in the target group (45), confirming the original guide while leading to the addition of a few follow-up questions for clarity and consistency. The interview guide addressed the following themes: school experiences leading up to struggles with school attendance, experiences of absenteeism, experiences and reflections on the support received from professionals, current situations, and hopes for the future. To mitigate interviewer bias, the guide provided a consistent foundation across all interviews, ensuring key topics were covered while allowing flexibility to explore participants’ unique experiences. Interviews took place at different locations based on the participants’ preferences, with one conducted digitally. The duration of interviews varied from 39 to 74 min. All interviews were recorded and transcribed verbatim.

2.3 Data analysis

A reflexive thematic analysis was conducted, following the stepwise procedure by Braun and Clarke (46). The six steps include (1) familiarization with the data; (2) generating initial codes; (3) searching for themes; (4) reviewing themes; (5) defining and naming themes, and (6) producing the report. NVivo 14 was used to store, code, and categorize data. The process of generating codes and themes was guided by an abductive approach, enabling the flexibility to shift between an inductive and deductive stance (47).

The analysis was conducted by the first and second author, both of whom hold prior knowledge and experience with SAPs through research. While these backgrounds offered useful insights, they also introduced a risk of influencing the interpretation of participants’ narratives, particularly in the identification of themes. Hence, reflective practices were required to mitigate biases from pre-existing assumptions (48). Initially, both researchers familiarized themselves with the transcribed interviews. Then, initial codes based on sentences and terms from the data were generated. These codes were combined and sorted to develop subthemes and overarching themes relating to the research questions. Regular meetings were held between the two authors to discuss their interpretations of the data. While no major disagreements emerged, occasional differences in emphasis were resolved by revisiting the data and collaboratively refining

interpretations. To further enhance reliability, the third author reviewed the themes and subthemes in light of the data material. Any uncertainties were discussed collaboratively until agreement was reached between all authors. In addition, member checks were performed by requesting feedback from each participant on the analysis results. Half of the participants responded and confirmed the study's findings.

2.4 Ethical considerations

The study was assessed by the Norwegian Agency for Shared Services in Education and Research (Sikt). Participants were contacted by professionals in the EPS or alternative provisions and asked if they wished to take part in the study. In line with national regulations, participants aged 16 and above received a consent form tailored to their age, containing written information about the study and the entailments of participation. For participants under age 16, parental consent was obtained through a separate consent form. Prior to each interview, the written information was repeated and reviewed orally with participants to ensure understanding and address any questions. Confidentiality was maintained throughout the research process. This was ensured by using pseudonyms and presenting demographic details in aggregate form, without linking gender to individual participants, particularly given the small sample size. All participants were informed of their right to withdraw from the study at any time.

3 Results

The analysis produced five main themes along with respective sub-themes. The first three main themes; (1) Perceived causes and maintaining factors, (2) Emerging absenteeism, and (3) Being absent were associated with the first research question, focusing on youths' perceptions of causes and experiences regarding SAPs. The remaining two main themes; (4) Adults "behind the curtains" and (5) Interventions and support were associated with the second research question, which explored youths' perceptions of support for SAPs from professionals. Figure 1 illustrates the main findings, including main- and subthemes, with detailed descriptions provided for the subthemes. Quotations, translated from Norwegian, are included to illustrate the themes and subthemes, with participating youths denoted as Y1, Y2, Y3, etc., followed by their respective age.

3.1 RQ1: What reasons do youth who previously struggled with SAPs attribute to their development and persistence, and how do they interpret their experiences?

This dimension consists of the three main themes "perceived causes and maintaining factors", "emerging absenteeism", and "being absent".

3.1.1 Perceived causes and maintaining factors

The youths shared similar perceptions regarding the reasons for their SAPs, describing a variety of factors primarily related to the school environment and individual vulnerabilities. This theme encompasses both causes described as onset and maintaining factors, which appeared to highly overlap. Subthemes include individual vulnerabilities, social disconnectedness, bullying, teacher support, and being misunderstood.

3.1.1.1 Individual vulnerabilities

All youths exhibited anxiety related to school attendance, stating it as one of the primary factors contributing to their SAPs. Hence, nearly all youths had a diagnosis of anxiety (8), and half of them were also diagnosed with depression (4). Some described experiencing anxiety and depression since early childhood, even before starting school, while for others, the onset of anxiety and depression coincided with the beginning of their absenteeism.

However, in all cases, anxiety was or eventually became related to aspects of school attendance and often intensified by consequences of being absent from school. Several youths reported that their anxiety was linked to social dynamics, leading them to worry about how their peers perceived them or to interpret social interactions negatively.

"Social anxiety is like.. I was afraid of people, basically. And there are a lot of people at school" (Y4, 16).

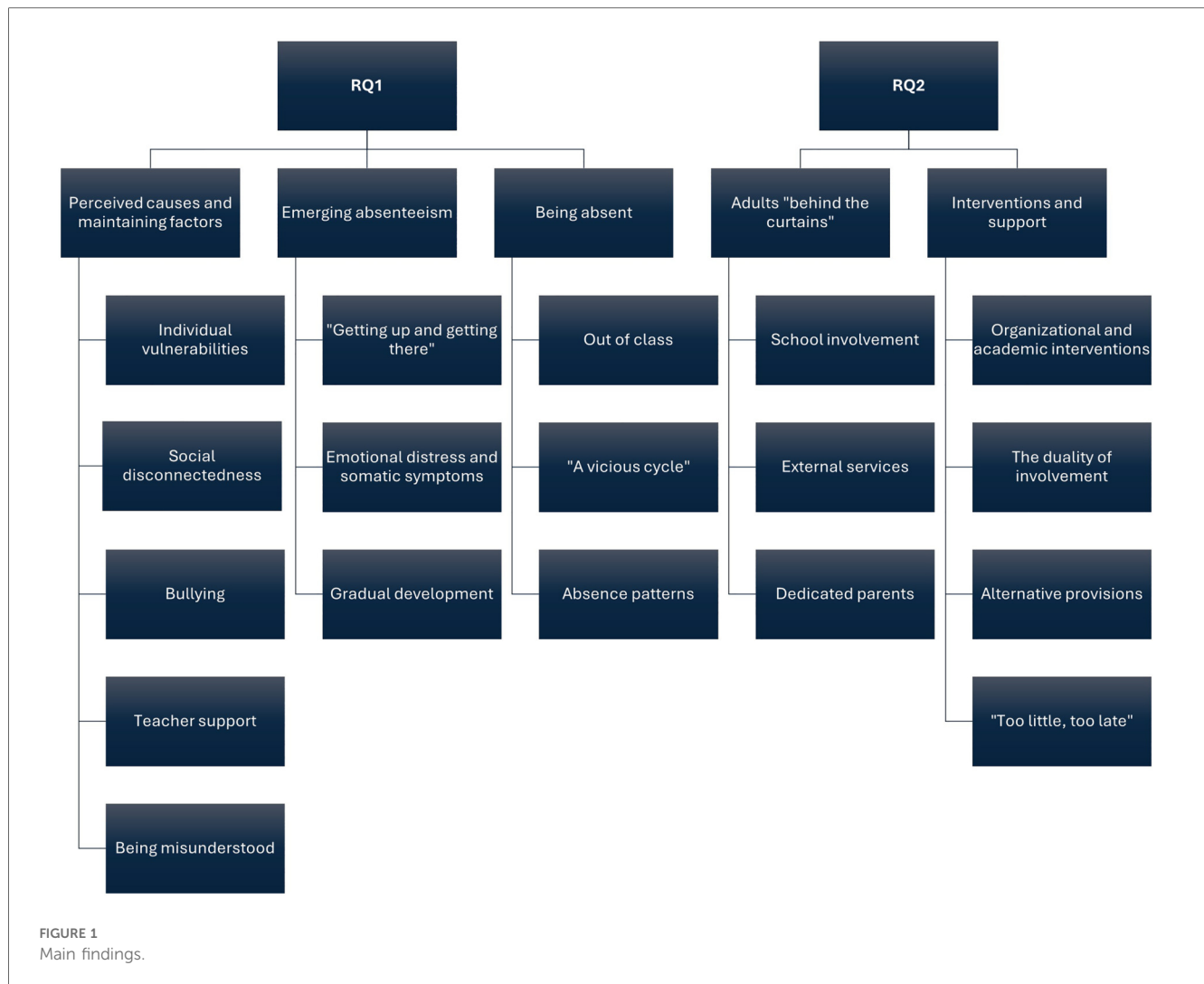
"It was of course, anxiety, linked to like, what others thought when you were gone and stuff. When you first come back, will you get questions about it, and I didn't have any reason, or like, any good reason, to why I was gone, so, I had to try and find excuses for that too" (Y5, 19).

Neurodevelopmental disorders such as ADHD (4), OCD (2) and ASD (1) were present with seven of the youths who all believed that features of these disorders played a significant role in their struggles to attend school. However, most of them were diagnosed a while after the onset of their SAPs, of which all expressed the belief that an earlier diagnosis would have led to necessary support from the school sooner.

"It would have made a big difference for me [...] Because I couldn't manage socially, I couldn't manage academically, I couldn't succeed in any areas. And that made me think I was the problem" (Y8, 18).

3.1.1.2 Social disconnectedness

Being socially disconnected emerged as a major cause for the youths' SAPs, with all of them experiencing a sense of disconnect from peers and classmates. While for some, the feeling of not belonging existed before the onset of SAP, for others, it developed as a result of being absent, contributing to the persistence of their SAPs. The youths described difficulties in accessing, making, and maintaining friendships, as well as



feelings of being “outside”, “excluded” or “invisible” in peer relationships.

“I never made it in, so I didn’t really have any friends or anything social at secondary school. And that doesn’t exactly help [...] when there isn’t anything or anyone to come to” (Y4, 16).

“[...] Over time it was, in fact, loneliness. Because I started to feel like I was on the outside, of the class, because I wasn’t there as much anymore” (Y3, 17).

3.1.1.3 Bullying

Seven of the youths reported bullying as a significant contributor in the development and persistence of their SAPs. The youths experienced a combination of different types of bullying (e.g., physical, verbal, relational, biased-based, and digital) that were ongoing at the time their absences occurred, and which frequently went undetected or was inadequately addressed by the school.

“I hadn’t told the teachers about the bullying, but it was visible enough, because I was probably the school’s most bullied kid at the time. And since I didn’t say anything, the teachers didn’t care” (Y2, 19).

3.1.1.4 Teacher support

Most of the youths emphasized the importance of receiving support from teachers or other school staff. For instance, several of the youths’ experiences with frequent teacher changes, which introduced unpredictability and contributed to the development of SAPs, underscored their need for consistent teacher support.

“In sixth grade, we got new teachers. Like all of them were new. And that came on top of everything else, so then it just all fell apart, really [...]” (Y4, 16).

When the youths were asked about their relationships with adults at school prior to and leading up to being absent, most of them brought up experiencing a lack of appropriate support. For some, this was mainly related to academic aspects, although

emotional and academic support were commonly described as intertwined.

“[...] I had a hard time [emotionally], and the way the teachers handled it was to put me in a group with the ones that were academically weaker, which was certainly not what the problem was for me” (Y10, 18).

Some youths described a lack of emotional support relating to not feeling valued or cared for by teachers or school staff. This contributed both to the development of their SAPs and served as a maintaining factor for their absences.

“[...] When the adults – the principal, the office lady, the school nurse, the teachers – when everyone stopped asking me how I’m doing [...] That doesn’t exactly make you feel welcome. So, I felt very unwelcome... like, I wasn’t worthy. I felt like, excluded, from school, from the adults, from everyone” (Y7, 17).

3.1.1.5 Being misunderstood

When asked about how they were met by the adults at school before their SAPs, most youths described feeling misunderstood in the sense of being underestimated, viewed differently, or perceived academically weaker than their peers.

“I wasn’t seen for who I am and, I didn’t get any more help than just getting praised for doing extremely simple things, that anyone could have done” (Y2, 19).

In continuation of these experiences, half of the youths felt defined by their challenges and experienced that their teachers perceived them as a “problem-child” or “trouble-kid”, focusing primarily on their difficulties rather than acknowledging their strengths or individuality.

“I was just looked at as like a trouble-kid. Kind of like, one who doesn’t care about school, so, they were more frustrated than worried about me” (Y8, 18).

3.1.2 Emerging absenteeism

This theme was produced from descriptions of the youths’ experiences regarding the emergence and the gradual establishment of SAPs and subsequent absenteeism. It consists of the subthemes “getting up and getting there”, “emotional distress and somatic symptoms”, and “gradual development”.

3.1.2.1 “Getting up and getting there”

In addition to causes related to the school environment, several youths highlighted that physical barriers added to the challenge of attending school. This included getting up and out of bed in the morning or enduring long or stressful journeys to school, which increased stress levels and often led to tardiness or absenteeism. Moreover, several youths emphasized the challenge

of the “doorstep test”, explaining that “the thought of school” appeared more stressful than physically being at school, with “getting there” as the most challenging aspect.

“It’s actually ok to be there, it’s better than staying home feeling guilty over not being there, right. But, getting up and getting there is the most difficult thing” (Y5, 19).

Different tactics were employed to avoid the stress associated with attending school. For some of the youths, absenteeism started with pretending to be ill to convince their parents to let them stay home.

“[...] I was a lot of fake sick. I said “oh, my stomach hurts, my throat hurts”, right, and my mom, she struggled because she was thinking, “should I respond to her emotions or should I force her to go to school” (Y6, 19).

Others took a different approach, hiding their absence by leaving the home, pretending to attend school but instead spending their time elsewhere.

“[...] I got up and left home, I just never went to school” (Y9, 22).

3.1.2.2 Emotional distress and somatic symptoms

The youths described experiencing a range of negative emotions linked to their SAPs. These were frequently anxiety and stress associated with the thought of attending school, as well as sadness and guilt tied to their inability to maintain regular school attendance.

“Everything was generally very negative at that time [...] I just wasn’t happy at all” (Y2, 19).

Some youths expressed frustration or anger, directed either towards their teachers, their peers or the school environment for not being accommodating, or towards themselves for struggling. Many of them had negative thoughts about themselves and described feeling “stupid”, “unworthy” and “alone”, suggesting a negative self-image and low sense of self-efficacy.

“I overthink that “you can’t do this, you are not good enough”, and stuff like that” (Y7, 17).

The negative emotions were frequently accompanied by somatic symptoms, such as discomfort, high heart rate, breathing difficulties, stomachache, nausea, or headache. These symptoms would often appear right before attending school but would diminish when school was avoided.

“Eventually it became terrible being at school, and that’s when I started getting nauseas, headaches and stomachaches, and I was barely able to breathe” (Y1, 12).

“I couldn’t get up from bed, and if I managed to get up from bed, then I could barely look at the door before feeling sick [...] And I would get frustrated with myself for not being able to go, but at the same time it was like, if I go out that door, I’m going to throw up in the backyard” (Y7, 17).

3.1.2.3 Gradual development

For all youths, SAPs developed gradually in severity, with initial difficulties attending school increasing into more serious and persistent absences. A few of the youths reported having positive school experiences prior to the onset of their absenteeism, particularly during their primary school years. However, most of the youths described having a difficult time at school from the very beginning of their educational journey, which eventually led to SAPs and absenteeism. In the initial stages, SAPs typically began with difficulties attending school, gradually leading to occasional absences and eventually escalating into increased levels of absenteeism.

“[...] I was away once a week, then two times a week, until eventually I nearly wasn’t at school at all” (Y6, 19)

“After a while I started skipping more and more classes, and I used to, maybe come to school and sit in class and after a while I would go and sit in the locker room or something. And then, gradually, it got worse and worse, and I was less and less at school” (Y4, 16)

Except for two, all youths reported an increase in their difficulties during the transition to lower secondary school, facing larger and more unpredictable environments, as well as changes related to academic and social demands. Some of them expressed an increase in difficulties with social interactions, feeling uncertain about their friendships and struggling to fit in with peers, while others pointed to challenges in adapting to new teachers and the introduction of grades. For some, the reduced monitoring from teachers made it easier to avoid staying in class.

“In primary school, they follow up with you in another way [...] But in lower secondary school, you become responsible for getting to classes, watching the time and all that. And so, it’s much easier to sneak out and hide” (Y8, 18).

Eventually, as they continued struggling with increasing SAPs, most of the youths described reaching a breaking point, which led to more established absenteeism.

“After a while, it became really bad. I couldn’t fake through it anymore. Like, I wasn’t able to come anymore” (Y2, 19).

“I just couldn’t do it anymore. I was so broken down and burnt out and just in a really black hole” (Y10, 18).

3.1.3 Being absent

This theme concerns the youths’ descriptions of their experiences and the characteristics of their absenteeism, including the subthemes “out of class”, “a vicious cycle”, and “absence patterns”.

3.1.3.1 Out of class

The youths’ whereabouts outside of class varied. However, most of them stayed at home with their parents’ knowledge. They described spending their time sleeping, playing online video games, using social media, reading books, or watching TV.

“Sometimes I just sat and played [videogames], or sometimes I slept, just to avoid it all” (Y5, 19).

Three of the youths tried to hide their absenteeism from their parents by either attending school but not showing up in class or by pretending to go to school but going elsewhere instead.

“I used to go to school because my parents wanted me to, and then I would leave school and just hang around somewhere else” (Y4, 16).

“I ended up sitting in the school toilets for many hours [...] Because if I went home and played truant, I would get disciplined for that” (Y8, 18).

3.1.3.2 “A vicious cycle”

Based on the youths’ descriptions, it appears that being absent from school formed a vicious cycle of conflicting feelings that was difficult to break. While avoiding school gave them a temporary sense of relief, the consequences of their absence were often followed by negative emotions and guilt.

“When I woke up and thought “I have to go to school”, it was that instant relief when I got to stay home. And then came the anxiety of not being at school again [...] So, it was a bit like, a roller coaster every day, really, of emotions” (Y6, 19).

“It’s a vicious cycle, so to speak [...] Because, when you stay home, you know you really should have been at school, so it doesn’t help to stay home either. You’re just avoiding” (Y5, 19).

Several youths emphasized that the consequences of absenteeism, such as missing school activities, falling behind academically, or developing a habit of being away from school, often led to more absenteeism, making it harder to break the vicious cycle. Hence, to cope with the negative emotions, some described a need to do something productive, such as schoolwork, while being home from school.

“[...] Because, if I did nothing, I felt more guilty” (Y3, 17).

3.1.3.3 Absence patterns

Most of the youths experienced periods of increased difficulty. These experiences could be related to attending specific classes, subjects or dealing with specific teachers that the youths found uncomfortable. More commonly, however, were the challenges of returning to school after illness, weekends, or extended holidays.

“After a holiday or a weekend, I would barely manage to go to school because I had gotten used to staying home” (Y7, 17)

There were also periods or situations when the youths found it easier to attend school, frequently related to classes or subjects they enjoyed.

“When there were subjects that I liked, I always tried to attend them, specifically. Because then I managed to push myself through it more often” (Y2, 19).

3.2 RQ2: How do youth who previously struggled with SAPs perceive the support they received from professionals?

This dimension consists of the two main themes “adults behind the curtains” and “interventions and support”.

3.2.1 Adults “behind the curtains”

This theme contains descriptions of the school staff, parents, and professionals from other support services that became involved in providing support to the youths after absenteeism had started. These professionals were commonly described by the youths as those who worked “in the background” or “behind the curtains”. Subthemes are “school involvement”, “external services”, and “dedicated parents”.

3.2.1.1 School involvement

The youths were asked about the time at which their school began to worry or take action to address their absenteeism. While all youths acknowledged the schools’ attempts to support them, most reported that the schools’ actions were either inappropriate or initiated too late, at a point when their absenteeism was already well-established.

“They didn’t initiate anything before it had gotten extreme” (Y2, 19).

Several youths described feeling that despite the schools’ efforts to help and support them, they encountered a lack of competency and understanding from the staff regarding their difficulties. This frequently led to measures feeling insufficient or not tailored to their individual needs.

“There were a lot of people who tried to help, but I think many of them didn’t have enough competency to actually be able to help me” (Y8, 18).

“[...] They involved themselves in the wrong way, so to speak. They didn’t understand the problem” (Y10, 18).

3.2.1.2 External services

As school initiatives proved insufficient, all the youths eventually received additional support from external professionals, including those working in educational, psychological, or social services within the community. However, it appeared that the youths were not always in direct contact with these professionals.

“I think as a child you don’t know all that is being done behind the curtains” (Y10, 18).

A few of the youths described experiencing inconsistency in the professionals they encountered, with frequently changing personnel making it difficult for them to build trust and feel supported.

“There were nine, ten different people that came in and out all the time, and who were talking to me [...] I saw each of them once and then they just disappeared” (Y1, 12).

In addition, all youths received assessment and support from the child and adolescent mental health service (CAMHS) and had been in direct contact with a therapist. However, the youths frequently described a lack of coherence between the support provided by CAMHS and what they received from their school, with therapists prioritizing emotional well-being and schools mainly focusing on attendance and academics. A few of the youths expressed the belief that the school staff lacked awareness of their mental health needs and how to accommodate them appropriately within the school environment, resulting in fragmented support.

“I always had a therapist, so, I think they thought, “we don’t need to bring these issues at school further up the system because you have a therapist” (Y8, 18).

3.2.1.3 Dedicated parents

Several youths expressed having supportive and actively involved parents who initiated contact with the school and took on a coordinating role in the collaboration with both the school and other support services. Some youths recalled instances of tension or conflict between their parents and the school, often due to their parents’ perception that the school was not providing sufficient support.

“I didn’t know it at the time, but there was a constant friction between my parents and the school, on that topic” (Y9, 22).

Consequently, half of the youths reported that their parents attempted at least one school change to improve their situation. For one of them, transferring to another school significantly improved their experience. However, most noted that this did not prove to be a lasting solution.

“I changed schools [...] and I had it good for two years. But then it fell apart again” (Y6, 19).

3.2.2 Interventions and support

This theme was generated from the youths’ descriptions of the types of interventions that were arranged by school staff and other professionals to support them and consists of the subthemes “organizational and academic interventions”, “the duality of involvement”, “alternative provisions”, and “too little, too late”.

3.2.2.1 Organizational and academic interventions

Youths described a variety of organizational and academic interventions initiated at the school. Academic measures included adjusting academic demands and arranging home-based schoolwork. Organizational measures involved adjustment of school hours (e.g., starting school later or leaving school earlier), smaller group work, reviewing the weekly schedule in advance to increase predictability, and mobilizing an adult at school for assistance. Noteworthy, mobilizing an adult was perceived as the most helpful initiative, but this was largely dependent on whether the youths had a good relationship with the adult.

“There was one woman, I think she worked for the municipality or something, and the school had talked to her [...]. She came and met me, at home, and followed me to school. And I wasn’t a fan of it at all [...]. And I remember some days when she couldn’t come, my contact teacher did it instead of her. But, when he came, it was ok, because we were buddies” (Y5, 19).

The most common organizational measure reported by all except one youth was being assigned a separate room at school. Although this initially lowered the threshold for attending school, it was not helpful long term. Several youths described feeling more “alone” or “isolated” while in the separate room and noted that this increased the threshold for returning to the classroom with their peers. They also described receiving little help from teachers while in the separate room, who often did not have the time or capacity to provide individual support.

“In the beginning it was like, I was still in class, but I had access to the separate room, so like halfway through the day I could go and sit there. [...] But after a while I just came and stayed the whole day in that room” (Y3, 17).

“They said I could come to school, sit in a separate room, and stay there if it was too difficult to be in class. But when I did that, I ended up sitting there alone for three hours without anyone checking in on me” (Y6, 19).

3.2.2.2 The duality of involvement

Nearly all youths described having the opportunity to engage in decision-making before interventions were implemented.

However, there appeared to be a duality of this involvement. For instance, half the youths felt that they were given too much flexibility and found it difficult expressing a clear idea of what might be effective, as they felt uncertain about this themselves.

“Is there anything that could help, is there anything we can do, is there something that will help you”. I have no idea. I haven’t experienced anything that helps [...]. But at least they asked me. I just couldn’t help them help me” (Y6, 19).

Others felt their involvement was limited to responding yes or no to already proposed interventions by the school, rather than actively being involved in discussing possible adaptations. At times, they also experienced an expectation that they should support the proposal.

“I didn’t get to decide a lot. They were like, came in, had a meeting with like, the principle, the head teacher, whoever it was, and they were like “we decided this, do you agree”, and you were pushed to say yes” (Y7, 17).

3.2.2.3 Alternative provisions

For seven of the youths, the support that was offered within the school context was not sufficient to help them return to school. Eventually, these youths were offered alternative provisions, which provided them with a sense of finally receiving the help they needed.

“I remember feeling, ok, now things can change. Now there is someone other than the school nurse helping me. It felt more, real, sort of” (Y6, 19).

All of them described their time at the alternative provisions positively. Organizational aspects such as higher student-adult ratio, flexible time schedules, increased involvement and predictability, resources, and time were emphasized.

“The fact that they had a lot of time. Time to build relations and to build me back up. Because I was scattered to pieces. And they glued me back together, little by little” (Y10, 18).

The youths also described feeling validated and cared for by the staff at the alternative provisions, highlighting their knowledge and competency regarding their difficulties.

“When I talked about something, they knew, and they had heard it before” (Y6, 19).

Feeling adequately met and understood appeared to contribute to youths’ motivation to attend school and engage in academic and social activities, and all of them reported that their attendance and engagement increased as a result. Moreover, the same seven youths expressed that attending an alternative provision was the primary intervention that had a positive long-term impact on them.

“That school was the only thing that helped me actually go to school, be at school, get grades and contribute in class” (Y7, 17).

“I am really thankful for that school. If it wasn’t for them, I wouldn’t be here today. Simple as that” (Y9, 22).

3.2.2.4 “Too little, too late”

When reflecting on how their SAPs were addressed, most youths described deficiencies in the support they received from the school and other support services. Nearly all of them expressed that they wished that they had received support earlier and felt that this would have prevented their absenteeism from establishing.

“If there is anything I would have changed, it’s the fact that the measures should have been initiated many years earlier [...] Like I said, too little, too late” (Y9, 22).

4 Discussion

This study aimed to achieve an understanding of the retrospective experiences of Norwegian youth with a history of SAPs in compulsory education. The study was conducted in the context of the Nordic education system, characterized by free schooling, universal access, equity, and inclusive education policies (41, 43). These systemic features distinguish the Nordic context from other international education systems, affecting how SAPs are experienced and addressed across contexts [(e.g., (42))].

In the current study, two research questions were addressed: (1) What reasons do youth who previously struggled with SAPs attribute to their development and persistence, and how do they interpret their experiences? And (2) How do youth who previously struggled with SAPs perceive the support they received from professionals?

To investigate the first research question, youths’ perceptions of the onset and maintaining factors of SAPs, as well as their interpretations of their experiences were explored. First, anxiety was reported as one of the primary reasons for their SAPs, with nearly all having diagnosis of anxiety and depression. This corresponds to earlier research linking mental health difficulties, such as anxiety and depression, to SAPs (5–7). There was also a high prevalence of neurodevelopmental disorders (ADHD, OCD, ASD) among the youths, which were commonly diagnosed after the onset of their SAPs. These late diagnosis may have led to insufficient accommodations within the school environment, and thus delayed interventions aimed at preventing the development of SAPs. Recent research has found neurodevelopmental disorders to be pervasive among youth with SAPs and suggests they might also increase the risk of developing SAPs (8, 49). In addition, youth with neurodevelopmental disorders are more likely to experience mental health difficulties, especially anxiety and depression (50). This may explain the high frequency of both neurodevelopmental disorders and mental health diagnosis in the current sample.

Another contributor to the youths’ SAPs were issues related to the social aspect of school, which included experiences of various types of bullying, difficulties in friendship and peer relationships, and perceiving themselves as on the outside or as excluded from the peer group. Negative experiences with peers align with findings from previous studies involving youth with SAPs (13, 14, 33). Moreover, research consistently indicates that prolonged bullying has a range of harmful consequences related to health and psychosocial issues, with anxiety and depression being the most commonly reported mental health difficulties (51). Bullying has also been identified as a risk factor for SAPs in several studies, as it increases the risk of anxiety and avoidance (12, 21, 34). Experiences of social disconnectedness as a result of bullying and friendship difficulties may relate to the peer domain of the SAL theory (16). Students who feel alienated from their peers often experience loneliness, isolation, and withdrawal from classmates (19). Our findings suggest this sense of disconnection may worsen with increased absenteeism, which contributes to the persistence of SAPs. These findings collectively underscore the importance of school-wide proactive approaches that foster inclusivity, positive peer relationships and psychosocial safety to mitigate the risks of bullying and social disconnection.

Inadequate support and low expectations from teachers and other school staff was frequently reported by the youths, persisting as their SAPs and related difficulties emerged. Previous studies have found that both positive and negative teacher-student relationships significantly impact SAPs, serving as a protective buffer or as a risk factor [e.g., (22, 30, 31)]. In the current study, several youths reported feeling unsupported and academically underestimated, underscoring evidence from research showing that high and clear expectations from teachers are linked to lower levels of unauthorized absenteeism (9, 39). Many of the youths additionally perceived a lack of emotional support from teachers, feeling undervalued and misunderstood or labeled as a “problem”. According to Torrens Armstrong et al. (52), professionals’ perceptions and labelling of students with SAPs have the potential to either exacerbate their difficulties or allow for positive support. This has important implications as it stresses the importance of professionals adopting a strength-based approach in their work to support youth with SAPs, emphasizing their potentials and interests rather than their deficits or struggles, to support the development of effective interventions. When youth perceive their teachers as academically and emotionally unsupportive, this may lead to them feeling alienated from their teachers which increases the risk of SAPs (18, 19). These findings align with previous studies suggesting that lacking positive relationships with teachers may contribute to establish and worsen absenteeism (11, 20, 21).

The youths experienced a gradual development of their SAPs, accompanied by the presence of physical barriers, negative emotions, and somatic symptoms at the thought of attending school. These characteristics align with the typical SAP development described by Kearney et al. (3). Also consistent with the experiences outlined in this study, previous studies have demonstrated the presence of somatic and emotional distress triggering avoidance in youth with SAPs (13, 32), as well as

negative self-perceptions and low self-efficacy regarding school attendance (30). A lack of belief in the ability to cope with school demands and stressors may function to increase avoidance and gradually lead to established absence (16). The youths reported that their absenteeism emerged gradually and sporadically but tended to establish after reaching a breaking point where stressors exceeded their capacity to cope. In line with the findings of Baker and Bishops' (13) study, several youths experienced increased school absenteeism when transitioning from primary to lower secondary school, which introduced new academic and social challenges. To accommodate these challenges, it is important that school staff are aware of the risks youth face when transitioning to lower secondary school, such as adapting to a larger, more complex environment, navigating new social dynamics and academic demands, and coping with increased unpredictability (25).

As the youths' SAPs established, most of them eventually stayed home with their parents' knowledge, engaging in activities such as sleeping, reading, or using the internet. Similarly, Rohrig et al. (53), found that youth were commonly home alone using electronics when missing school. While the internet and social media might offer a temporary sense of connectedness, it may also have a prolonged negative effect on anxiety and social functioning in the real world, thus reinforcing absenteeism (32). This tendency relates to the youths' descriptions of conflicting feelings of temporary relief followed by guilt and anxiety from avoiding school, which also aligns with patterns described in a previous study by Dannow et al. (14). Although avoiding school provided an instant relief, anxiety towards school is likely to worsen as absenteeism extends, creating a vicious cycle of avoidance (23). Consequently, to cope with the guilt of not attending, youths often felt the need to engage in productive activities, such as schoolwork. This aligns with literature descriptions, noting that youth with SAPs often value learning and perform well academically (23), but may also experience learning difficulties, possibly due to falling behind on schoolwork because of absenteeism (15).

The vicious cycle of SAPs can be considered in relation to a SAL process (16, 19). In the present findings, alienation from peers emerged from youths' experiences of exclusion, bullying, and social disconnection. Alienation from teachers appeared in the youths' descriptions of feeling misunderstood, as well as emotionally and academically unsupported. Several youths also felt academically underestimated and perceived that teachers held low expectations of them, which along with the experience of falling behind on schoolwork, contributed to alienation from learning. Feeling alienated from these domains may lead to the development of SAPs, but continuous SAL may also reinforce absenteeism, acting as a maintenance factor for SAPs (16). This process can be illustrated by the youths' experiences with periods of increased difficulty, such as after staying home due to being ill or after a weekend or extended holiday. These instances have been identified as situations that pose a risk for developing SAPs (25). For the youth, the routine of staying home following these situations intensified the feeling of disconnection from school, making it more challenging to return. Nonetheless, youths

reported that attending school was easier in subjects they found enjoyable, underscoring the importance of professionals considering whether the youths' absence and attendance has a specific pattern to ensure a strength-based approach to intervention strategies (23).

The study's second research question aimed to address youths' perceptions of the support they received from professionals. Commonly, schools initially attempted to address the youth's SAPs, but most described these actions as inappropriate or delayed. School staff are effectively positioned to identify students with emerging SAPs, but this presupposes that they are competent in recognizing early signs and risk factors (25). Delayed or inappropriate support may allow SAPs to establish and facilitate a "wait to fail approach" (26). As a consequence of delayed intervention by the schools, all youth reported that external professionals from a variety of educational, psychological, or social services were brought in to extend support, suggesting a need for targeted interventions (26). However, in contrast to their direct engagement with school staff and CAMHS therapists, the youths struggled to differentiate between other professionals and to understand who had contributed what support, as their involvement was often perceived as taking place "behind the curtains". Still, the findings revealed inconsistencies in the support provided by external professionals, including CAMHS, particularly regarding their coordination with school initiatives. These findings contrast with recommendations from a recent systematic review highlighting that successful outcomes of school-based approaches toward SAPs were highly dependent on effective communication and cooperation between school staff, external services, and families (28). As a result of inconsistent collaboration, several youths described their parents as having to take on a coordinating role in collaborating with the school and seeking help from external support services. Dannow et al. (14) reported similar findings and emphasized that because parents do not have the sufficient qualifications to take on the primary responsibility for solving their child's difficulties, it could at worst result in them becoming a maintaining factor in their child's SAPs. However, it is probable that parents may at times be driven to take on this responsibility due to inadequate support offered by the school. This is reflected in the current study by the frequency of school changes initiated by parents as an attempt to improve their child's situation. Similarly, previous studies have indicated that youth with SAPs change schools more frequently than those without (15), and Heyne et al. (24) note that school changes may be warranted in cases where parents have lost confidence in the school.

One common school-level response to the youths' SAPs involved mobilizing an adult for assistance at the start of the school day. However, the perceived effectiveness of this was largely dependent on the youth's relationship with the adult, which underscores the significance of positive relationships between youth with SAPs and the professionals supporting them, as these relationships are crucial for effective intervention (27–29). The most frequent measure was getting assigned a separate room at school, initially perceived helpful as it increased

school attendance. However, youths described becoming increasingly detached from the school environment, in which they felt more disconnected and alienated from peers and teachers. Rohrig et al. (53) suggest that alternative options, such as separate rooms, should serve as a steppingstone between staying at home and staying in the classroom. In this study, however, the use of a separate room appeared counterproductive as it sustained or potentially increased the threshold for returning to the classroom. This finding supports the broader conclusions drawn in Boaler and Bond's (28) systematic review, which noted a significant lack of empirical evidence supporting the effectiveness of interventions delivered by school staff. Hence, more research is needed to identify and validate such strategies.

For most of the youth, school-level responses proved insufficient. Instead, alternative provisions had enduring positive effects on their attendance, grades, and social engagement. These outcomes were attributed to higher student-adult ratios, flexible schedules, increased predictability, involvement, and staff competency, all of which contrasted with their experiences in mainstream school. Likewise, both Wilkins (39) and Nuttall and Woods (27) noted the effectiveness of these factors in alternative provisions for youth with SAPs. Moreover, school or class size, flexibility and predictability have been reported to impact SAPs in mainstream schools (14, 22). On one hand, variations in these factors are a part of regular school attendance, requiring students to adapt to school expectations. However, schools have a significant responsibility in adjusting demands to accommodate students' individual needs, especially those who display difficulties. Therefore, mainstream schools might benefit from adapting strategies used in alternative provisions to improve support provided to students with SAPs. For instance, ensuring students' sense of flexibility and predictability in decision-making regarding their SAPs, in line with Article 12 in United Nations Convention on the Rights of the Child (UNCRC), is essential. While all youth in the current study had the opportunity to participate in decision-making, a prominent finding was that involvement was often twofold. Some experienced excessive flexibility that led to passivity because they lacked the knowledge or confidence to make informed suggestions, while others were presented with predefined measures they were expected to accept. These contrasting experiences emphasize the need for a balanced approach to youth involvement in decision-making. This may require professionals to offer guided choices while also encouraging an open discussion to ensure the achievement of meaningful participatory involvement. According to our findings, this balance seemed more attainable within the alternative provisions, likely due to higher resources and competency among staff regarding SAPs. The competency of school staff is critical for successfully implementing interventions toward SAPs, facilitating positive student-teacher relationships (27, 28), and early detection of risk factors (25). In the current study, all youth reported that support efforts were initiated too late, contradicting the emphasis on early interventions in the literature on SAPs, and corresponding to the notion that SAPs become increasingly difficult to reverse as they are allowed to establish (26, 28, 29).

5 Strengths and limitations

The current study is not without limitations. First, given the qualitative design, the study has limited possibilities for generalization across context, although it may hold transferability to comparable educational environments. The findings should, however, be interpreted within the Nordic educational context, where structural features may limit the direct transferability of findings to educational systems with differing structures, resources, or inclusion policies. Moreover, recruitment of participants who previously struggled with SAPs proved challenging, as evidenced by the small sample size and the withdrawal of four youths from the study. The small sample size may have introduced self-recruitment bias, as youth who agreed to participate in the study might have other characteristics than those who declined, potentially influencing the results. However, clear criteria for participant selection, particularly regarding SAP severity, could reduce the impact of these limitations and increase the validity of the findings. Moreover, the current study relied on self-reported retrospective accounts, which could result in data being shaped by subjectivity or inaccuracies in the youths' recollections of past experiences. With self-reported data, there is also a risk that social desirability and response bias have an impact on the data. A strength of this approach, however, was that it allowed for reflective insights into the youths' first-hand experiences, offering valuable perspectives on their challenges and experiences of support, which have received limited research attention in the past.

6 Conclusion

This study investigated Norwegian youths' retrospective experiences of SAPs and received support from involved professionals. First, youths outlined similar experiences of gradual onset of SAPs, accompanied by emotional and somatic distress, and conflicting feelings about school attendance. The study mainly identified individual (e.g., mental health and neurodevelopmental diagnoses) and relational (e.g., friendship difficulties, bullying, inadequate teacher support) factors as contributing to the development of SAPs. Findings indicate that relational factors, such as poor peer- and teacher relationships, along with falling behind academically, may lead to SAL which contributes to the onset and maintenance of SAPs. Second, youths' initial experiences of support within the school setting were perceived as inappropriate, insufficient, or delayed. Support from professionals from external services (e.g., educational, psychological, or social) was perceived as inconsistent and uncoordinated with school initiatives. Hence, most youths eventually attended alternative provisions, which had enduring positive effects on attendance and engagement in academic and social activities.

These findings underscore the significance of fostering early intervention efforts in schools, including protocols for systematic attendance monitoring to detect and support students at risk.

Efforts should focus on strengthening positive teacher- and peer relationships and providing individualized accommodations at the school level, to mitigate the risk of SAL and SAPs among vulnerable students. Effective collaboration between the youth, family, school and external professionals, with an emphasis on coherence between support initiatives, is essential to ensure timely and adequate intervention. For instance, regular, structured meetings between different stakeholders could be implemented to develop and monitor the effect of interventions. Moreover, the findings suggest that incorporating strategies from alternative provisions, such as flexibility, predictability, and involvement, into mainstream school support efforts may enhance the initial support provided to youth experiencing SAPs. Lastly, increased resource allocation for flexible, school-based interventions and interdisciplinary collaboration teams may be an important consideration for policymakers.

The current study adds to previous studies addressing youth perspectives on SAPs, identifying contributive factors among individual, relational, and contextual domains. In addition, youths' experiences of receiving support were investigated, offering insight into the perceived effectiveness and availability of interventions. To further explore support initiatives, future studies should include professionals' and other stakeholders' perspectives. Moreover, studies should focus on identifying and evaluating the effectiveness of intervention strategies offered by mainstream schools in cases of SAPs, as there seems to be lack of evidence-based practices provided within the school setting.

Data availability statement

The datasets generated and analyzed for this study obtain sensitive qualitative data from interviews with a vulnerable population. Due to ethical and privacy concerns, as well as the risk of participant identification, the raw data cannot be shared publicly. Access to anonymized data may be granted upon reasonable request.

Ethics statement

The study involving humans was approved by the Norwegian Agency for Shared Services in Education and Research. The study was conducted in accordance with the local legislation and

institutional requirements. Written informed consent for participation in this study was provided by participants aged 16 and above, or by legal guardians/next of kin of participants under the age of 16.

Author contributions

SEH: Conceptualization, Formal analysis, Investigation, Methodology, Project administration, Validation, Visualization, Writing – original draft, Writing – review & editing. TH: Conceptualization, Formal analysis, Methodology, Project administration, Supervision, Validation, Writing – review & editing. SH: Conceptualization, Methodology, Supervision, Validation, Writing – review & editing.

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EDITED BY

Joanna Anderson,
University of Cambridge, United Kingdom

REVIEWED BY

Martin Karlberg,
Uppsala University, Sweden
José Manuel García-Fernández,
University of Alicante, Spain

*CORRESPONDENCE

David Heyne
✉ info@davidheyne.org

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Addressing authorized absences: a school district's initiative to examine prevalence and promote proactive attendance practices

David Heyne^{1,2*}, Inge Verstraete³ and Marije de Wit³

¹School of Psychology, Faculty of Health, Deakin University, Burwood, VIC, Australia, ²Excellence in Attendance Support, International Consultancy, Netherlands, ³Samenwerkingsverband vo Zuid-Kennemerland, Haarlem, Netherlands

Background: Authorized absences often receive less attention from policymakers and researchers, despite having a similar impact to unauthorized absences. The GRIP study aimed to help a Dutch school district 'get a grip' on attendance by raising awareness of authorized absences and supporting improvements in attendance practices.

Method: Using an action research approach, two district-level consultants prioritized building trust with school staff, administrators, and district personnel to foster collaboration in the study. With the participation of 31 of the district's 33 secondary schools, they accessed and analyzed absence data from the 2018/2019 academic year. A key step was standardizing absence categories across schools to gain a clearer picture of absences across the district. A launch event was held to communicate findings and start helping schools translate data insights into attendance improvement practices.

Results: Authorized absences accounted for 85.5% of all missed class time. Sickness/medical-related absences and school-initiated absences were the most prevalent, comprising 75 and 16% of all authorized absences, respectively. There was little evidence that schools responded to authorized absences prior to the current study. Through the collaborative process that characterized the GRIP study, schools became more aware of authorized absences and received support in implementing practices to improve attendance, sparking growing interest among schools in establishing an attendance taskforce of their own.

Conclusion: Schools have substantial influence over authorized absences, particularly school-initiated ones, offering opportunities to reduce unnecessary absences. Six key drivers for improving school attendance emerged from the consultants' reflections: district-wide collaboration, trust-building through non-judgmental engagement, using data to trigger urgency, empowering schools with data-driven insights, applying a tiered approach to attendance, and adopting an adaptive approach for continuous improvement. Future research should focus on refining absence registration systems and incorporating qualitative methods to better understand authorized absences and improve interventions.

KEYWORDS

school attendance, authorized absence, unauthorized absence, school-initiated absence, sickness-related absence, attendance data, proactive attendance strategies, school district

1 Introduction

Students' presence at school provides educators with key opportunities to support learning, well-being, and readiness for adulthood (Heyne et al., 2024; Kearney et al., 2022). School absence – whether authorized or unauthorized – can disrupt this developmental process, affecting academic achievement (Keppens, 2023) and social-emotional well-being (Villadsen et al., 2024). The KiTeS framework (Melvin et al., 2019) highlights that school absence is shaped by interconnected factors, including school-level influences such as disciplinary procedures and support structures, as well as broader influences, such as cultural attitudes toward education and policies at local and national levels.

Efforts to improve school attendance continue to gain momentum, an important development given high rates of chronic absence (Chang et al., 2024). These efforts include fostering an inclusive school environment that supports students' sense of belonging, well-being, and engagement (e.g., Grant et al., 2023; McNeven et al., 2023; Solberg and Laundal, 2024). At the district level, initiatives to support attendance are expanding, as reflected in a growing body of research (e.g., Balfanz and Byrnes, 2018; Boaler et al., 2024; Brown, 2023; Corcoran et al., 2024; Lavigne et al., 2021; Rychcik, 2023), with some specifically targeting secondary school students (e.g., Daniels, 2020). Meanwhile, countries worldwide are increasingly reviewing policies and practices that holistically address students' educational, social, and emotional needs, including policies on attendance and school completion (Organisation for Economic Co-operation and Development, 2024).

Attendance and absence data¹ provide essential insights as schools, districts, and authorities work to support students, promote attendance, and reduce absence. First, knowing who is present upholds schools' safeguarding responsibilities, ensuring student safety (White, 2022). Second, data helps identify students struggling with attendance, enabling timely interventions within a multi-tiered support framework to prevent chronic absence (Heyne and Gentle-Genitty, 2024; White, 2022). Third, attendance data informs local and national policies and practices (Kearney et al., 2022; Kearney and Graczyk, 2022), influences resource allocation, and helps foster more inclusive learning environments (Heyne et al., 2022). The usefulness of attendance data depends on its quality and completeness (Kearney and Childs, 2022), and on how absences are categorized.

1.1 Authorized and unauthorized absences: the dominant dichotomy

Schools often classify absences as authorized (excused) or unauthorized (unexcused). Authorized absences include those the school deems acceptable based on satisfactory explanations, such as sickness, medical appointments, and religious events, as well as school-approved term-time holidays, while the unauthorized absences cover unexplained or unapproved absences such as truancy and

unapproved term-time holidays (Dräger et al., 2023; Hancock et al., 2013; Karel et al., 2022).

Research on the impact of school absence often focuses on total absences, but a smaller body of work has examined the distinct effects of authorized and unauthorized absences. Early studies suggested that unauthorized absences are more harmful to academic achievement than authorized ones, based on findings from primary-aged students in the US (Gershenson et al., 2017; Gottfried, 2009; Pyne et al., 2023) and both primary- and secondary-aged students in Australia (Hancock et al., 2013). These findings are thought to have contributed to the predominant focus on unauthorized absences in research and policy (Dräger et al., 2024; Klein et al., 2024; Weathers et al., 2021). A report on post-pandemic education policy, drawing on survey data from 26 countries, supports this view, noting that while absences due to illness increased during and after the pandemic, unjustified absences remain a common concern for countries (Organisation for Economic Co-operation and Development, 2024). Reflecting this, the survey itself focused on policies and practices addressing unauthorized absences, reinforcing the longstanding prioritization of unauthorized absences over authorized absences.

More recent research based on UK data suggests that both authorized and unauthorized absences throughout primary and secondary school are equally harmful to students' performance at the end of compulsory schooling (Dräger et al., 2024). In fact, both authorized and unauthorized absences negatively impact educational attainment similarly across each year of schooling (Klein et al., 2024). Even moderate levels of authorized and unauthorized absences negatively affect academic progress (Dräger et al., 2023), and authorized absences in secondary school and at the end of primary school are more harmful to achievement than authorized absences earlier in primary school (Dräger et al., 2024).

Beyond broad comparisons of authorized and unauthorized absences, some studies have examined the effects of different types of absences within these categories. For example, research on secondary school students found that both authorized absences due to illness and unauthorized absences due to truancy lowered the likelihood of students pursuing further education after school (Klein and Sosu, 2024). Another study of secondary school students found no difference in educational outcomes between authorized absences due to illness or domestic circumstances (e.g., a family crisis) and unauthorized absences (i.e., truancy) at the end of compulsory and post-compulsory schooling (Klein et al., 2022). These findings suggest that authorized and unauthorized absences can have comparable impacts, reinforcing the need for further research into each, as emphasized by Panayiotou et al. (2021).

1.2 Inconsistencies in the recording and reporting of authorized and unauthorized absences

There are inconsistencies in how authorized and unauthorized absences are recorded and reported, both across and within countries (Heyne et al., 2022). These inconsistencies stem not only from differences in national policies but also from variations within regions, between schools, and even among individual staff responsible for documenting and managing absences.

¹ We use 'attendance data' to refer to school records of both attendance and absence, as is common practice. However, since the GRIP study focused specifically on recorded absences, we use 'absence data' when discussing analyses related to the study.

Despite schools receiving official guidance on how to record authorized and unauthorized absences (e.g., Griffiths et al., 2022), variations persist. Some schools enforce stricter policies on term-time family holidays than others (Hancock, 2019), and even within schools, principals may treat absences of high-performing students more leniently (Keppens, 2023), such as by classifying certain absences as authorized that would otherwise be recorded as unauthorized for other students. In the UK, absences related to emotional distress are typically considered authorized but are sometimes recorded as unauthorized (Lester and Michelson, 2024). School staff also report difficulties in accurately classifying absences as illness, COVID-19 isolation, or emotion-based school absence (Ward and Kelly, 2024). In the US, definitions of habitual unauthorized absences vary by state, and schools often apply their own unofficial criteria (Gentle-Genitty et al., 2014). Additionally, tracking methods for unauthorized absences likely differ considerably across states (Conry and Richards, 2018).

Reporting requirements also vary. Some authorities mandate reporting all absences exceeding a certain threshold, while others focus only on unauthorized absences (Heyne et al., 2022). In the Netherlands, unauthorized absences must be reported if they exceed 16 hours in four weeks, while authorized absences are only reported under specific circumstances (Karel et al., 2022). As a result, there is no national register of authorized absences and little published data on their prevalence. However, a report from four municipalities suggests that long-term authorized absences are eight times more common than long-term unauthorized absences (Ingrado, 2023).

These inconsistencies in recording and reporting affect attendance management at school and district levels. The underestimation of the prevalence and impact of authorized absences can delay essential support (Karel et al., 2022) and contribute to inequitable interventions by skewing perceived needs for support. Municipalities may also be uncertain about their role in addressing long-term authorized absences, as the legal framework is unclear and seemingly absolves them of this responsibility (Ingrado, 2023). More reliable data on authorized absences is needed to better understand the issue and ensure appropriate support.

1.3 Illuminating school-initiated authorized absences

Authorized absences include those initiated by the school. Common examples are temporary removal from class (in-school suspension), temporary removal from school (out-of-school suspension), and permanent removal from school (expulsion), which are used as disciplinary measures in response to behavioral issues (Heyne et al., 2019; Maag, 2012). These absences are collectively termed school-initiated absences (Kearney et al., 2019).

School-initiated absences take various forms beyond disciplinary measures. These can involve schools subtly encouraging struggling students to stay home during tests to protect the school's academic performance, pressuring parents to collect children early, or failing to adequately support students with diverse needs – such as autistic students – hindering their full participation (Cleary et al., 2024; Heyne et al., 2019). Additionally, class absences due to school-related activities, such as re-exams or mentoring, may be recorded as 'absent' or 'present' depending on school, regional, or national guidelines. For example, in the UK, specific codes classify off-site educational

activities such as work experience, interviews, or sporting events approved by the school, with students counted as 'present' even when off school grounds (Griffiths et al., 2022).

School-initiated absences are notable for several reasons. First, although authorized by the school, they are often not in the student's best interests (Cleary et al., 2024; Heyne et al., 2019). For example, out-of-school suspensions can reduce students' engagement with school (Pyne, 2019), and, like unauthorized absences and those due to illness, absences due to school exclusion have been linked to lower academic achievement (Keppens, 2023). Second, exclusionary discipline disproportionately affects black and Latinx students (Weathers et al., 2021), reinforcing inequities in the education system. Third, while schools have limited control over some absences, such as those due to illness (Organisation for Economic Co-operation and Development, 2024), they have considerable control over school-initiated absences. Reducing these absences is therefore essential for schools and districts seeking to improve attendance to promote better outcomes for young people.

1.4 Summary and aims

Both authorized and unauthorized absences are linked to lower academic achievement. However, policies and research have often prioritized unauthorized absences. Meanwhile, school-initiated absences have received little attention, despite schools having more control over these absences from class. The current GRIP study contributes to the growing focus on district-level initiatives that proactively improve attendance by supporting all students and fostering a preventive approach to absence.

Commissioned and funded by the school district, the study was led by authors Inge Verstraete (IV) and Marije de Wit (MdW) and focused on secondary schools in a district in the Netherlands. Its aim was to help these schools 'get a grip' on attendance by raising awareness of authorized absences and promoting proactive attendance practices that support students and their development. This paper outlines the motivation, process, and progress of this district-wide initiative.

2 Method

Guided by a collaborative, context-specific problem-solving approach, the GRIP study focused on identifying and addressing all types of absences, not just unauthorized ones. The study embraced principles of action research to foster proactive and sustainable improvements in attendance practices, bridging the gap between research and the everyday realities of school practices (Edwards-Groves and Rönnerman, 2022; Manfra, 2019).

Conducted between November 2020 and October 2023, we outline the study's context for change (2.1.1), the problem addressed (2.1.2), collaboration and communication among partners (2.1.3), working with secondary schools to systematically collect absence data (2.2.1), reflections on practices for recording absences, leading to a uniform system for classifying absences (2.2.2), data analysis (2.2.3), and actions taken to influence knowledge and practice in the school district (2.3). For further methodology details, refer to the report by Karssen et al. (2023), *Grip op Geoorloofd Verzuim (Gaining Control over Authorized Absences)*.

2.1 Foundations for change

2.1.1 Study context

In the Netherlands, schools are legally required to record both authorized and unauthorized absences, but reporting requirements to the national service that administers education department regulations (DUO) primarily focus on unauthorized absences. Specifically, reporting is mandatory for unauthorized absences totaling 16 hours or more within 4 weeks, or continued unauthorized absences for four or more weeks. Authorized absences are reported only in specific cases, such as concerns about the duration and frequency of the student's absences (Karel et al., 2022).

The GRIP study was conducted in South Kennemerland, an urban area in the west of the Netherlands. The *Samenwerkingsverband vo Zuid-Kennemerland* (Collaboration of Secondary Schools in South Kennemerland) is an association akin to a school district, including 33 secondary schools across six municipalities, seven of which are special education schools. These schools educate about 20,000 students at all educational levels, under the direction of 14 school boards.

GRIP study data covered the 2018/2019 school year, prior to the COVID-19 pandemic, and included both quantitative and qualitative data, although this paper focuses on the quantitative data.

2.1.2 Impulse for action

The impetus for the study arose from the role of consultants IV and MdV in assisting South Kennemerland schools with supporting students with special needs and their parents, in accordance with the inclusive education law. Over several years, they observed rising student absences, particularly for those reported as sick. Their interactions with schools revealed a troubling trend: while most absences were authorized, they were often prolonged, highlighting a gap in the existing legal framework's focus on unauthorized absences.

Recognizing the need for a more comprehensive approach to address all types of absences, the consultants developed an absence policy and protocol in collaboration with community health services, youth and family services, youth health care and school doctors, care coordinators, and compulsory education officers. This guide, detailing roles and responsibilities at the first signs of absence, was disseminated across schools and relevant agencies in the district.

The consultants' commitment to promoting attendance was further reinforced by attending the 2019 inaugural conference of the International Network for School Attendance (INSA), which underscored the importance of a preventive approach to attendance that engages all students, including those with authorized absences. At the conference, poignant messages from youth, such as "Do not let go of us" and "Safety is the key," highlighted the value of inclusive attendance practices. The conference also deepened the consultants' understanding of the crucial role of data for early intervention and supportive responses to absence.

These insights, coupled with the consultants' earlier initiatives, culminated in the GRIP study, which they led as principal researchers. The study aimed to explore absence patterns and raise awareness about the importance of proactive district-wide practices for both authorized and unauthorized absences.

2.1.3 Partner engagement

To drive change, the consultants actively engaged key partners at all levels of the district's education system. Historically, partnership development was informal and infrequent, relying on schools

sharing information amongst themselves or through incidental consultations.

Employing an intentional and inclusive approach, the consultants built a broad coalition through strategic outreach. This coalition included decision-makers (directors from the district and school boards, and principals from the schools) as well as frontline professionals from 31 schools (team leaders, care coordinators, program counsellors, and administrative staff who provided absence data). The initiative was further supported by the Kohnstamm Institute and a data specialist. Study permission was obtained from the district's director and board members, and the consultants made persistent efforts to align all partners with the study's objectives.

Communication was key, with updates shared during biannual management and board meetings, as well as quarterly meetings with the district's support coordinators. Discussions focused on the study's status, timeline, expectations, and the individuals needed for upcoming steps.

2.2 Learning from the absence data

This section outlines the collection of absence data, the development of a standardized system for classifying absences, and the descriptive analyses used to identify absence patterns.

2.2.1 Accessing the data

To minimize the burden on schools, the consultants recruited a specialist in Dutch student administration systems. Her expertise ensured streamlined data collection from schools. Direct collaboration with the schools, characteristic of action research (e.g., Ward and Kelly, 2024), was essential for trust and cooperation. Consequently, data was provided by 31 of the 33 schools, representing 94% of the district's schools.

Schools were asked for the following information: each occurrence of absence, whether it was deemed authorized or unauthorized, date of absence, who reported the absence, the stated reason for the absence, whether there was a response to the absence, and who was involved in the response (e.g., mentor, care coordinator, youth doctor, school attendance officer). Background information on students, including sex, the type of education they were enrolled in, and year level, was also collected to provide context.

The specialist accessed data through the Magister student administration system, used by most schools, and integrated data from the remaining schools using other systems. All data-related interactions followed strict protocols, including agreements to ensure data confidentiality and integrity. Files were secured, and data anonymized to protect student privacy.

After combining the schools' datasets, the specialist began standardizing the data to address discrepancies (e.g., some schools recorded absences per half-day while others did so hourly).

2.2.2 Developing a uniform system for classifying absences

Recognizing inconsistencies in how schools recorded absences, including variations in the number and types of categories used, the consultants collaborated with the Kohnstamm Institute to develop a uniform classification system. The system was based on the SNACK screening instrument for school attendance problems (Heyne et al., 2019) and insights from the INSA conference.

The nine categories, detailed in [Table 1](#), covered both authorized and unauthorized absences, with examples in the table reflecting actual school data entries. These categories were established before re-classifying the schools' data.

Several details about the categories are worth noting. 'Absences not specified' was used when no information was provided by the school regarding the absence. For 'sickness/medical-related' and 'private matters', the decision for the student to miss school typically came from the parent. 'School-initiated: other' was categorized as an absence because, although students were engaged in other school-initiated activities, they missed scheduled instructional time. The category 'arrived late' was not sub-categorized by the length of lateness, as schools did not provide specific data on how late students were.

In the next stage of data preparation, the consultants mapped each school's absence categories to one of the nine standardized categories. For instance, a school with 12 different absence categories had them reclassified into the nine uniform categories. This process ensured consistent classification of all absences, regardless of the number or type of categories originally used by the schools.

In the final stage, the nine categories were classified as either authorized or unauthorized based on the definition provided by the current Compulsory Education Act of 1969 ([Government of the Netherlands, 2021](#)). Authorized absences were defined as those with a valid reason for not attending school, while absences that did not meet this criterion were classified as unauthorized, with the following clarifications. Schools generally classified 'school refusal' as authorized

when a doctor or healthcare provider indicated a reduced capacity for attendance. The exceedingly small proportion of school refusal absences classified by schools as unauthorized (0.0008% of all school refusal absences) were excluded from the analysis. For 'arrived late', some schools classified late arrivals as authorized, while others deemed them unauthorized. Due to limited additional information (e.g., whether lateness was due to a dentist appointment), it was not possible to verify classifications independently. Therefore, we adhered to each school's classification, labeling late arrivals as either authorized or unauthorized accordingly. The classification of absence categories as authorized or unauthorized is shown in [Table 1](#).

2.2.3 Data analysis

The dataset for analysis included 1,526,062 data points, covering absence details (date, reason, whether the absence was authorized or unauthorized, who reported the absence, whether a response was made, and by whom) as well as student background information (sex, type of education, and year level). This extensive dataset was managed and analyzed using SPSS ([IBM, 2021](#)).

Given the exploratory nature of the study, the analysis focused on identifying patterns in absences across the district, laying the groundwork for actionable insights. Accordingly, descriptive statistics were applied to summarize overall absence rates, authorized absences, school-initiated authorized absences, and the frequency of responses to absences.

2.3 Engaging schools in action

To maximize the study's impact in driving meaningful change across the district, the consultants employed three key strategies: communicating the study's findings, supporting schools in translating those findings into actions, and creating a district-wide network to help schools develop and implement their own attendance taskforces. These strategies are outlined below, with their observed impact discussed in Section 3.3.

Study findings were communicated both before and during a launch event. Prior to the event, a summary of the research report was shared with district and school boards, including aggregated data across schools and anonymized school-level data (with the 31 schools identified numerically rather than by name).

The consultants organized a celebratory, collaborative launch event to both recognize the schools' involvement in the study and build awareness and enthusiasm for improving attendance and managing absences. The event brought together a diverse group of participants, including representatives from the district and school boards, along with key staff from 26 of the 31 participating schools (84%). Attendees included 8 district personnel, 10 management members (6 school principals), 24 student support coordinators, 10 special needs coordinators, 6 behavior specialists, and the data specialist involved in the study. To foster an open and trusting atmosphere, school attendance officers and city council representatives were not present but were later informed of the study's findings.

The event featured both theoretical and practical elements, beginning with an informative morning session followed by an interactive afternoon work session. During the morning session, dynamic presentations were delivered by the consultants, a research partner from the Kohnstamm Institute, and an international expert in

TABLE 1 The nine absence categories in the uniform classification system, with examples.

Category	Examples for authorized absences
1. Absences not specified	
Authorized absences	
2. Sickness/medical-related	Illness; visit to the doctor, dentist, physiotherapist, etc.
3. Private matters	Wedding; funeral; religious event; driving test; conversation with the school attendance officer.
4. Incidents beyond one's control	Problem with public transport or taxi service.
5. School-initiated: punishment	Suspended; removed from the class as sanction for behavior; time out; red card; internal disciplinary measure.
6. School-initiated: other	In another class; discussion during class time (e.g., with the mentor); receiving individual assistance; educational needs support; in the study room; at student council; on a first aid course; doing chores; extracurricular activity outside of school; at peer leader activity; participating in a Top Talent activity; taking a re-exam.
7. School refusal	
Unauthorized absences	
8. Truancy	
Authorized and unauthorized absences	
9. Arrived late	

school attendance. These presentations covered the study's purpose, methods, key findings, the practical implications of data for improving attendance, and the pyramid framework for promoting attendance and reducing absence (Kearney and Graczyk, 2020).

During a networking break before the afternoon session, participants received a comprehensive package containing: a research report with aggregated data across schools, a school-specific report with tiered data based on the pyramid framework, a digital copy of their school's data, a template letter to parents emphasizing the importance of attendance, and a visually engaging poster highlighting key aspects of school attendance.

Designed as a quick-reference guide for school staff, this poster outlined various types of absence, conditions for a welcoming school environment, and challenges schools face in engaging all students. It also included key student and parent perspectives, thought-provoking questions for students about attendance, early warning signs of absence, practical tips for fostering positive relationships, and important safety considerations (Figure 1). This resource aimed to raise awareness and foster support strategies that promote student attendance and well-being.

In the afternoon, the consultants led a supervised work session that promoted active participation within and across school teams. They guided schools in analyzing their own data and identifying practical strategies to address attendance issues specific to their context. Each school received an individualized report, with data disaggregated by absence levels: Level 1 (students with 5% absence or

less), Level 2 (students with more than 5% and less than 10% absence), and Level 3 (students with 10% absence or more). The pyramid framework, also known as the multidimensional, multi-tiered system of supports, helped schools understand student needs and allocate resources more effectively – providing school-wide interventions at Level 1, targeted support for emerging absences at Level 2, and intensive support for chronic absences at Level 3 (Kearney and Graczyk, 2020). Schools were encouraged to monitor attendance consistently throughout the year, paying particular attention to early-year data, as patterns in the first month of the school year often predict future absences (Attendance Works, 2023a). To ensure the session led to actionable outcomes, staff were encouraged to identify specific implementation steps upon their return to school. Ideas that were generated included discussing attendance during staff meetings and having principals greet students at the school entrance.

At the conclusion of the launch event, schools were invited to establish their own attendance taskforces. This would involve using their school-specific reports to develop and implement tailored attendance strategies aligned with their goals, participating in district-wide attendance network meetings held three times a year, and receiving ongoing consultant support as needed.

Following the event, schools were provided with a digital copy of the general research report for broader dissemination. Since June 2024, they have also been receiving attendance-themed newsletters to further support their efforts.



FIGURE 1

Poster depicting key information, challenges, and practical tips for school staff. © Sophie Phoelich: <https://www.sophiephoelich.com/>.

3 Results

This section reports on absence rates, starting with overall absences for context, followed by rates of authorized absences, including school-initiated authorized absences. ‘Rates’ refer to the proportion of class time missed over the school year, aggregated across students in the 31 secondary schools, unless otherwise specified. In addition, we report the frequency of schools’ responses to authorized absences and observations of the study’s impact on district-wide attendance initiatives.

3.1 Rates of absence

3.1.1 Overall absence

Students in the 31 secondary schools missed an average of 6.9% of class time during the 2018/2019 school year (see Table 2), roughly equivalent to 2 weeks of absence over the year. Notably, absence rates varied considerably across schools, ranging from 4.0 to 15.7%.

When examining absence rates by sex, boys missed an average of 6.8% of class time, and girls missed an average of 7.1%. These sex-based averages are based on data from 30 schools, as one school did not provide sex-specific absence data.

The highest absence rates were observed among students in the 2nd and 3rd years of secondary school, at 7.4 and 7.5%, respectively, while the lowest rate was observed among 1st year students, at 5.5%.

3.1.2 Authorized and unauthorized absences

Among students in the 31 schools, 5.9% of class time was missed due to authorized absences, while 1.0% was missed due to unauthorized absences (Table 2). This means authorized absences accounted for 85.5% of the total missed class time (5.9% out of 6.9%).

Authorized absence rates varied considerably across schools, ranging from 3.4% at the school with the lowest rate to 12.1% at the highest. Similarly, unauthorized absence rates ranged considerably, ranging from 0.2 to 3.6% across schools.

When disaggregated by sex, girls had an authorized absence rate of 6.1%, while boys had a slightly lower rate at 5.9%. Unauthorized absence rates were 1.1% for girls and 1.0% for boys.

By school year, authorized absences were highest in the 2nd year of secondary school (6.7%) and lowest in the 6th year (5.1%). Unauthorized absences peaked in the 3rd year of secondary school (1.2%) and were lowest in the 1st year (0.5%).

The breakdown of absence rates by category is provided in Table 3. Across both authorized and unauthorized absences, the most common categories were sickness/medical-related absences (60.3% of all absences)

and school-initiated: other (10.8%). Among authorized absences, the two most common categories were sickness/medical-related absences (75.0% of all authorized absences) and school-initiated: other (13.4%). For unauthorized absences, truancy was the more prevalent of the two categories, accounting for 68.3% of all unauthorized absences.

3.1.3 School-initiated authorized absences

School-initiated absences, which were categorized as school-initiated: punishment and school-initiated: other, collectively accounted for 13.0% of all absences and 16.1% of all authorized absences (Table 3).

In regular schools, school-initiated absences represented 10.4% of all absences (i.e., both authorized and unauthorized), compared to 52.8% in special schools. In special schools, school-initiated absences were the most common category (52.8%), followed by sickness/medical-related absences (32.7%) and absences not specified (8.2%). In regular schools, sickness/medical-related absences were the most frequent category (69.8%), followed by absences not specified (11.7%) and school-initiated absences (10.4%).

3.2 Response to authorized absences

Across all schools, the vast majority of absences were not followed by any action (Table 4). Specifically, when considering all data, including instances where no information was provided about whether a response was made, approximately 9 out of 10 authorized absences (90.8%) went without a response, and approximately 8 out of 10 unauthorized absences (78.1%) also received no response. When looking only at instances where schools clearly indicated whether a response was made following absence (i.e., excluding instances of absence where no information about a response was provided), nearly 100% of authorized absences (1,246,617 out of 1,247,806) and 88% of unauthorized absences (111,442 out of 126,513) were not acted upon.

We also examined responses to absences separately for special and regular schools, using data not presented in Table 4.

For the 7 special schools, there was limited information regarding whether any action was taken in relation to absence. Of the 139,137 data points across the fields ‘yes’, ‘no’, and ‘no information’, 99.4% ($n = 138,329$) fell into the ‘no information’ category. The remaining 0.6% of data points ($n = 808$) indicated that no action was taken in response to unauthorized absences. Notably, there were no data points indicating that these schools responded to authorized or unauthorized absences.

In contrast, data from regular schools was more complete, with only 0.2% of data points indicating ‘no information’ about whether a response was made. For authorized absences, just 0.1% of data points indicated that ‘yes’, action was taken, while 99.7% indicated ‘no’ action. For unauthorized absences, 11.9% of data points indicated that ‘yes’ action was taken, whereas 87.9% indicated ‘no’ action was taken.

3.3 Observed impact of the GRIP study on school attendance initiatives in the district

The consultants leading the GRIP study observed a notable impact on school attendance initiatives across the district.

A significant ‘shock effect’ occurred when the study’s findings revealed previously unnoticed absence patterns to school staff. This revelation, facilitated by the study’s comprehensive strategy for

TABLE 2 Proportion of school time missed across students in 31 participating schools, relative to total possible school time during the 2018/2019 academic year.

	Average across all schools (%)	Minimum for a single school (%)	Maximum for a single school (%)
All absences	6.9	4.0	15.7
Authorized absences	5.9	3.4	12.1
Unauthorized absences	1.0	0.2	3.6

TABLE 3 Absence rates by category, as percentages of all, authorized, and unauthorized absences.

Category	Relative to all absences	Relative to authorized absences	Relative to unauthorized absences
1. Absences not specified	10.3%	na	na
2. Sickness/medical-related	60.3%	75.0%	na
3. Private matters	3.9%	4.9%	na
4. Incidents beyond one's control	0.1%	0.1%	na
5. School-initiated: punishment	2.2%	2.7%	na
6. School-initiated: other	10.8%	13.4%	na
7. School refusal	1.6%	2.0%	na
8. Truancy	6.3%	na	68.3%
9. Arrived late	4.5%	1.9%	31.7%
Total	100.0%	100.0%	100.0%

na, not applicable.

TABLE 4 Frequency (and percent) of responses to authorized and unauthorized absences, including instances with no information about whether there was a response.

	Authorized absences	Unauthorized absences
Was there a response to the reported absence?		
'Yes'	1,189 (0.1%)	15,071 (10.6%)
'No'	1,246,617 (90.8%)	111,442 (78.1%)
Sub-total for 'Yes' and 'No'	1,247,806	126,513
No information provided	125,259 (9.1%)	16,140 (11.3%)
Total for 'Yes', 'No', and No information provided	1,373,065 (100%)	142,653 (100%)

disseminating findings, was instrumental in establishing school attendance as a priority for schools. As a result, the consultants found it easier to introduce strategies aimed at reducing absences and promoting student engagement. Furthermore, school attendance is now a standing item in the district's annual management meetings, where discussions focus on fostering open communication and strong collaboration between the district and schools to ensure coordinated efforts in addressing attendance-related challenges.

This prioritization has already led to concrete actions across multiple schools. Since the launch event, the consultants have supported five schools in establishing their own attendance taskforces, with two additional schools expressing interest. These schools are receiving assistance in using their data reports to develop actionable strategies for attendance improvement. One school, for example, is updating its student information system to strengthen its capacity for data-informed decision-making about attendance improvement. In addition, the district is offering financial support to schools interested in launching projects to improve their data use, with plans to extend successful initiatives across the district.

A key aspect of the consultants' ongoing efforts is to keep school attendance a priority across the district. In their consultations with

schools, they emphasize the importance of the issue by posing the question: 'Why is this so important to us?' Through regular themed newsletters on new developments in the field of attendance, such as strategies for increasing parent involvement, they help maintain a district-wide focus on attendance improvement, sustaining the momentum generated by the GRIP study.

4 Discussion

The district-wide GRIP study focused on raising awareness of authorized absences in secondary schools and fostering a proactive approach to attendance.

4.1 Summary, interpretation, and implications

In this section, we summarize the key findings, interpret them in relation to existing literature, and consider their implications for policy and practice. Additionally, we consider how absence classifications can reflect or reinforce broader systemic factors, influencing educational equity.

4.1.1 Rates of authorized absence

Authorized absences were the primary contributor to student absence in our district's secondary schools, accounting for 85.5% of missed class time in the 2018/2019 school year. Specifically, of the total 6.9% of class time missed, authorized absences constituted approximately 5.9%, while unauthorized absences accounted for the remaining 1.0%.

Comparing authorized absence rates across studies is challenging due to variations in classification criteria, data collection methods, student populations (e.g., different ages), timeframes (e.g., absences measured over a school year or term), and contextual factors (e.g., data collected pre- or post-pandemic). Despite these differences, findings from other studies can still offer some valuable perspective. For instance, while authorized absences constituted 54% of absences in lower secondary education (ages 12–15) in Western Australia (Hancock, 2019), we found that authorized absences made up 85.5% of all missed class time in secondary schools (ages 12–18).

The high proportion of authorized absences across our district's secondary schools highlights the need for greater attention. Prior research indicates that both authorized and unauthorized absences negatively affect academic achievement, sometimes to a similar degree (Dräger et al., 2024; Klein et al., 2024). While policy and interventions often focus on unauthorized absences, studies suggest that even moderate levels of authorized absence can lower academic performance (Dräger et al., 2023). Developing effective policies and practices can help ensure that all forms of missed instructional time – including authorized absences – are appropriately addressed.

At the national level, policies in the Netherlands focus primarily on unauthorized absences, as schools are currently required to report only unauthorized absences to the national database, while the reporting of authorized absences is not obligatory (Karel et al., 2022). This means that a substantial portion of missed instructional time due to authorized absences is overlooked by authorities, and potentially also by districts and schools. National policies should be revised to require schools to record both authorized and unauthorized absences with equal detail, supported by uniform reporting standards for both types of absence. This more comprehensive approach would enhance the understanding of overall attendance patterns and support the development of more effective interventions.

At the district policy level, education authorities should mandate the inclusion of authorized absences in early warning systems, ensuring that frequent absences – regardless of classification – trigger structured, supportive interventions rather than being overlooked. By establishing clear policies, education authorities can ensure a uniform and proactive approach to identifying students with recurring authorized absences, allowing barriers to attendance to be addressed before they escalate.

At the school policy level, administrators should reassess attendance protocols to ensure that authorized absences are addressed as rigorously as unauthorized ones. Protocols should emphasize that the primary aim of recording attendance and absence is not just compliance but the early identification of students and families who may need support to address barriers to attendance. Schools can also implement mandatory staff training to help educators distinguish between different causes of authorized absences (e.g., illness, mental health challenges, and family obligations), ensuring consistent application of absence codes and helping staff recognize patterns of authorized absences as potential indicators of broader issues requiring intervention.

At the school practice level, schools should work to raise awareness of the cumulative impact of absences – regardless of the reason – on student engagement and learning. Also, frequent authorized absences may signal deeper concerns, such as health problems or disengagement from school. Schools should implement support systems to help identify and address these challenges, ensuring that staff can respond effectively when patterns of absence suggest an underlying need for support.

By embedding these measures into national, district, and school-level policies and practices, education systems can move toward a more balanced approach to attendance management, ensuring that all types of absence receive appropriate attention and response.

4.1.2 Sickness/medical-related authorized absences

Sickness/medical-related absences accounted for 75% of all authorized absences and were the most common category of

absences – authorized or unauthorized – in this study of secondary school students. A similar pattern was found in Dutch primary schools, where 75% of students in regular schools and 71% in special education were reported sick at least once during the school year (Pijl et al., 2021a). This consistency across primary and secondary schools suggests that sickness/medical-related absences represent a significant public health concern within the education system.

Although sickness/medical-related absences are often perceived as less problematic than other types of absence, they are linked to lower academic achievement and can act as a barrier to student success (Hancock, 2019). Students who miss school due to illness may be motivated to catch up on missed work (Keppens, 2023), and teachers and parents may be more supportive of these students than they are of students with other absences (Klein et al., 2022), yet an accumulation of sickness/medical-related absences can still hinder academic progress. To minimize this, Klein et al. (2022) recommended additional school-based support, such as tutoring during and after school, along with strengthening parents' home-based involvement by providing guidance on helping children keep up with schoolwork.

Beyond academic concerns, sickness/medical-related absences warrant close attention for other reasons. They may indicate underlying health concerns, including mental health challenges (Klein et al., 2022). Interviews with secondary school students suggested that absences recorded as sickness/medical-related are not always due to illness or medical appointments but may stem from family problems, peer conflicts, dissatisfaction with lessons, school disengagement, or simply a preference to do something else during school hours (Vanneste-van Zandvoort, 2015). Additionally, parents may report sickness/medical-related absences to mask other factors, such as family difficulties or a child's reluctance to attend school (Kearney, 2003; Reid, 2014; Thambirajah et al., 2008).

These findings and perspectives highlight the need for a dual approach – one that provides educational support while also uncovering and addressing the underlying reasons for absences reported as sickness/medical-related. According to Vanneste-van Zandvoort (2015), responding to absence reports should not be a routine administrative task focused on verification and control but should involve meaningful engagement with students and parents to understand their experiences. School staff should take a proactive role in these conversations, fostering open dialogue to uncover the real reasons behind reports of sickness-related absences.

Schools can further support families of students with frequent sickness/medical-related absences by providing targeted resources to ease transitions back to school. For example, Attendance Works (2023b) offers guidance to help parents determine when a child is well enough to attend. Additionally, schools can equip families with strategies to support students experiencing anxiety or other health-related attendance barriers (e.g., Parenting Strategies Program, 2022).

These family-level measures would complement broader school-based interventions aimed at reducing sickness-related absences and ensuring students receive necessary academic and well-being support. A structured, school-based approach to managing sickness-related absences is exemplified by the Medical Advice for Sick-reported Students (MASS) intervention (Vanneste et al., 2016). MASS focuses on early identification and systematic monitoring, with teachers encouraged to explore underlying reasons for absences (van den Toren et al., 2020). By fostering collaboration among students, parents,

school staff, and healthcare providers, MASS seeks to address root causes of absences and lessen their impact on students.

This approach may be particularly relevant in contexts like the Netherlands, where any legal guardian can report a child as sick regardless of the underlying cause, reinforcing the need for structured systems that ensure sickness-related absences are appropriately monitored and addressed. Moreover, because secondary schools often have less flexibility than primary schools in adapting or repeating missed instructional content (Pijl et al., 2021b), structured interventions such as MASS are especially valuable at this level.

Preliminary evidence from two non-randomized studies suggests that MASS may help reduce sickness-related absences among adolescents and young adults. A quasi-experimental study in 14 pre-vocational secondary schools (VMBO) involving over 900 students found that sickness-related absences in the intervention group decreased, after 12 months, from 8.5 days during a 12-week period to 4.9 days, while the control group showed less improvement (Vanneste et al., 2016). Similarly, a controlled before-and-after study in eight intermediate vocational education schools (MBO) suggested that MASS may have reduced sickness-related absences and depressive symptoms among the older students (van den Toren et al., 2020). However, the researchers emphasized the need for a larger randomized controlled trial to confirm these findings.

The high rate of sickness/medical-related absences calls for a comprehensive response that includes not only school-based interventions but also supportive policies at national and district levels. National policies could mandate standardized criteria for reporting sickness-related absences to education authorities, ensuring consistency across schools and reducing the risk of misclassification. At the district level, education authorities could establish guidelines for schools to systematically monitor patterns of sickness-related absences and incorporate this data into district-wide attendance-tracking systems to identify trends and guide early interventions. Additionally, funding and policy support for structured interventions like MASS could help schools to move beyond simply recording sickness-related absences, ensuring they are met with timely and appropriate responses that address both academic and well-being needs.

4.1.3 School-initiated authorized absences

School-initiated absences were the second most common type of absence, comprising 13.0% of all absences and 16.1% of authorized absences. These absences were categorized into two types, namely school-initiated: punishment and school-initiated: other. Understanding the nuances between these categories is essential for developing effective policies and interventions.

The school-initiated: punishment absences accounted for approximately 2% of all absences in the study. While exclusionary disciplinary practices, such as suspension and exclusion, make up a small share of absences, they carry substantial implications for student engagement and equity. These practices disproportionately affect marginalized groups, including autistic students (Cleary et al., 2024) and racial and ethnic minorities, such as Black and Latinx students (Weathers et al., 2021), deepening existing educational inequities. The work of Cleary et al. and Weathers et al. underscore the need for schools to critically assess their disciplinary practices. Readers may consult the practical guide by Addis and Hawkins (2025) for an in-depth discussion.

At the school and district policy levels, clear guidelines should limit punitive exclusionary measures. Schools should be required to record and report school-initiated: punishment absences, making it possible to assess their impact on students and identify disparities across student groups. Districts should also provide professional development on alternative disciplinary approaches, such as restorative practices, which effectively address behavioral issues without excluding students (Grant et al., 2023). At the national level, policymakers should incentivize schools to replace punitive measures with inclusive, evidence-based alternatives and require them to demonstrate efforts to reduce exclusionary discipline.

The school-initiated: other absences accounted for approximately 11% of all missed class time and involved students missing class due to activities initiated by school staff, such as make-up tests, mentoring sessions, and enrichment activities like Top Talent. While these activities offer students opportunities for support and enrichment, poor scheduling can lead to substantial loss of instructional time and disengagement from class peers.

To minimize these risks, schools should carefully schedule such activities to support students' academic and social-emotional needs without increasing class absence. Holding these activities during non-instructional periods reduces learning disruptions while maintaining peer engagement. Anecdotal evidence from a GRIP study school with low absence rates suggests that strategically scheduling mentoring sessions and make-up tests outside class time helps minimize disruptions to learning. The school coordinates school-initiated absences with students, parents, and relevant institutions, ensuring thorough documentation. This proactive approach minimizes the impact of missed classes by facilitating advance planning, enabling make-up work, and preventing scheduling conflicts for those students who already have significant missed class time.

Absence registration systems should distinguish between the two types of school-initiated absences: those related to punishment and those classified as 'other'. This distinction would allow for more targeted interventions, enabling schools to address exclusionary discipline practices while also ensuring that non-punitive school-initiated absences are scheduled in ways that minimize instructional disruptions.

4.1.4 The response to authorized absences

We found that schools rarely responded to authorized absences. In regular schools, only 0.1% of authorized absences prompted action, compared to 12% of unauthorized absences. In special education schools, over 99% of the data lacked information on whether action was taken in response to absences.

If the data from regular schools accurately reflects school practices, it suggests a major oversight in addressing authorized absences. One contributing factor may be policies that prioritize reporting unauthorized absences over authorized ones (Karel et al., 2022), leading busy school staff to allocate resources accordingly. Additionally, the misperception that authorized absences are less problematic may lead schools to not respond to them systematically. Alternatively, if schools did respond to authorized absences but did not document their responses, the lack of documentation prevents them from assessing how absences are addressed and whether interventions are effective. This, in turn, limits their ability to refine interventions and provide appropriate support.

Schools may need to enhance their systems for recording responses to absences. Technology-driven intervention management

can support accurate, real-time monitoring of absences and responses, reducing the risk of students slipping through the cracks due to inconsistent documentation (Heyne and Gentle-Genitty, 2024). This helps schools identify students experiencing challenges that may be overlooked because their absences are authorized and not scrutinized for underlying causes or impact.

Educational policymakers should emphasize the importance of responding to authorized absences to ensure underlying issues affecting student attendance are not overlooked. Supporting schools in adopting technology-driven attendance management systems and training staff in effective data management can help ensure a more comprehensive approach to student attendance and well-being.

4.1.5 The process of effecting change across the school district

The GRIP study aimed not only to analyze district-wide data on authorized absences but also to drive meaningful change in schools' attendance practices. Achieving such change required a carefully coordinated, multi-year process focused on three key phases. In the initial phase, the study identified patterns of absence, providing schools with a clear understanding of the challenges they faced. The second phase built on this foundation, as the consultants worked with schools to develop and implement tailored strategies, translating data insights into practical actions to improve attendance. In the third phase, a district-wide network was established to help schools develop and manage their own attendance taskforces, ensuring ongoing collaboration and sustainability. These three phases illustrate how deliberate efforts over time can build the capacity needed to address attendance challenges. We identified six key drivers that contributed to the positive engagement and actions observed during these phases.

First, the collaborative approach adopted throughout the study was instrumental in driving change across the district. From the outset, the consultants engaged interested parties² at multiple levels – including administrators from the district board and school boards, as well as management and key school staff – fostering inclusivity and a shared commitment to improving attendance. The consultants maintained an open-door approach, encouraging school staff to seek guidance and support, and to share ideas for the study. They also presented a summary of the gathered absence data to the district and school boards before the launch event, ensuring key decision-makers were informed and that the district, as the study's financier, remained supportive. This broad engagement, from administrators to frontline staff, was essential in securing the support needed for the successful implementation of attendance improvement strategies.

Second, the consultants' commitment to continuous communication and a respectful approach was crucial in building trust and maintaining schools' engagement throughout the process. By maintaining personal connections, providing regular updates, and respecting school autonomy, the consultants further strengthened trust in the initiative. They consciously used non-judgmental language in their communication, which encouraged schools' participation without defensiveness and fostered productive discussions about actively finding solutions for absences. By sharing school-specific data only with each school and

its board, the consultants created a constructive atmosphere that encouraged reflection without fear of being 'named and shamed.' At no point were schools made to feel they were 'doing it poorly.' This respectful attitude fostered a positive district-wide environment and ensured a low threshold for attending the launch event. The approach to engaging schools in the study mirrors the approach used to promote student attendance: fostering a safe, supportive, and inspiring environment that encourages active participation.

Third, as noted in the Results, the 'shock effect' drove immediate action among schools. Presenting school staff with previously unnoticed absence patterns in their own data heightened awareness and prompted a prioritization of attendance. This realization, particularly regarding high rates of authorized absence, led schools to quickly reassess their practices and explore new strategies. The urgency was likely amplified by the COVID-19 pandemic, which intensified attention to attendance issues.

Fourth, the interactive afternoon session empowered schools to take ownership of their data and start translating findings into practice. Schools could engage hands-on with their data, which fostered collaboration among school staff, reflection, and the development of actionable steps to improve attendance. This approach also encouraged innovation and the tailoring of strategies to each school's unique context.

Fifth, applying the pyramid framework – introduced during the morning presentations and explored in the interactive afternoon session – gave schools a structured tool to analyze their school-specific attendance data. While the 'shock effect' heightened awareness of overall absence rates, the framework helped schools recognize the value of Level 1 universal interventions to promote attendance and Level 2 targeted interventions to efficiently address emerging absence issues, rather than focusing solely on Level 3 absences. Providing schools with their data within this framework allowed them to analyze absence patterns through the lens of these intervention levels, fostering deeper reflection on school-specific absence patterns and resource allocation. With this structured approach, schools could integrate the framework into their ongoing attendance strategies, improving their ability to monitor absence patterns and tailor interventions. Additionally, the framework supports continuous evaluation, enabling schools to refine level-specific interventions based on data-driven insights and maintain intervention effectiveness (Heyne and Gentle-Genitty, 2024). For further guidance on applying the pyramid framework at school and district levels, readers may consult detailed discussions in Heyne (2024) and Heyne and Gentle-Genitty (2024).

Sixth, continuous reflection and adjustment throughout the action research process contributed to its positive impact. By critically evaluating assumptions and strategies at each stage – from data collection to intervention implementation – the consultants remained responsive to challenges and adaptable to feedback. This iterative approach allowed for real-time refinements, ensuring strategies remained effective and aligned with schools' evolving needs. It fostered a culture of learning and adaptability, essential for sustaining attendance programs (Heyne and White, 2024). The taskforces formed since the launch event demonstrate how the action research groundwork continues to support improvements in attendance practices. The consultants continue to raise awareness about attendance among school professionals, parents, and students, and they outline future actions through attendance-themed newsletters, reinforcing the long-term commitment to attendance initiatives.

² We use the term 'interested parties' instead of 'stakeholders' because the latter has been criticized for its colonial connotations.

Drawing from the key drivers described above, practical considerations emerge for districts seeking to develop and sustain meaningful change in attendance programs. A coordinated, multi-level approach – where district leaders, school staff, and other interested parties collaborate – ensures that commitment is reinforced and strategies remain aligned. Transparent communication across all levels of the school district, supported by dedicated facilitators such as attendance consultants, fosters trust and enables all parties to fulfill their roles effectively. Maintaining attendance as a priority across schools helps sustain schools' focus and propels linked activities that build and maintain momentum over time. Providing schools with actionable attendance data enables informed decision-making and encourages reflection on effective interventions, ensuring schools actively engage in improving attendance practices. The use of the pyramid framework further supports a data-driven approach by guiding schools in tailoring interventions at different levels of support. Finally, an ongoing commitment to evaluation and adaptation ensures that attendance interventions remain responsive and effective in the long term.

A strong policy foundation is essential for effective and sustainable district-wide attendance programs. In this study, documentation gaps limited schools' ability to fully understand attendance patterns and provide tailored support – approximately 10% of absences were classified as 'absences not specified.' Clear guidelines for categorizing and recording authorized and unauthorized absences and their sub-categories promote consistency across schools in tracking reasons for absences. This enables early identification of attendance concerns and timely intervention.

Beyond classification, policies should encourage district-wide collaboration and equip school staff with the resources and training needed to use attendance data effectively. Establishing collaborative platforms where schools share best practices and engage in joint problem-solving can further strengthen attendance outcomes across the district.

4.1.6 The systemic implications of absence classification

While this discussion has largely focused on the prevalence of authorized absences and efforts to improve attendance, it is important to consider how the classification of absences as authorized or unauthorized both reflects and reinforces broader systemic factors. Extrapolating from the KiTeS framework (Melvin et al., 2019), we recognize that the application of these labels and the responses they elicit are influenced by various factors, such as school disciplinary policies, cultural beliefs, perceptions of disability, and government regulations. For example, families from minority groups may be more likely to have their child's absences classified as unauthorized (Rosenthal et al., 2020), potentially undermining their sense of belonging in the school community and exacerbating educational disparities. Conversely, families with greater social capital may frame absences in ways that lead educators to label them as authorized, shielding their children from stigma or disciplinary action. Thus, absence classifications do more than document absences – they shape how educators, families, and students respond to absences.

By understanding how these systemic influences affect absence classifications, educators and policymakers can work to ensure labels do not obscure deeper issues or disadvantage specific student groups. One step is to review how absence codes are applied within a district and train staff in cultural sensitivity and the voluntary/involuntary absence

distinction described by Birioukov (2015). This distinction moves schools beyond deficit-based views of absences by recognizing that some absences stem from uncontrollable factors like poverty or health issues, and others reflect students' avoidance of negative experiences with peers, teachers, or curriculum. Applying this framework helps schools identify root causes of absence, implement appropriate interventions, and ensure that absence records support equitable attendance practices rather than reinforcing existing inequities.

4.2 Strengths and limitations of the study

4.2.1 Strengths

This study has several notable strengths. First, by focusing on secondary schools, the study addressed attendance patterns often shaped by the developmental and educational processes that can make attendance more challenging for adolescents, such as increased independence, a more complex school environment, and rising academic pressures (Heyne, 2022). Second, the study achieved a high participation rate, with 31 of 33 schools (94%) in the district providing data. This coverage enhances the generalizability of the findings within the district and offers insights into authorized absences that may be relevant for other districts with similar characteristics. Third, the use of daily recorded absence data collected by school staff minimizes recall bias, contributing to the reliability of the findings. Additionally, the sustainability of school attendance initiatives across the district was supported by the establishment of a district-wide network for attendance taskforces.

4.2.2 Limitations

Despite its strengths, the study has limitations that warrant attention, including variation in absence categories across schools, potential inconsistencies in how schools applied categories, and the timing of data collection.

First, the study relied on school-defined absence categories, which varied considerably and required systematization to allow for combined analyses. Although the consultants developed a standardized classification system informed by the literature, they remained constrained by the data provided by schools, potentially leading to gaps in capturing certain absences. For example, some categories found in the literature, such as 'school withdrawal' – where parents intentionally or inadvertently withdraw their child from school for short or extended periods (Heyne et al., 2019) – were not included in the study because the concept is not recognized in school registration systems. As a result, the study cannot offer insights into the prevalence of school withdrawal within the district.

Second, how schools applied absence categories may have introduced bias in prevalence estimates. For example, some schools may have assigned sickness/medical-related absences based solely on a parent's or student's initial explanation without further inquiry, even in cases where other reasons for absence may have been relevant. This could have led to over- or underestimation of the true prevalence of certain absence categories.

Third, the study used data from the 2018/2019 school year, predating the COVID-19 pandemic. The pandemic significantly altered school attendance patterns (e.g., UK Department for Education, 2023), with research indicating shifts in parent and youth attitudes, such as parents becoming more likely to keep children home for minor illnesses or safety concerns (Hancock, 2023). Therefore, the patterns of authorized absences

reported in this study may not fully reflect current patterns. While the findings offer valuable insights into pre-pandemic authorized absences, caution is advised when generalizing these results to the post-pandemic context.

4.3 Suggestions for further research

Future research would benefit from involving community partners, parents, and young people in the research process. While this study did not include these groups, their involvement in future research would provide valuable perspectives on authorized absences, particularly in identifying local solutions and tailoring interventions to meet the needs of specific student groups. Qualitative methods, such as interviews with students, parents, and educators, could be employed to uncover the underlying factors driving both authorized and unauthorized absences, providing richer insights that inform more nuanced strategies for supporting student attendance.

Enhancing absence registration systems is also essential for ensuring accurate and actionable attendance data. Researchers could collaborate with schools to refine these systems, such as by incorporating categories like ‘school withdrawal’. Finding the right balance in the number of categories is important: too many categories can discourage accurate data entry and increase inconsistency, while too few may limit valuable insights for educators and researchers (Nederlands Jeugdinstituut, 2024). Input from interested parties, including students, parents, and educators, is necessary to ensure that the categories are balanced in number, practical for support purposes, and compliant with legal requirements. A validation study, as suggested by Hancock (2019), could explore how schools apply decision-making rules for absence codes and whether these codes accurately reflect the reasons provided by parents and students.

The field of school attendance would also benefit from a more multidimensional approach to data collection. Relying solely on attendance and absence metrics offers an incomplete view of the students in our care. Future studies should incorporate additional data points, such as belonging, engagement, well-being, and progress in learning and development, to provide a more holistic understanding of students’ experiences (Heyne and Gentle-Genitty, 2024). Such a comprehensive approach would help schools identify students who may be physically or virtually present but not fully participating or progressing, enabling earlier interventions that address their identified needs.

5 Conclusion

This study contributes to emerging research supporting district-level initiatives to address attendance challenges. Our findings demonstrate that collaborative engagement with school staff, administrators, and district leadership, combined with strategic data use and frameworks like the pyramid model, can drive improvements in schools’ attendance practices.

By partnering with nearly every secondary school in the district, we highlighted the notable prevalence of authorized absences, including two types of school-initiated absences: those related to disciplinary measures and those where students typically remain at school but miss class time. Recognizing schools’ influence over these absences presents opportunities to reduce unnecessary class time missed. Schools can reassess their use of punishment-related

school-initiated absences, and for other school-initiated absences, a distinction can be made between those that support students’ development and those that are avoidable or potentially detrimental. Strengthening absence registration systems and incorporating qualitative research methods could further enhance understanding of authorized absences and inform more effective interventions.

All absences, including authorized ones, offer opportunities to understand and support students and families holistically. By thoughtfully examining absences—considering their underlying causes and their impact on students’ academic and personal development—schools can proactively address barriers to attendance and foster a more supportive learning environment. Strengthening this approach through the effective use of data ensures that schools and districts can translate insights into meaningful action, reinforcing their shared commitment to cultivating attendance practices that benefit students’ presence, participation, and progress.

Data availability statement

The datasets presented in this article are not readily available because they belong to the school district and the schools within the district. The schools granted permission to use their data for this study but did not consent to sharing the data beyond the scope of the study. Requests to access the datasets should be directed to Inge Verstraete, iverstraete@swv-vo-zk.nl.

Author contributions

DH: Writing – original draft, Writing – review & editing. IV: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – review & editing. MW: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The authors declare that Generative AI was used in the creation of this manuscript. Generative AI (ChatGPT) was used to assist in the editing of this manuscript, specifically for refining the clarity and flow

of the text. All content edited using generative AI was reviewed for factual accuracy and plagiarism.

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EDITED BY

Carolina González,
University of Alicante, Spain

REVIEWED BY

Angel Puig-Lagunes,
Universidad Veracruzana, Mexico
María Pérez-Marco,
University of Alicante, Spain

*CORRESPONDENCE

Ulla Irene Hansen
✉ hanul@ous-hf.no

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Parental perspectives on school attendance problems and the role of municipal support systems

Ulla Irene Hansen^{1,2*}, Ellen Kathrine Munkhaugen² and
Kenneth Larsen¹

¹Department of Education Science, University of South East of Norway, Horten, Norway, ²Division of Mental Health and Addiction, Oslo University Hospital, Oslo, Norway

Introduction: This study aims to explore parents' experiences collaborating with support systems in a Norwegian municipality for children who experience school attendance problems (SAP). The heterogeneity of SAP highlights the need for individualized measures tailored to each student's needs and collaboration between schools, municipal support systems, and the Child and Adolescent Psychiatric Outpatient Clinic (BUP). Empowering parents to advocate for their children is crucial in managing challenging situations.

Method: In total, 11 parents of students who received support from a school absenteeism team (SAT) participated in the study. This qualitative study uses focus group interviews as a data collection method.

Results: The results underscore the complexity of addressing SAP within municipal support systems and the need for a dedicated SAT to support students and empower parents. The parents underline the importance of having collaborative practices, evidence-based knowledge, structures, and procedures to ensure interventions are relevant and predictable. They emphasized the importance of establishing collaborative practices within the municipality.

Conclusion: Collaborating with parents as equal partners increased the sense of wellbeing for the parents and enhanced the students' decision-making process.

KEYWORDS

parents' perspective, collaboration, empowerment, knowledge, school attendance problems

Introduction

School attendance problems (SAP) comprise different types of absenteeism, such as anxiety-based school refusal (1), truancy (2), and parent- and school-based school withdrawal (3). Both school attendance problems and school absenteeism are problematic because of their frequency and/or duration (4). Students with SAP have a significantly increased risk of high school dropout, leading to potential unemployment, poverty, and social isolation in adulthood. SAP is a phenomenon that faces a complex and heterogeneous symptom presentation (5, 6). Various individual, school, and family factors influence this multifaceted issue. Individual factors encompass psychological problems such as anxiety and depression, learning difficulties, and neurodevelopmental disorders, such as attention deficit hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) (7, 8). School factors include, for example, the school environment, teacher-student relationships, peer relations, and bullying. Havik et al. (9) found an association between school refusal and truancy-related absenteeism and teachers' classroom management in lower secondary school. They suggest that one factor that

may increase the risk of school refusal and truancy is poor support from teachers. Transitions between education can be challenging for students with SAP and special needs (9). Ingul et al. (10) underline the importance of identifying transition problems in lower secondary school. Family factors include health issues, family dynamics, economic challenges, and difficulties within school-home collaboration (11, 12). Addressing all these factors requires a systemic approach involving schools and municipal support services to implement customized strategies that improve school attendance and prevent chronic absenteeism (12–14).

Parents of children who exhibit school attendance problems and children with special needs are vulnerable, often experiencing stress on multiple levels, which impacts their overall wellbeing (15). Parents support and influence their children's development, and being a part of their children's lives is a lifelong commitment (15–18). The complexity of parenting children with special needs can be overwhelming, and parents are often deeply involved in various aspects of their child's education (19). Acknowledging the parents' multifaceted role as part of the ecological system is essential to understanding their role. Thus, empowering parents is beneficial in addressing SAP. Empowerment is an internal process through which individuals gain control over their lives and ensure democratic participation within the community. This process highlights the strengths and competencies of each participant in the ecological system (20). Professionals are responsible for listening to parents who advocate for their children, recognizing that parents are constantly involved in their children's lives and often best positioned to understand their needs (17, 21–23).

Due to the multifaceted issues associated with SAP, Bronfenbrenner's Ecological Systems Theory (24) offers a comprehensive framework to analyze and address severe SAP. This theory elucidates the different environmental contexts and describes developments influenced by the interaction between these contexts. It emphasizes the importance of examining the interplay between the child and their family, school, and community to identify factors that may affect their school attendance. It also highlights the need for broader support when a student is absent from school (24). SAP is a multifaceted problem where complex school- and community-based issues may contribute. The arguments for implementing frameworks such as multi-tiered systems of support (MTSS) focus on how the different contexts impact SAP and problematic school absenteeism. The student's wellbeing is linked to a healthy school environment and well-functioning community systems. Therefore, a systemic approach such as ecological theory may combine individual and contextual factors (14, 16, 25, 26).

"Hemmasittare och vägen tillbaka" is a Swedish multimodal and manual-based program (henceforth referred to as HSP) designed to increase school attendance and reduce anxiety, depression, and other psychiatric symptoms (27). HSP was developed in Sweden, based on cognitive behavioral therapy (CBT), and has been developed in an environmental context. This multisystemic framework incorporates academic, behavioral, and social-emotional support based on the students' needs. HSP is organized into three phases: (1) the assessment phase, (2) the

intervention phase, and (3) the maintenance phase. Implementation of HSP or other systemic, multimodal intervention frameworks for SAP in municipalities often requires a school absenteeism team (SAT) with the following competencies:

- 1) The assessment phase is ongoing throughout the whole intervention period. The initial assessment phase is a core element of HSP, assessing the cause and reasons for absenteeism through assessment tools, school reports, and reports from other relevant support systems. The key part of the initial phase is to establish a safe and trustworthy relationship between the HSP professional, the student, and their parents, and get an overview of the reasons for the student's attendance problems. Strengthening the collaboration between the home and school is one of the key factors to address, alongside the support system around the student, combining all the measures that can help the student. Several services are relevant when children experience school attendance challenges, such as the Educational and Psychological Counseling Service (PPT), the Child and Adolescent Psychiatry Outpatient Clinic (BUP), the Norwegian Welfare and Labor Administration (NAV), and the Child Welfare Services (BVT).
- 2) In the intervention phase, the SAT professional will plan the student's activity. This plan may include behavioral interventions, academic adaptations, and individualized psychological interventions, and it is always based on the assessment that is verified by the student and the parents before implementing the plan. The plan is evaluated weekly by the student, their parents, schools, and other relevant professionals, and changes may be made to accommodate the student's needs. When the student has psychological symptoms, such as anxiety and depression, it will be necessary to consult and refer to, for example, the BUP. The SAT professional has been trained to understand this complex phenomenon, but it is important to get support from a specialist if needed. During this phase, the SAT professional will still be the closest to the family. Still, sharing knowledge about the student's needs and the measures implemented to enhance the relationship with the school and the PPT and prepare the student for the next phase is necessary. Once a deeper understanding of the student's needs and individualized measures has been established, the SAT professional will gradually transfer the responsibility for the student to the school and the PPT in the municipality.
- 3) The SAT will still be available in the maintenance phase but will be more distant. The SAT professional will still be available in this phase as a supervisor for the school and the support services, but the school will now be responsible for the activity plan and support at school. There can still be some support from SAT professionals, but the student and their parents must be willing to trust and accept support from other professionals as well.

The estimated duration of HSP is approximately 1 year. Still, the SAT noted that it would need more time for some students,

especially when the student has been absent for an extended period and has developed a sense of mistrust in, and alienation from, the system. We aimed to explore parents' experiences of collaborating with municipal support systems to address SAP using a systemic, multimodal intervention framework implemented by the municipality's SAT. This framework presented in this study represents a holistic approach that ensures a comprehensive assessment of the underlying causes of SAP and facilitates targeted interventions to address students' specific needs. A core framework element is helping parents and the school system understand and address absenteeism. The framework captures the need for coordination and collaboration between the support systems when handling this multifaceted issue.

The heterogeneity among students displaying SAP highlights the need for comprehensive intervention strategies. Multimodal treatments, based on thorough assessments and involving interdisciplinary approaches, are recommended for their effectiveness (2, 28). It is crucial for municipal support systems to acknowledge the overlap in psychiatric symptoms across types of absenteeism (2). Identifying individual and organizational factors that increase school attendance is essential to improve the utility of interventions for all students (12, 29). Previous research has emphasized that understanding the heterogeneity of this phenomenon is essential for understanding the student's situation, interests, and needs and for planning effective interventions. These interventions should be pedagogically sound, evidence-based, and codeveloped with the student, their family, and the school (12, 14, 30). Pérez-Marco et al. (4) conducted a systematic review of intervention programs for SAP. The study aimed to systematically review programs designed to reduce or prevent school refusal and truancy. They underline the fact that SAP affects family, peers, and teachers; therefore, it is essential to address SAP intervention in the context and implement a simultaneous intervention in the family. CBT strategies used in school refusal are evident, and truancy programs, such as psychoeducational techniques to better understand the student's situation, are preferred. Effective programs are characterized by cooperation and collaboration between all participants (4).

Due to the multifaceted problems of SAP, effective intervention programs are characterized by interdisciplinary perspectives so that students' treatment needs are met efficiently (4) and there is collaboration and cooperation with all relevant participants in the systems (4). In addition, there is a consensus that early identification and intervention are crucial to prevent severe school attendance problems. For example, Kearney et al. (14) suggest that an MTSS model can be used as a framework to prevent and detect attendance problems early and intervene in and support students experiencing SAP. Effective interventions are crucial when students show signs of absenteeism. Teachers need the knowledge to identify at-risk students and prevent severe school attendance problems (10, 31). Few studies report parents' perspectives on adequate municipal support of students with SAP.

In Norway, students up to the age of 24 have a legal right to education. The first 10 years of schooling are mandatory, while the final 3 years are voluntary. The Norwegian Education Act

emphasizes the responsibility of schools to collaborate with parents to facilitate meeting students' special needs and monitor and implement measures to address student absenteeism. Norway has no national registration system to monitor absenteeism among Norwegian students.

The present study

Severe SAP is a complex, global issue that has received increased attention recently. However, the literature regarding the parental perspective needs to be more extensive, especially concerning the topic of municipal-level support. There has been limited research on how a municipality-based support system may organize its support and what elements are needed in this support to give students and their parents sufficient help. Studying parents' collaboration experiences with schools and municipal support systems is required to understand how to address the complexity of this phenomenon. The impact of collaborative efforts among professionals in municipal support systems needs further exploration.

This study's objective is to explore parents' perspectives on interacting with the municipal support system. Further information that may enhance municipal-level support and the implementation of HSP.

Methods

Participants

The study targeted the parents of 11 students who had received services from the SAT in a rural municipality during the 2021–2022 and 2022–2023 school years. The SAT facilitated recruitment by sending written invitations and information packets to the students' parents, seeking their consent for participation. Of the 11 families contacted, nine agreed to participate.

Regarding the participants, six were mothers and three were fathers. One mother was single, and one student had divorced parents. The parents' employment varied in percentage, and they reported having an agreement in place with their employer, adapted to their situation and their child's mental health severity, in combination with full financial support from NAV. The student cohort represented in the study displayed varied patterns of absenteeism; the mean percentage of absenteeism was 70%. These patterns varied within the continuum from refusal, with 50% attendance, to 100% absenteeism from school, confirmed by the SAT professional in collaboration with the school system. One student was diagnosed with Tourette's syndrome, two with ASD, one with ADHD, one with separation anxiety, and one with no verified diagnosis. No instances of bullying were reported in this sample.

This qualitative study employed focus group interviews as the data collection method. The rationale for using focus group interviews stems from the phenomenological approach in this

study and their ability to elicit rich, interactive discussions, generating valuable data. The benefit of gathering data through focus groups is the dynamic that occurs in interaction when participants reflect together and bring several perspectives to the table. As defined by Morgan (32), focus group interviews have three key aspects: they are a method specifically for data generation, group interaction is a crucial data source, and the researcher plays an active role in facilitating discussions to generate data. The method typically involves structured discussions among 6 to 10 participants who are often strangers, creating a dynamic conducive to diverse viewpoints and rich data collection (32–34).

The focus group session in this study lasted approximately 2 h and was conducted by authors one and two. In the first minutes of the interview, the parents and authors introduced themselves and had some “warm-up” conversations facilitated by the authors. The authors then explained how the interview would be conducted. Author one introduced each question. The questions to be discussed were supposed to last approximately 20 min each. The questions were presented as open-ended questions about their situation and about the support they received from the school and the municipal support system. They discussed their circumstances before the SAT was implemented and their experience of being assigned an SAT professional. They were also asked to discuss the collaboration between the school, the PPT, the BUP, and other relevant support services. They were asked about how an SAT could contribute to their situation and their opinion on the key factors for an SAT to implement, involving evidence-based knowledge, collaboration, individual plans for the student, and organizing factors. The researchers developed the questions based on previous research. The participants received feedback on the results in a parental meeting after the data analysis had been completed and discussed.

Procedures

A rural Norwegian municipality has established an SAT to strengthen student support. The team’s goal is to initiate measures that improve school attendance among primary and lower secondary school students who exhibit school absenteeism for more than 10% of the school year. Identifying the interventions and organizational dynamics that promote increased attendance is crucial for informing the support system around these students. The complexity of these efforts may intensify for students approaching the end of lower secondary school and preparing to transition to high school or vocational training programs.

The HSP framework is comparable to the Norwegian context. The transition between countries with similar structures, norms, and values may increase the success of an adaptation to a local context (35–37). The SAT is organized in the municipality to support children, families, schools, and other related services within the municipality and neighboring systems. Principals at the schools in the municipality refer to the SAT about a student’s absenteeism after initial measures have been conducted.

SAT professionals work individually with students and parents. An HSP framework requires a strong relationship with the student that can manage the difficulties that may arise when measures are implemented. In this initial phase, the student is referred to the PPT because it is important to establish a rationale for the resources required to support the student in such a situation. This is a new practice in this municipality because a student with no academic difficulties is not typically referred to the PPT. The SAT professional is the “key stakeholder,” organizing the collaboration with the school, parents, students, and other relevant professionals in the municipality, the PPT, and the BUP. The SAT meets weekly to discuss students and measures, deciding if other professionals can assist. Furthermore, it regularly receives supervision from trained professionals.

This study is a part of a larger project named “Back to School,” and was approved by the Regional Ethics Committee with application ID 234850 and adhered to the data protection guidelines stipulated by Oslo University Hospital. Ethical considerations also extended to ensuring the anonymity of the participating children and parents, aligning with the National Committee for Research Ethics in the Social Sciences and the Humanities (NESH) recommendations. The study’s alignment with the Personal Data Act and the Declaration of Helsinki was overseen by municipal legal authorities. The participants’ demographics are sensitive data and are therefore not described in detail.

In addition, the first author’s role as a supervisor for the SAT and the inclusion of coauthors in the study design served to mitigate potential biases, such as the close relationship between the first author and the SAT. This upheld the integrity of the research process. Authors one and two supervised the SAT during the implementation phase of HSP. The authors were educated in the HSP framework and trained as supervisors. Author three has experience in schools and specialist healthcare for children with ASD. Limitations are discussed in the Conclusion section.

Data analysis

Constructivism was the theoretical underpinning of this study. The data analysis followed a phenomenological approach, guided by Braun and Clarke’s (38) six-phase thematic analysis method. This approach allowed for an in-depth exploration of patterns and themes relevant to the study’s objectives. The initial phase involved transcription by the AI tool Whisper (AI = artificial intelligence), and then the first author checked the transcription to verify that the transcription was correct. All the authors then read each interview comprehensively to grasp the overall narrative and identify keywords and patterns. In the first inductive exploration, quotations related to the research questions were sorted into categories by all the authors to identify patterns and themes in the data. To look for patterns, the quotations were marked with colors, and their use in this manuscript

illustrates how they relate to the themes. This was another approach that increased the validity of the results.

In the next step, the meaning-carrying units were abstracted into codes as part of the content analyses, and the codes were then sorted into subcategories. In a few cases, the meaning-carrying units needed to be recoded, resulting in another subcategory. All the authors assessed the coherence and validity of these themes together. Tentative codes were discussed and revised until a consensus was reached. The authors engaged in ongoing reflexive practice to acknowledge any biases and assumptions that could influence the results. The authors then met both physically and online. The authors met several times to examine relationships between codes, themes, and subthemes. The authors searched for previous research in this field to validate the themes. The quotations used in this manuscript show how the data were generated and the subsequent conclusions. To make this process valid and increase the coding process's consistency, being a part of a research group is helpful. In this study, there were three researchers in the group to ensure that the coding and interpretations illustrate the data. The results were discussed in relation to previous literature in the field to strengthen the study's validity. This study is small, so validating the results through previous research is important. The final phase involved defining and naming the themes for the presentation (38). The analysis was conducted manually, resulting in the emergence of three main themes.

Results

This research explored parents' experiences with collaboration with schools and local support systems, such as PPT and BUP, for students facing significant refusal and SAP. The main themes are as follows: (1) barriers to effective support, (2) professionals' knowledge, and (3) collaboration. The parents supported each other, and their verbal and non-verbal responses created a safe environment and inspired the participants to share. The relief at finally understanding that they were not alone in this situation was a euphoric experience for the parents and may have strengthened their participation.

Barriers to effective support

This main theme offers insights into parents' experiences before the involvement of the SAT. It encapsulates the parents' feelings regarding their child's absenteeism and their need for support when advocating for their child.

A sense of being left alone

The participants consistently emphasized the importance of peer support among parents in enhancing wellbeing and mitigating the adverse effects of facing the challenges on their own. One participant stated, "I wish I'd known others in the same situation...Someone to discuss and reflect with. Because you think you're the only one."

Sharing parental advice and personal experiences greatly enhances the understanding of individual situations, empowering parents to better navigate different systems and opportunities. Exchanging experiences in a safe environment fosters a sense of community. This revelation has significant implications for municipal support mechanisms and highlights the benefits of facilitating connections among individuals facing similar challenges.

Prior to the SAT's involvement, the parents reflected on their circumstances.

The conversation was as follows. One parent stated, "...[L] oneliness is the first thing that springs to mind..." Another parent said, "Yes, I was completely at a loss..." followed by, "A sense of despair and an inability to influence the system..."

In the other focus group, one parent said, "In our case, somatic illness is the reason why it is hard to attend school ... and if my child is at the hospital, they will get support... but if my child is at home and cannot attend school, nobody helps."

One family had to leave and move to another municipality to access effective measures. They said, "The old school put all the responsibility (for non-attendance) on us..."

Before the SAT was established, the parents felt solely responsible for implementing the recommended strategies without thorough evaluation or oversight by professionals. This stemmed from a lack of mandated supportive policies at home, making the parents the primary source of support for their children and with little support from professionals. The parents expressed a sense of working in isolation and a strong commitment to following the recommendations of educational professionals to ensure their children attended school.

One of them said, "You have to force your child and try to persuade them. And when they're small, you can carry them to school and hope that this period will pass, although you can't do this for an extended period, but it's hard to know what to do." Despite feeling ignored and blamed, the parents also sensed that the system had expectations, highlighting a conflicting role that needs attention, as illustrated by the following statement by a parent, "I'm thinking about all the conflicts I had with my child when they had a tough time because I felt obligated to get them to school." Another parent said, "And the worst is that ultimately, you begin to seriously doubt your own parenting skills."

Several parents reported using physical methods, such as forcing their child to attend school and ensuring they stayed there, in line with the guidance of educational professionals. This often coincided with a sense of deep despair and sorrow.

Being heard—parents as experts

This section describes the parents' experiences and their role in decision-making.

The conversation was as follows. One parent said, "It took a long time before we were listened to...I think if the school had listened to us earlier, it would not have become so serious..." Another parent in the group stated, "We felt it differently. The school listened to us, but they had no solutions." One parent replied, "...It took a long time before we were heard, and when we were heard, the damage had already been done...."

These statements highlight the importance of including parental perspectives to enhance a child's support system. Some participants noted that their schools were supportive and encouraged parental involvement in collaborative efforts. However, these schools often lacked the necessary skills to support the child. A common theme among several parents was the delay in early identification and intervention for school attendance problems due to a systemic lack of knowledge and a policy framework. Various factors, including the undervaluation of parental knowledge, further compounded this issue.

Parents expressed frustration due to feeling excluded, unacknowledged, and being expected to ensure regular school attendance. They pointed to a widespread lack of understanding about the causes and perpetuating factors of school attendance problems in schools, the PPT and the BUP, often characterized by subjective judgments and opinions. This lack of objective understanding, frequently replaced by personal biases and attitudes, prevented them from effectively encouraging consistent school attendance. Recognizing this barrier is crucial for implementing holistic strategies to address school absenteeism. This knowledge gap undermines the efforts of parents to promote school attendance, thereby impeding the development of a comprehensive understanding of SAT problems and creating effective interventions. One parent said, "I thought every time new professionals showed up... maybe this will work because no one knows where to begin." Further, another parent said, "You try so hard, teachers and people around you give you advice... I know there are many problems we need to address and many services that provide help, but it's challenging to find something that works."

The participants reflected on their parental authority, highlighting the marginalization of their experiential knowledge and expertise about their child within a system that ostensibly relies on their involvement. They felt that the intervention strategies were primarily based on the subjective judgments of professionals rather than on empirically grounded knowledge or parental input. Despite these challenges, their confidence in the support systems remained in place, bolstered by the introduction of new methodologies or the involvement of new experts.

A sense of distrust

This section contains parental experiences of the system regarding their role in collaboration with professionals.

One parent said, "...What are we doing wrong? What am I doing wrong when we cannot get our child to attend school? You begin to blame yourself and your partner, so to speak...this situation negatively impacts the family."

Another parent continued, "The situation gets all-consuming.... from the time our child goes to bed or doesn't want to go to bed because he dreads going to school. Day after day...around the clock." Another parent elaborated, "If you're not engaged physically with your child's attendance, your brain is constantly thinking about what you can do better and what will happen tomorrow."

The participants described their parenting experiences as being under constant scrutiny, with frequent questioning of their parental

abilities by professionals. A significant disconnect between the parents and the professional system was evident throughout the discussions, reducing confidence in the system's efficacy and integrity. One parent said, "It's my collaboration with the BUP that gives me the strongest sense of distrust. You leave the place, and you just scream, you feel like a guilty person, it's horrible." Parents reported a perceived lack of knowledge and established protocols, which prevented them from effectively advocating for their child's educational needs. This was linked, for example, to delays in obtaining evaluations and reports from the BUP and the PPT, which they believed were crucial for ensuring the necessary educational support. When these evaluations and reports were finally received, they were often outdated. This left the parents feeling that the situation was highly disorganized. The resulting distrust toward the municipal education system, including schools and teaching staff, was stressful for the parents. Attempts to seek help from external experts often failed to address these issues, as these experts frequently had no understanding of the severity and urgency of the crises the students and their families were facing. This left the parents feeling isolated. The parents expressed a sense of distrust concerning their abilities as parents while also perceiving a burden of responsibility and blame, which negatively impacted their psychological and emotional wellbeing. Understanding this phenomenon is crucial for raising awareness and developing a support infrastructure that appropriately involves parents.

Professionals' knowledge

Pathways to better care

This theme highlights the importance of understanding parents' and children's needs, focusing on the implementation of holistic support by the SAT. This section highlights the parents' reflections on their experience after the SAT became involved.

The participants were eager to share their experiences, and one said, "... I felt safe when the SAT was involved." One parent stated, "Yeah, my child had similar feelings. Now my child has a person who helps to handle their frustrations about the school," and continued, "The SAT met my child at the school several times during the week. And if they didn't manage to attend school, they talked on the phone or at our house."

Another parent stated, "The SAT approach was sensitive ... That was important for us, and to be sure that it was the right person... It's crucial that the person doesn't just burst in." Another parent added, "I was pleased with the method the SAT professional used. It was okay to take it slowly, to take it one step at a time." One parent continued, "The SAT professional had a very trust-building personality." Another parent said, "I agree. Still, the turning point for us was when I met one (an SAT professional) who understood our situation completely; that was fantastic."

Professional consultation and the perception of equal interactions have therapeutic benefits. One parent said, "Having one person that could take all issues with the school was a relief." Another parent replied,

Wow, suddenly, we didn't have so many conflicts at home. We could relax a bit, and we're not that stressed anymore. The measures carried out were more individualized, and the mother-son relationship that you are so independent of when you're going through difficult things improved.

One parent stated, "I think every municipality should have such a team because they meet our child and us and put individualized measure in practice."

Providing practical support, such as respite for parents through child engagement activities, strategic interventions, and advocacy efforts, significantly enhances family welfare. This approach reduces both psychological and practical stress. The parents emphasized the importance of the SAT's accessibility, highlighting how easily it can be accessed in times of need. The parents emphasized the importance of the SAT's initiatives, knowledge base, and methodological frameworks. They found the collaboration between the SAT, the students, and themselves beneficial. They appreciated the SAT's ability to identify and address student absenteeism issues, valuing its advocacy for their concerns and its role in alleviating their guilt. In addition, the SAT's ability to integrate parental insights into customized and acceptable plans empowered the parents. One parent stated, "The school was okay, supportive and positive, but they struggled. They should learn about school attendance problems like we do now because it's so great when you realize that a measure is 'to the point' and works...."

The parents noted that the effectiveness of professionals in improving attendance depends on their willingness to make an extra effort. Having someone to talk to during difficult times at home, and professionals willing to "go the extra mile" was very important to the parents. This kind of support is crucial for fostering confidence and trust. A consistent "parental voice" emerges, characterized by a sense of relief and the alleviation of a significant burden. Building trust among families and relevant professionals, such as teachers and the PPT, is essential for the effectiveness of these interventions. In addition, a fundamental understanding of absenteeism is seen as a crucial prerequisite for such interventions to promote attendance at school effectively.

Collaboration

Coherence in educational and health services

This section contains the parents' perceptions of access to services and the service's effectiveness in cross-agency and interdisciplinary collaboration. The parents shared their views on the system's collaboration regarding assessments and initiating measures to support their child's situation. They also emphasize the need to advocate for their child.

One parent said, "You must be your own lawyer and find all the available knowledge. There's more advice in Facebook groups."

The parents reported difficulties navigating the various services available, noting that problematic school attendance problems increased the need for access to diverse support systems. They also perceived consistent school attendance as a prerequisite for

activating these support mechanisms. One parent said, "We didn't make any individual education plan (IEP) because the schools can't do much these days...."

The parents lacked a comprehensive understanding of the various components of the municipal services, their interrelationships, and the connection between the municipal support system and special health services such as the BUP. Parental awareness and understanding of the support system appeared limited. Navigating these complex systems was challenging, leading parents to rely on a single professional in the SAT.

One parent said, "Our SAT professional refers to a counselor at the PPT...I guess they talk with each other, so I think it works well."

When a child exhibits school attendance problems, parents often encounter a lack of systematic procedures and protocols for intersystem collaboration to improve school attendance. This lack of structured collaborative frameworks can lead to exclusionary practices, especially without strategic coordination within the system. In addition, the parents found the organization of different services in the municipality, the BUP, and the PPT to be fragmented. The services were inaccessible, and the referral process was demanding. Significant time passed before the parents received support from the municipal system and the BUP.

The parents felt that the efficacy of professional support is influenced by the professional's expertise, personal attributes, and commitment to going beyond the basic requirements, which is characterized by a willingness to offer additional assistance and support. They expressed uncertainty about whether referring children to other services with long waiting lists was an effective solution for addressing mental health issues resulting from absenteeism.

One parent said, "... [H]ow mentally ill do you have to be to get access to the BUP?"

The parents identified another bottleneck in the system: the BUP's role as a diagnostic authority and its recommendations for financial support from NAV. One parent stated, "This was the hardest time. My child went through the third diagnostic process, was not attending school, and was afraid of being left alone at home; at that time, you had no right to financial support... your child must have a diagnosis, and that takes a year."

The participants in the study identified specific shortcomings in the educational infrastructure and resources, particularly in allocating essential resources for school attendance problems. This disconnect between schools and students negatively impacts parents, often burdening them with the responsibility of ensuring their child attends school and managing the complexities of their situation. This added responsibility posed significant challenges. The parents reported that navigating these systems was extremely burdensome, adding to their demanding circumstances. This significantly affected their own professional lives, as they had to support their child and interact with various support systems. Some of the parents worked part-time, while others could not work due to their child's need for care. One parent said, "I'm working part-time, and my employer is very understanding so that I can adapt my work schedule to the needs of my child...."

Various strategies were employed to address these issues, including administrative measures, financial support from NAV, and medical leave provided by general practitioners (GPs). One parent added, "...There's a lot of work: meetings, emails, telephone calls... I've never felt so tired before."

The parents described a significant lack of knowledge in adapting educational environments to create a secure and predictable setting that meets the needs of their children with neurodevelopmental disorders and mental illnesses. One parent stated,

My child needs to wear a hood, and when they attended a cooking class after a long period of absenteeism, the teacher told them to remove the hood for hygienic reasons ...and my child came home and told me this. The teacher should never have said that to my child... but now it's too late.

From the parents' perspective, the lack of integration and collaboration between schools, the PPT, and the BUP was detrimental to them and their children. They described seeking help as a struggle and attributed the barriers to effective intervention for absenteeism and the successful reintegration of students with SAP to failures in systemic collaboration and deficiencies in the BUP's support mechanisms. The parents emphasized the importance of knowledge in organizing municipal support and counseling systems to meet the needs of their children. They suggested that a better understanding of the system is crucial for developing comprehensive strategies to address the complex issues surrounding SAP.

Discussion

This study explores parents' perspectives to provide knowledge that may address municipal-based practices.

The parents in the present study frequently experienced distrust in the system, feeling their voices and concerns were not adequately heard or valued. This distrust was associated with disempowerment and a strong sense of being disconnected from the system, as they described feeling alone and helpless. The parents felt sidelined in decision-making processes related to their child's education and wellbeing and, at the same time, felt obligated to support the school in their efforts to tailor measures for their child in school. This conflict must be addressed. In line with other studies, an in-depth understanding of what children need and the importance of parents' perspectives for individualizing measures have been highlighted (12, 19, 22). The parents in this study also underscored the importance of mutual trust in every part of the system as a key factor in therapeutic relationships that may result in positive outcomes. A lack of empowerment can negatively impact the effectiveness of support measures. Gray et al. (19), who studied 12 students with ASD who had experienced school refusal, found that strengthening the partnerships between parents and schools can positively impact autistic students' experience of school. Hsiao et al. (22) concluded that parent involvement is a key factor in school success in their guidelines for empowering parents. This aligns with previous research that

shows the importance of collaborating with parents to support a student with SAP (17, 19, 22, 39).

Another significant barrier identified in this study is the perceived lack of understanding among professionals about the complexities of school absenteeism. The parents reported that this lack of understanding resulted in inadequate or inappropriate responses to absenteeism issues. This increased absenteeism and exacerbated the problems for most of them. They noted that insufficient knowledge, poor systematic intervention, and delayed measures contributed to ongoing absenteeism. Furthermore, the parents expressed that their children did not receive a proper education because of their absence from school, and the teachers were not familiar with working with students at home. They reported that this lack of flexible, responsive, and tailored measures may be a significant barrier to meeting their children's educational needs. The measures adopted often lack flexibility, which negatively impacts the students' sense of autonomy. In line with other studies, this study's results highlighted that the parents wanted to ensure that the students' voices were included in important questions about their situation (19, 20). Studies have shown that one effect of SAP is that students frequently lose the chance to discuss their unique situations and articulate their needs (15, 40).

Further, the parents expressed that the system tends to underplay their crucial role in addressing their child's absenteeism. This impacts collaboration with parents, which is crucial for developing effective and sustainable intervention strategies. This is also underlined by Preece and Howley (15), who studied the impact of school refusal and ASD on students and their families. Undervaluing parents' insight and active participation leads to a disconnection between the support provided and the family's actual needs. The complexity of parenting children with absenteeism is more challenging than parenting children who do not experience such challenges. The school, the PPT, and the BUP need to pay more attention to parents and make them feel heard and cared for (17, 19, 39). Addressing these challenges is essential for creating effective strategies to reduce SAP and to ensure that the support system effectively meets the needs of students and their families (15, 39).

The parents in this present study agreed that the support offered by the school, the PPT, and the BUP was often characterized by inconsistencies, fragmented efforts, and a lack of coherent strategies across different levels of schools and support systems. They reflected on the difficulty of getting the system's help when needed. Their children suffered from mental health issues, such as depression, anxiety, and trauma. These mental health issues were often trivialized and attributed to parenting. This frequently led to despair among the parents. However, some parents reported that the school responded positively to the student's needs, often due to the supportive and attentive nature of the teacher. This aligns with Gray et al. (19), highlighting the importance of unique skills and evidence-based knowledge among professionals throughout the system to effectively understand and meet these students' needs.

It is well known that addressing SAP requires acknowledging the severity of students' mental health issues and their lack of wellbeing at school. To address these mental health problems, the intervention

needs to take a holistic approach to address the children's individual needs (2, 44). This study suggests that enhancing the knowledge and skills of professionals within the municipal support system is crucial for better supporting students with SAP.

A barrier highlighted by parents in this study is a lack of knowledge in schools and support systems. In line with previous research, professionals' knowledge significantly influences municipal support systems' efficacy in addressing SAP (12, 41). A deeper understanding of SAP is crucial, as attitudes and supportiveness are shaped by knowledge. Professionals need a comprehensive grasp of the multifaceted nature of SAP (23, 42). This allows for more effective identification of the root causes and will result in more targeted interventions (10).

The parents in this study stated that the knowledge held by the SAT should be implemented throughout the entire municipal system and the BUP to better support families and children with SAP. They said that only the SAT professional understood their situation thoroughly. They all valued the SAT's development of individualized support plans based on the results of the assessment phase in the HSP. The diverse roles of the SAT have positively impacted parents, providing them with a sense of relief and trust in their SAT professional. The parents often called the SAT professionals "our SAT professional." However, one may speculate that this could also create a dependency that may prevent the development of sustainable relationships with the school and other professionals. This dependency between parents, students, and the SAT professional could lead to confusion and stress, making the system vulnerable. The complex role of the SAT professional in advocating for families can result in a sense of overload. Collaborating in teams with clear roles and responsibilities may help prevent such issues. HSP is one way to disseminate knowledge within a collaborative support system, with collaboration being a core element of the framework (15, 34). This may include continuous professional development to keep educators and professionals updated with the latest research, strategies, and practices in addressing absenteeism. Supporting students with school attendance problems requires collaboration not only between support systems but also in the SAT. Knowledge development should focus on intervention techniques, building strong relationships with students and their families, understanding diverse student needs, and fostering collaborative approaches (43). Further, based on the findings of this study, implementing the MTSS framework will meet some of the challenges by offering a structured and evidence-based approach to addressing absenteeism (46). Implementing this model could enable professionals to systematically evaluate and address the different levels of student needs (19). Within this multimodal approach, effectively addressing absenteeism requires combining it with individualized measures that are as unique as the students themselves (36). Furthermore, an ecological framework may be an effective way to increase competence and address SAP, supporting the implementation of a system that considers the organization and structure of the support and the importance of assessing all factors related to SAP (31). Reissner et al. (12) and Melvin et al. (25) show that a combination of a deeper understanding of absenteeism, the implementation of contextual frameworks, individualized and multimodal approaches,

continuous professional development, fostering safe relationships, collaborative practices, and evidence-based interventions may significantly improve the effectiveness of support systems.

Multimodal strategies, which incorporate academic, behavioral, and social-emotional support, are essential in offering comprehensive intervention (5, 7, 23).

The results from this study showed that the evidence-based holistic approach used by the SAT provided effective interventions and collaboration for the diverse needs of students and their families. There is often a lack of coordination among the various professionals and services involved in addressing absenteeism. Valle et al. (17) underlined that a lack of coordination can lead to conflicting approaches, duplicated efforts, or gaps in support, making it difficult for parents to navigate the system and for students to receive cohesive and comprehensive care (17). Within an ecological framework, the system must establish a structure that promotes collaboration among the various systems. This will ensure that students are effectively directed to the appropriate services when encountering difficulties. Recognizing that absenteeism can be a symptom of psychiatric disorders, such as anxiety and depression, underscores the importance of collaboration within the support system (45). Such collaboration is crucial for the early detection and assessment of mental health issues and for preventing serious psychiatric problems and absenteeism (2, 43).

Professionals must be capable of building safe, trusting relationships with students and their parents. This level of support is a prerequisite to feeling supported and understood. A secure and trusting environment encourages open communication, which is crucial for identifying issues early and intervening effectively. Empowering parents will reduce the level of stress in both parents' and students' lives and increase the sense of wellbeing (17).

This study emphasizes the importance of collaborating with parents and students to ensure that all perspectives are considered in the decision-making process. These results support implementing an evidence-based, multimodal, multisystemic approach within the municipal support system (5, 14, 39). This approach should include systematic procedures within the support system and individually tailored measures to meet the needs of students with various levels of absenteeism (12–14). A holistic multisystemic approach could ensure that interventions are supported and effective (42).

Conclusions and limitations

The results from this study highlight the importance of professionals' knowledge and skills in providing evidence-based interventions for students and supporting parents. By deepening the understanding of absenteeism, adopting a multimodal approach such as HSP, engaging in continuous professional development, fostering safe relationships, promoting collaborative practices, and utilizing evidence-based interventions, the effectiveness of support systems can be significantly enhanced.

The study also identifies barriers, such as distrust, insufficient professional knowledge, systemic inconsistencies, and the undervaluation of parental involvement, which underscore the complexities of effectively supporting these students. The results

of the study emphasize the importance of the SAT as a dedicated support unit equipped with the necessary knowledge, structures, and procedures to ensure that interventions are predictable, flexible, and transparent. To sustainably implement an SAT, municipalities must engage in informed discussions and provide the SAT with a mandate that reflects the complexity of the tasks and competencies needed to support children and their parents in this situation. This approach may ensure that interventions remain consistent over time and across various disciplines.

The valuable insights from this research will enrich existing literature and provide practical guidelines for policymakers and municipalities. Addressing parental perspectives gives important information that may improve support systems and ensure a more effective and higher-quality approach to addressing SAP.

A limitation of this study is the small sample size and diversity of the participants. The fact that most of the participants were mothers limits the diversity of the sample in this study, and this may represent a bias. The fathers' voice is underrepresented and this may have given a one-sided presentation of the results. This may reduce the likelihood that the results represent all the parents who have experienced SAP and its challenges. One of the focus groups ended up with only two parents. This is not an ideal group size and may have affected the information gathered. The parents were eager to share their stories, and the results provided valuable information to the study, so the authors decided to conduct the interview session. The authors thoroughly discussed the study's validity during the analysis process.

Although the overall group size is small in this study, the transferability of the results to other contexts relies on a deep understanding of this specific context rather than generalizing to broader populations.

Another potential limitation of this study is that one of the authors previously served as a mentor for the SAT without being directly involved in supporting the parents. The parents were informed about this. The research group was one approach to minimize this effect. This bias was discussed thoroughly in the research group. Despite this, the results align with similar studies.

This study highlights the need for further research on parental support and collaboration within the system. Furthermore, the impact of integrating parents as equal partners in the support system and implementing multisystemic municipal approaches warrants further exploration. Further research is needed to establish a municipality support system based on evidence-based interventions.

Data availability statement

The original contributions presented in the study are included in the article/Supplementary Material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving humans were approved by the Regional Ethics Committee with application ID 234850 and

adhered to the data protection guidelines stipulated by Oslo University Hospital. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

Author contributions

UH: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Validation, Writing – original draft, Writing – review & editing. EM: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Supervision, Validation, Writing – review & editing. KL: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Software, Supervision, Validation, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Correction Note

A correction has been made to this article. Details can be found at: [10.3389/frcha.2025.1645221](https://doi.org/10.3389/frcha.2025.1645221).

Generative AI statement

The author(s) declare that no Generative AI was used in the creation of this manuscript.

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*CORRESPONDENCE
Ulla Irene Hansen
✉ hanul@ous-hf.no

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Correction: Parental perspectives on school attendance problems and the role of municipal support systems

Ulla Irene Hansen^{1,2*}, Ellen Kathrine Munkhaugen² and
Kenneth Larsen¹

¹Department of Education Science, University of South East of Norway, Horten, Norway, ²Division of Mental Health and Addiction, Oslo University Hospital, Oslo, Norway

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Carolina González,
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Caroline Deltour,
University of Liège, Belgium
Chiara Enderle,
Leipzig University, Germany

*CORRESPONDENCE
George Alaimo
✉ galaimo@live.co.uk
Catherine Kelly
✉ catherine.kelly@manchester.ac.uk

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School staffs' views on student non-attendance: a systematic literature review

George Alaimo* and Catherine Kelly*

The University of Manchester, Manchester, United Kingdom

Introduction: The views of school staff on student non-attendance have scarce representation in the existing literature. This systematic literature review explores the perspectives of school staff on student non-attendance, synthesizing findings from eleven qualitative and mixed-method papers.

Methods: Using a thematic synthesis approach, the review investigates how non-attendance is conceptualized by school staff and the extent to which their perspectives reflect its multidimensional nature.

Results: School staff described the factors contributing to student non-attendance as: (1) within-child, such as anxiety, mental health, and special educational needs; (2) home environmental influences, including parenting styles and attachment needs; (3) school-related factors such as academic pressures, unsuitable curricula, and peer rejection; and (4) the emotional and resource strain experienced by school staff.

Discussion: Findings suggest that conceptualizations of non-attendance, such as "emotionally based school avoidance" (EBSA) or "school refusal," may influence staff interpretations and strategies for intervention. Eco-systemic approaches emphasizing collaborative relationships between schools, families, and external agencies are highlighted by school staff. This review underscores the need for flexible, context-sensitive approaches to support attendance, informed by clear, strengths-based terminology and increased collaboration between stakeholders. Future research should explore the integration of systemic models into school policies and address the well-being of staff supporting student non-attendance.

KEYWORDS

school staff perspectives, supporting school attendance, school non-attendance, emotionally based school avoidance (EBSA), attendance intervention, systematic literature review, school wellbeing

Introduction

School non-attendance has long been a focus of concern within education and psychology, as its complex and multifaceted nature impacts not only students and their families but also school systems and broader society (Bond et al., 2024b). Understandings of school non-attendance have evolved considerably over the past few decades, moving from a narrow focus on individual behavioral factors, framed as "truancy" or "school refusal," to a more nuanced, systemic understanding that considers the interplay of personal, family, and school-related influences (Elliott and Place, 2019; Bond et al., 2024a). This shift reflects a growing recognition of the need for contextually grounded approaches that account for the variety of factors driving school attendance problems (Kearney and Graczyk, 2020). This recognition has led to the development of systemic models that emphasize the interaction of individual, family, school, and societal factors. Notably, the Kids and Teens at School (KiTeS) Framework (Melvin et al., 2019) conceptualizes school

attendance and absenteeism within nested environmental systems. Similarly, Enderle et al. (2024) adopt an ecological systems approach to analyse school attendance difficulties, highlighting the dynamic interplay of proximal and distal factors that shape attendance behavior. These models reinforce the importance of viewing attendance issues as embedded within broader ecological contexts, thus moving beyond individual-level explanations. In recent years, particularly in the wake of the COVID-19 pandemic, the urgency surrounding school attendance issues has intensified. This urgency has underscored a need for research that explores how school staff understand non-attendance, offering insights critical to effectively addressing this growing challenge (Bond et al., 2024b).

A critical aspect of understanding and addressing school non-attendance lies in the terminology and conceptual frameworks used by researchers and practitioners. In the literature, terms such as “school refusal,” “truancy,” “school withdrawal,” and “school exclusion” have been prevalent. More recently, terms like “emotionally based school avoidance” (EBSA) and “emotionally based school non-attendance” (EBSNA) have emerged to reflect situations where anxiety and emotional distress significantly contribute to students’ difficulties attending school (West Sussex Educational Psychology Service, n.d.; Corcoran et al., 2022). Yet, as noted by Corcoran and Kelly (2023) this terminology has its limitations; potentially implying a within-person deficit and overlooking broader systemic factors, as well as assuming anxiety as the primary cause of non-attendance. It can be seen that different terms each hold distinct implications regarding the perceived causes and responsibilities associated with non-attendance (Heyne et al., 2019). For example, conceptualizations of non-attendance as a multi-systemic issue tend to advocate for functional, multi-system approaches to address the root causes of attendance problems. Kearney and Graczyk’s (2020) multi-dimensional, multi-tiered model highlights the need to examine attendance problems at the individual, family, and school levels, allowing for targeted interventions that respond to unique contextual factors. In addition to addressing absenteeism reactively, the model advocates for proactive, universal supports aimed at promoting engagement and preventing attendance problems. These Tier 1 interventions include fostering positive school climates, strengthening teacher-student relationships, enhancing social-emotional competencies, and regularly screening for early signs of disengagement (Kearney and Graczyk, 2020). The prevailing frameworks and definitions that inform current understandings of non-attendance influence understandings of how to support attendance problems. However, while recent reviews have considered school staff perspectives within broader analyses of professional or multi-stakeholder views (Hamadi et al., 2024; Hejl et al., 2024), a dedicated synthesis focusing specifically on how school staff understand, and support attendance issues has not yet been undertaken.

Qualitative research has potential to inform policy and practice (Thomas and Harden, 2008), this review therefore seeks to draw on school staff perspectives on attendance issues and their reflections on intervention to support improved attendance by answering the following questions: (1) How is school non-attendance conceptualized across research exploring school staff views? and (2) To what extent does the current research on school staff views of non-attendance reflect the multidimensional nature of the issue?

Addressing these questions may help to bridge the gap between theoretical frameworks and practical applications, illuminating how conceptual understandings of non-attendance influence day-to-day practices and shaping future research, policy, and intervention strategies aimed at reducing school non-attendance.

Methods

Systematic literature review

To structure the review process, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework (Page et al., 2021) was used with a thematic synthesis to integrate findings and generate insights beyond the individual included studies (Flemming and Noyes, 2021).

Search strategy and information sources

In October 2024, systematic searches were conducted of relevant databases including: PsycInfo, Education Resources Information Centre (ERIC), Web of Science, Applied Social Science Index and Abstracts (ASSIA), EBSCO host, and ProQuest Dissertations and Theses (see Figure 1). The search terms were developed through consultation with the existing literature to reflect the broad and evolving terminology used to describe school attendance problems (Boaler and Bond, 2023; Corcoran and Kelly, 2023). Terms such as “emotionally based school avoidance”, “truancy”, or “school exclusion” were considered, but ultimately not used as primary search terms in order to maintain a wide scope and avoid over-narrowing the search to specific subtypes. For instance, while EBSA has become a prominent term in the UK context, its use is not consistent internationally or over time, limiting its utility for a systematic search (Boaler and Bond, 2023). Similarly, “truancy” and “school exclusion” are typically associated with discrete or policy-defined attendance behaviors, which may not fully capture the broader range of attendance difficulties explored in this review. As such, more inclusive and frequently used umbrella terms like “school non-attendance” and “school absenteeism” were prioritized to ensure coverage of relevant literature across educational and geographical contexts.

The following terms were therefore used to search the databases:

“school refusal” OR “school absenteeism” OR “school non-attendance” OR “school attendance problems” OR “chronic school absenteeism” OR “school refusal behavior”

AND (“school staff” OR “teacher” OR “assistant” OR “educator”)

AND (“view*” OR “perspective*” OR “perception*” OR “experience*”).

Inclusion criteria

Papers were filtered by title to remove those not related to school staff views of school non-attendance, leaving 453. The abstracts and keywords in the remaining articles were used to identify any that did not meet the inclusion criteria (see Table 1).

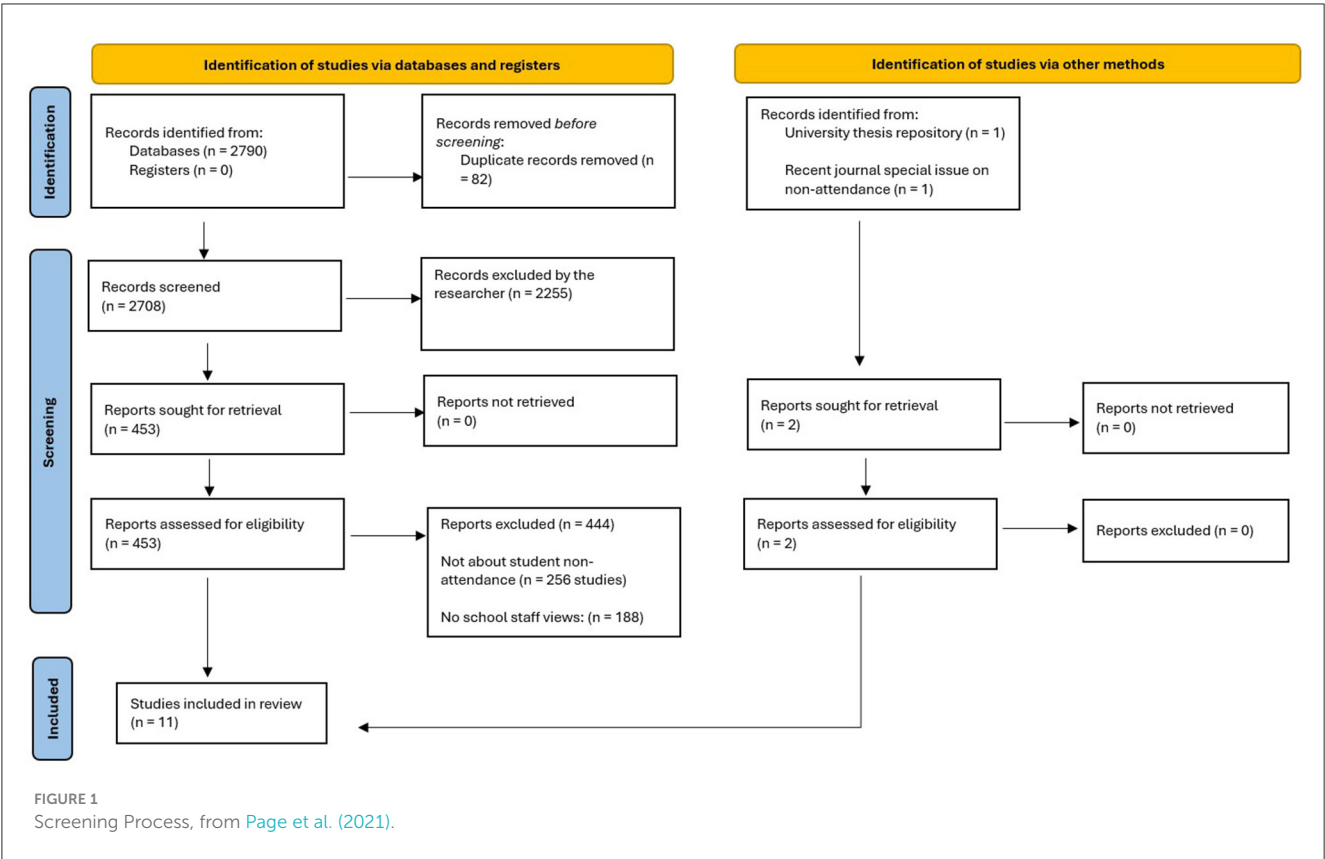


TABLE 1 Inclusion criteria.

Inclusion Criteria	<ul style="list-style-type: none">• Is an empirical study collecting qualitative data containing school staff views of student non-attendance.• Is an empirical study collecting quantitative data containing school staff views of student non-attendance.• Is written in English.• Is published between 2013–2024.• Is a peer-reviewed paper.
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Inclusion criteria were developed referring to criteria used in existing systematic reviews on school attendance (e.g., Boaler and Bond, 2023). There were two reviewers; the first reviewer searched for information sources independently and assessed studies for inclusion. Each paper was assessed against each of the eligibility criterion as “eligible/not eligible/might be eligible (full-text screen needed).” The full text was also retrieved when abstracts contained insufficient information. Eleven reports were sought for retrieval and all could be accessed. Articles were included when inclusion criteria were met from the full text. The second reviewer independently assessed 3 of papers. Disagreements or ambiguities were resolved through discussion. Data was extracted by the first reviewer and independently checked for consistency and clarity by the second reviewer.

The quality assessment process was implemented using the Weight of Evidence (WoE) framework, specifically focusing on WoE A and WoE C criteria, as outlined by Gough et al. (2017). WoE A evaluates the methodological quality of each study, a checklist (Woods, 2020) examining factors such as research design, sample

selection, and data analysis techniques to ensure the reliability and validity of the findings was used, scoring each paper out of 20. A sample of papers (27%) were also assessed by second author and any disagreement resolved through collaborative discussion. Papers were categorized into high (16–20), medium (11–15) and low quality (≤ 10). WoE A assessment indicated that all studies scored medium or high for methodological quality, reflecting positively upon the work conducted in this area. WoE C assesses the relevance of each study to the specific research questions of the review, specific criteria were developed by the authors determining how well the study’s focus aligns with the context of school staff perspectives on school non-attendance (see additional material for WoE C criteria). By applying these criteria, the researcher assessed whether the included studies were both methodologically sound and relevant to the research objectives.

Results

Study characteristics and summary of findings

The included papers were published between 2013 and 2024. Six were based in England and two in Sweden, with one study each from the USA, France and Ireland (see Table 2).

While most studies did not report detailed demographic data, several provided information relevant to participant gender or school SES. For example, Chian et al. (2024) included six school staff members (five female, one male) working in primary

TABLE 2 Summary of included research.

Author/ year/ country	Aims and/or research questions (RQ)	Participants	Age range/setting	Methodology	Findings	Conceptualization of non-attendance	Weight of evidence (WoE) A/C rating
Gren-Landell et al. (2015) Sweden	Aims: To investigate what teachers in mainstream and special education in aged 12–15 years view as contributing factors to problematic school absenteeism. 2) To investigate if there are socio-demographic differences in how different factors are rated to contribute to problematic school absenteeism.	158 teachers	12–15 years Mainstream and special education settings. 142 state funded 14 private	Mixed-methods design Survey One open-ended question on what the participants perceived as the most common causes of problematic school absenteeism	Participants identified highest-rated risk factors: adverse home situations (e.g., divorce, violence), permissive parental styles, and student low mood/depression Peer influence on absenteeism rated lowest among contributing factors by participants Participants noted factors interrelated. Importance of teacher competency in mental health recognized by participants.	‘Problematic school absenteeism,’ encompassing recurrent absenteeism (including truancy and enduring absence). This absenteeism includes both authorized and unauthorized forms with potential adverse effects on students.	High/High
Martin et al. (2020) France	Aim: To explore the experiences and opinions of school personnel, mainly teachers, related to school refusal among immigrant families.	30 school staff members (Teachers, school nurses and doctors, counselors, principals and assistant principals, educational assistants)	11–15 years 15–18 years Paris and Bourgogne Franche-Comté.	Qualitative In-depth interviews Grounded theory	Participants expressed experiencing difficulties, ambivalence, and destabilizing feelings in situations involving school refusal from immigrant families. Some participants were at risk of developing exclusionary attitudes. Others addressed school refusal with dedication and innovative strategies.	‘School refusal’ characterized by reluctance to attend school, resulting in prolonged absences, accompanied by emotional distress, but without severe antisocial behavior, and often involving parents’ awareness. Participants told this definition in interview.	High/Medium
Finning et al. (2019) England	Aim: To investigate secondary school educational practitioners’ beliefs about risk factors for school attendance problems.	16 school staff members (Teachers, principals, heads and assistant heads of year, SENCOs, learning assistants, parent and family support advisors, deputy safeguarding lead, inclusion manager)	11–16 years Mainstream city centre schools and a rural school. South West England.	Qualitative Focus groups Thematic Analysis Hybrid inductive/deductive approach	Participants emphasized individual, family, and peer risk factors for school attendance issues, particularly highlighting anxiety over other mental health concerns. School factors were perceived as less significant compared to these individual and social factors.	No firm conceptualization. Discusses the complexity of school non-attendance terminology in the literature review.	High/High
Cunningham et al. (2022) England	Aim: To explore primary school staffs’ views and experiences of supporting children with attendance difficulties and of interventions aimed at reducing non-attendance	8 school staff members (Teachers, school leadership and support staff)	4–11 years Mainstream primary schools and a special school. Five English counties	Qualitative Semi-structured interviews Thematic Analysis Inductive approach	Participants expressed that prevention is key and use various social/emotional and learning interventions. Success hinges on collaboration among parents, school staff, and other agencies.	‘Non-attendance’ Discusses complexity of school non-attendance terminology in the literature review.	High/High

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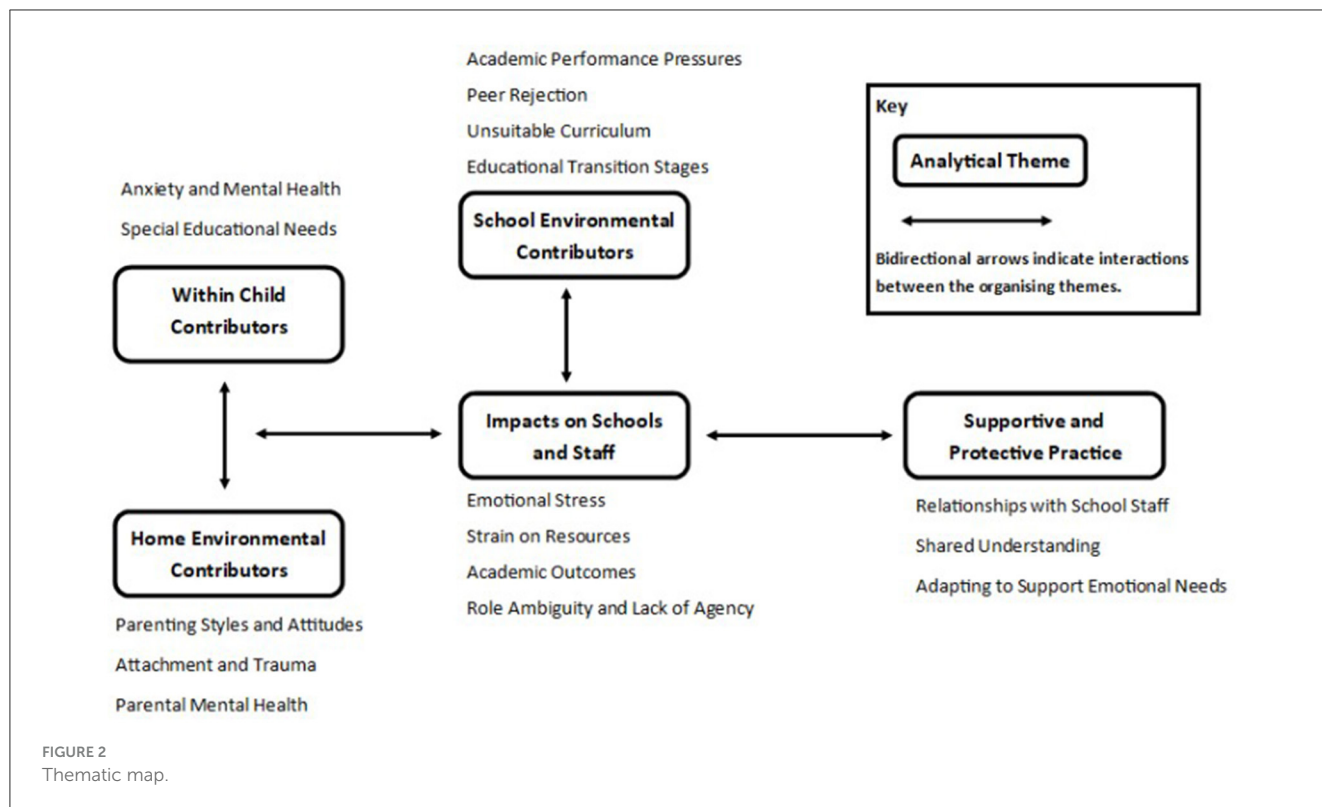
TABLE 2 (Continued)

Author/ year/ country	Aims and/or research questions (RQ)	Participants	Age range/setting	Methodology	Findings	Conceptualization of non-attendance	Weight of evidence (WoE) A/C rating
Devenney and O'Toole (2021) Ireland	Aim: To explore the views of education professionals in relation to school refusal	17 school staff members (Teachers, principals, and other administrative roles)	12–18 years Private, public all-girls, public all-boys, and DEIS (mixed-gender and all-girls) schools.	Qualitative semi-structured interviews Thematic analysis Deductive approach	Participants described school refusal arising from emotional distress, family issues, and academic pressure. Schools try strategies, but success varies. Concerns about medication reliance for SEMH raised.	'School refusal' A child's motivated refusal to attend school or remain in class for the duration of the school day for reasons associated with emotional distress.	Medium/High
Corcoran et al. (2022) England	Aim: To explore two cases of successful interventions for EBSNA gathering perspectives from school staff, parents, and EPs to understand the key factors enabling successful returns to school.	4 school staff members (Teachers, and SENCo) 4 non-school staff members (EP, TEP, and parents)	4–11 years Two primary schools in the same LA.	Qualitative Semi-structured interviews Thematic analysis Inductive approach	School staff explored the importance of regular and positive communication between home and school, along with understanding anxiety triggers for tailored interventions. Building supportive relationships with students and parents and adapting practice and collaborating with professionals were key.	EBSNA	High/High
Strand and Cedersund (2013) Sweden	Aim: To explore school staff's reflections on students with high levels of truancy	15 school staff members (Teachers, SENCo, school nurse, social worker)	14–16 years	Qualitative Interviews Positioning analysis	School staff reflected on students across health, social, and educational areas, revealing ongoing changes in their relationships. Staff categorized students with mainly negative attributions.	Truancy	Medium/ Medium
Ford (2018) England	Aim: To explore the experiences of school staff who work with emotionally based school non-attenders.	6 school staff members (Head teachers, assistant head, learning support assistant and school counselor)	11–16 years Same LA.	Qualitative Interviews Thematic analysis Inductive approach	School staff highlighted the importance of parental engagement, struggles with academic pressures, and noted varying success with support strategies. Factors like mental health issues and peer dynamics contributed to non-attendance. Staff felt frustrated but shared occasional success stories, influenced by personal values.	Explores conceptualization as part of analysis (within-child factors, contextual factors)	High/High

(Continued)

TABLE 2 (Continued)

Author/ year/ country	Aims and/or research questions (RQ)	Participants	Age range/setting	Methodology	Findings	Conceptualization of non-attendance	Weight of evidence (WoE) A/C rating
Pritchard (2019) England	Research questions: How do secondary school staff make sense of their successful experiences of supporting pupils exhibiting EBSR to attend school more regularly? How can the views and perceptions of secondary school staff around their successful experience of supporting pupils exhibiting EBSR to attend school more regularly be used to inform future practice in secondary schools?	8 school staff members (Pastoral staff, EWO, SENCo)	11–16 years Three secondary schools, one LA.	Qualitative Semi-structured interviews IPA	Staff identified key areas of supporting pupils with EBSR, including the importance of adult and peer support, providing separate spaces, collaboration among staff, acknowledging emotional impacts on staff, and adapting the school day to meet individual pupil needs.	Emotional based school refusal	High/High
Block (2019) United States	Research questions: What are the perceptions of secondary teachers on student absences? Are students who exhibit school refusal behavior more likely to be identified as students with special education needs?	26 teachers	14–18 years One urban high school, Midwest.	Online survey Mixed methods Two open ended qualitative questions	Teachers emphasized the importance of autonomy, positive relationships, and addressing special education needs. Teachers suggested building positive relationships, engaging activities, and frequent communication with parents. There was a call for additional support and school-wide policies to tackle attendance issues.	‘School refusal’ Problematic absenteeism, such as truancy, school phobia, and anxiety. Mentions ‘psychological matters’	Medium/ medium
Chian et al. (2024) England	Aim: To explore perspectives of school staff who share their experiences of the facilitators and barriers to mainstream school EBSA initiatives and practices.	6 school staff members Three SENDCos, one Assistant Head of Inclusion, one Wellbeing Coordinator, and one Teaching Assistant.	4–11 years 11–16 years Three mainstream primary schools and three mainstream secondary schools.	Qualitative Semi-structured interviews Reflexive thematic analysis	School staff identified significant barriers to effectively supporting EBSA, including financial constraints, challenges in collaboration with external partners, and parental resistance. Despite these obstacles, staff emphasized the importance of creating an inclusive school climate to foster student belonging and support.	Emotional based school avoidance (EBSA)	High/High



and secondary mainstream schools, with some schools serving boroughs with significant social and emotional mental health (SEMH) needs. Cunningham et al. (2022) reported on eight participants across seven schools with varied attendance profiles and socioeconomic contexts; some schools were situated in urban areas with below-average attendance, suggesting links to socioeconomic disadvantage. In Devenney and O'Toole's (2021) study, the final sample included 17 professionals (eight male, nine female) working across various Irish secondary schools, including those participating in the Delivering Equality of Opportunity In Schools (DEIS) scheme, a government initiative targeting low socioeconomic status schools. Such details are important for understanding the contexts in which school staff perspectives are formed and applied.

Thematic synthesis followed the three-stage process outlined by Thomas and Harden (2008). In the first stage, line-by-line inductive coding was conducted on the findings and discussion sections of each included study, generating 112 initial codes. This process involved assigning codes based on meaning and content. The first researcher independently coded each line of text according to its meaning and content. Codes were then structured in a hierarchical "tree form" or as "free" codes in NVivo 12 if they did not fit within the superordinate grouping.

In the second stage, codes were grouped and refined into 16 descriptive themes, which remained close to the original data and summarized patterns across studies. These themes captured shared perspectives or experiences reported by participants or interpreted by study authors. In the third stage, analytical themes were generated by interpreting the descriptive themes at a higher level of abstraction. This involved asking interpretive questions of

the data (e.g., "What are the underlying processes or mechanisms at play?") and identifying patterns of interaction and implication. The five analytical themes represent a conceptual understanding of the processes influencing school attendance and staff responses, moving beyond description to generate novel insights (see Figure 2). Bidirectional arrows in the thematic map reflect the iterative nature of the relationships between organizing themes.

The thematic synthesis and coding were primarily conducted by the first author, who approached the data from a constructivist perspective, acknowledging the active role of the researcher in interpreting meaning. Each stage of the process was discussed with the second author. The coding process included regular meetings to review code structures and emergent themes. Consensus on theme development was achieved through reflexive discussion with the second author offering oversight on theme development and interpretation (see Thomas and Harden, 2008). Disagreements or uncertainties were resolved through discussion, revisiting source data, and checking for consistency with the inclusion criteria and the wider literature.

Each analytical theme and its descriptive themes will be presented in turn.

Within child contributors

Anxiety and mental health

The mental health of children was referenced as a contributing factor to student non-attendance in all but one of the studies reviewed. Gren-Landell et al. (2015) highlighted that school staff

view mental health difficulties, particularly anxiety and depression, as prominent factors linked to school non-attendance. Similarly, [Finning et al. \(2019, p. 20\)](#) identified anxiety as a leading cause of non-attendance, noting: “it starts with a simple panic attack at school and then it escalates until it’s full-blown school anxiety.” [Ford \(2018\)](#) echoed these findings, with school staff referencing that children’s anxiety can feel somewhat fixed. One teacher explained: “it can be difficult to kind of get them [children] to change their mindset and see things from a different point of view” ([Ford, 2018, p. 102](#)).

Special educational needs

School staff perceived that children with special educational needs (SEN) are particularly vulnerable to non-attendance. Across this studies, SEN was characterized by neurodevelopmental needs, such as Attention Deficit Hyperactivity Disorder (ADHD) ([Devenney and O’Toole, 2021](#)) and physical health needs ([Finning et al., 2019](#)). Many school staff perceived that the standard curriculum is ill-equipped to cater for students with such needs ([Finning et al., 2019](#); [Devenney and O’Toole, 2021](#); [Cunningham et al., 2022](#)) increasing the risk of non-attendance and helplessness from school staff: “no matter how hard you try, school is just not the right place for them [children with SEN], they need something different” ([Finning et al., 2019, p. 20](#)).

Home environmental contributors

Parenting styles and attitudes

Across the studies, school staff often perceived that parenting styles play a critical role in influencing student attendance. [Gren-Landell et al. \(2015\)](#) found that inconsistent or permissive parenting can contribute to patterns of absenteeism, while [Ford \(2018\)](#) observed that children from homes lacking structure or clear expectations are more likely to miss school. One teacher explained: “sometimes it comes down to, like, parenting, people not being, like, strict enough and getting them in” ([Ford, 2018, p. 105](#)). School staff perceiving a negative parental view toward education influencing non-attendance was present across four studies under review ([Gren-Landell et al., 2015](#); [Ford, 2018](#); [Finning et al., 2019](#); [Cunningham et al., 2022](#)). This was frequently viewed as barrier to school supporting children finding it challenging to attend school: “the parents aren’t backing us, they might say that they are while on the phone but they’re not backing us up” ([Finning et al., 2019, p. 21](#)). This finding was echoed by teachers in [Cunningham, Cunningham et al. \(2022\)](#) study struggling to engage parents who were perceived to not value school attendance.

Attachment and trauma

Attachment needs and traumatic experiences were perceived as significant contributors to student non-attendance. School staff note that children exposed to adverse childhood experiences (ACEs), such as family separation and violence often struggle with attachment-related anxieties, making it difficult for them to attend school regularly ([Strand and Cedersund, 2013](#); [Gren-Landell et al., 2015](#); [Ford, 2018](#); [Devenney and O’Toole, 2021](#)). The absence of

secure attachments and the presence of unresolved trauma are seen as key factors in school non-attendance by many school staff across the studies under review ([Strand and Cedersund, 2013](#); [Gren-Landell et al., 2015](#); [Devenney and O’Toole, 2021](#)).

Parental mental health

School staff frequently recognized parental mental health as a significant factor contributing to student non-attendance ([Gren-Landell et al., 2015](#); [Ford, 2018](#); [Cunningham et al., 2022](#); [Chian et al., 2024](#)). They observed that children with parents experiencing mental health challenges often feel compelled to stay home to protect or care for their parents. For example, one staff member noted that a student “feels like she has to look after [her mother] and things like that” due to the mother’s mental health challenges ([Ford, 2018, p. 106](#)). Similarly, it was noted that children may refuse to separate from their parents because of excessive worry about their health ([Chian et al., 2024](#)). Additionally, teachers viewed low parental mood and depression as significant contributors to absenteeism ([Gren-Landell et al., 2015](#)).

School environmental contributors

Academic performance pressures

The pressures placed on children to perform well academically by schools was referenced as a key contributor to school non-attendance by over half of the papers under review ([Gren-Landell et al., 2015](#); [Ford, 2018](#); [Block, 2019](#); [Finning et al., 2019](#); [Devenney and O’Toole, 2021](#); [Cunningham et al., 2022](#)). School staff highlighted that performance and exam success can create intense stress, particularly during critical periods like the GCSEs. For instance, one practitioner highlighted that “the pressure on achievement in the older years can be massive,” especially when combined with other life stressors’ ([Finning et al., 2019, p. 22](#)). Teachers observe that this pressure often leads to student burnout, self-harm, and anxiety, which were directly linked to absenteeism ([Gren-Landell et al., 2015](#)). Some staff expressed frustration at the intense focus on academic results, noting that it can overshadow students’ emotional wellbeing, leaving children who struggle academically feeling less valued ([Ford, 2018](#)).

Peer rejection

School staff frequently identify peer rejection and conflict as significant contributors to attendance difficulties. Negative peer relationships, including bullying and social exclusion, were viewed as creating a hostile school environment ([Cunningham et al., 2022](#); [Ford, 2018](#)). Staff noted that even minor incidents, such as name-calling, can lead to severe attendance issues, particularly for students who dwell on these negative interactions ([Finning et al., 2019](#)). Non-attenders were often perceived as “lonely” or “isolated” which contributed to their reluctance to engage with the school environment ([Cunningham et al., 2022](#)). Additionally, school staff often felt that children who felt excluded or bullied were more likely to experience a diminished sense of belonging ([Ford, 2018](#)).

Unsuitable curriculum

School staff frequently viewed their respective national curriculums as a significant factor contributing to student non-attendance due to its lack of engagement and suitability for all students, particularly those with SEN (Gren-Landell et al., 2015; Block, 2019; Finning et al., 2019; Cunningham et al., 2022). For example, one group of practitioners highlighted that offering more vocational subjects and a curriculum tailored to individual needs could improve attendance, but noted that many schools are unable to do so due to cost and pressure constraints (Finning et al., 2019). Similarly, teachers observed that when education is not adapted to address students' learning difficulties, it can lead to disengagement and avoidance behaviors (Gren-Landell et al., 2015). Children who were uninterested in the material being taught or who found it irrelevant are often seen as "unwilling to engage" which was perceived to further contribute to their attendance difficulties (Block, 2019; Cunningham et al., 2022).

Educational transition stages

School staff across three studies viewed transitions, particularly the move from primary to secondary school, as significant contributors to student non-attendance (Ford, 2018; Finning et al., 2019; Devenney and O'Toole, 2021). Staff also noted that the transition from having one teacher to managing multiple teachers and navigating a larger school environment can be "mind blowing" for some students (Finning et al., 2019, p. 22). This major change can trigger anxiety, as students struggle with new routines, a different school culture, and the pressures of a more exam-driven environment (Ford, 2018; Devenney and O'Toole, 2021; Cunningham et al., 2022).

Impacts on schools and staff

Emotional stress

Emotional stress for school staff manifested as feelings of frustration, helplessness, and emotional exhaustion when supporting children with attendance difficulties (Ford, 2018; Cunningham et al., 2022). Some staff described the work as an "emotional drain", particularly when students miss carefully planned lessons, leading to increased workload and pressure to catch up on assessments and having difficult conversations with "irate parents" (Cunningham et al., 2022, p. 73). Additionally, staff often feel a deep sense of responsibility and "genuine concern" for the academic progress of non-attending students, which adds to their stress, especially when curriculum demands are not met (Devenney and O'Toole, 2021). These challenges can evoke a parental-like worry for the students' wellbeing, heightening the emotional burden (Ford, 2018).

Strain on resources

Non-attendance was mostly characterized as "resource drainer" across the studies (Ford, 2018; Cunningham et al., 2022; Chian et al., 2024). Financial constraints exacerbate these challenges, leading to staffing shortages and limiting the ability to provide necessary support, such as adequate teaching assistant (TA)

coverage (Chian et al., 2024). Teachers also faced increased workloads and time pressures, feeling the burden of catching up on missed curriculum and managing the complex needs of these students without sufficient external support (Ford, 2018).

Academic outcomes

School staff recognized that student non-attendance can have significant negative effects on academic outcomes for schools (Ford, 2018; Devenney and O'Toole, 2021; Cunningham et al., 2022). School staff felt that non-attendance directly impacts the number of students meeting "age-related expectations" and diminishes overall progress figures, which are crucial for school performance inspections (Cunningham et al., 2022). The emphasis on data and targets exacerbated this issue, as school staff felt they are evaluated on attendance and academic performance, leading to a focus on numbers rather than student wellbeing (Ford, 2018).

Role ambiguity and lack of agency

School staff often experienced role ambiguity and a lack of agency in addressing student non-attendance, leading to frustration and feelings of helplessness (Ford, 2018; Finning et al., 2019). Educators struggle to define their responsibilities, questioning whether they should act as "care providers" or focus solely on education, which creates uncertainty in handling complex issues like mental health (Gren-Landell et al., 2015; Devenney and O'Toole, 2021). This lack of clarity and the pressure of limited resources leave many feeling disempowered, with some staff acknowledging that they must "leave it to the professionals" due to feeling unable to influence emotional outcomes positively (Ford, 2018; Finning et al., 2019).

Supportive and protective practice

Relationships with school staff

Five studies consistently highlight that school staff believe that when children feel connected to and cared for by teachers, attendance difficulties reduce (Ford, 2018; Block, 2019; Pritchard, 2019; Corcoran et al., 2022). Teachers and staff who invest time in rapport-building activities, such as shared classroom tasks, create a sense of belonging and trust, which was perceived as central to consistent attendance (Corcoran et al., 2022). Additionally, staff who maintained consistent, supportive contact, even outside the classroom, built strong, trusting relationships that encouraged children's willingness to attend school (Strand and Cedersund, 2013). School staff often felt that this approach fosters a supportive environment where children felt valued and understood, enhancing their engagement with school (Ford, 2018; Pritchard, 2019).

Shared understanding

A shared understanding between home and school, as well as among school staff, was crucial in effectively supporting students with attendance difficulties (Pritchard, 2019; Corcoran et al., 2022; Cunningham et al., 2022). This was felt to enable school staff and parents to identify and address difficulties, leading

to earlier and more effective interventions and environmental adjustments (Corcoran et al., 2022). Consistent communication with parents, such as daily contact, was noted to help ensure an aligned approach, preventing problems from escalating (Pritchard, 2019). Within schools, knowledge about families and sensitive communication among staff members were key to choosing appropriate strategies and ensuring a unified response to each child's needs (Cunningham et al., 2022).

Adapting to support emotional needs

Adapting to support children's emotional needs was seen as central to protecting against attendance difficulties (Pritchard, 2019; Corcoran et al., 2022; Cunningham et al., 2022). School staff felt that when schools were able to work flexibly, tailoring their practices and expectations to meet individual needs, attendance difficulties were ameliorated (Corcoran et al., 2022; Cunningham et al., 2022). This included adjusting the school day, providing personalized timetables, and offering additional academic support, such as slowing down work or using scaffolds to reduce anxiety (Corcoran et al., 2022; Cunningham et al., 2022). Emotional support was also key, with staff maintaining a calm and positive approach, helping students articulate their feelings, and reframing challenges to reduce their anxiety (Pritchard, 2019).

Discussion

This review examined school staffs' perspectives of student non-attendance. There were varied terminology and conceptual models used to describe school non-attendance by researchers, such as EBSA and "school refusal". This appeared to influence how school staff and practitioners describe and interpret non-attendance, often then driving the nature of support offered or deemed appropriate, based on those interpretations. The findings also underscore the complex interplay of within-child and systemic factors impacting attendance and highlight how these are perceived by school staff.

How is school non-attendance conceptualized across research exploring school staff views?

In line with existing literature, varied terminologies, such as EBSA, school refusal, and chronic non-attendance were used by researchers in framing studies and gathering participants' views, reflecting subtle conceptual differences in understanding attendance difficulties (Kearney et al., 2019). For example, in Gren-Landell et al. (2015) the term "problematic school absenteeism" is presented to participants, and school staff identified factors such as adverse home environments, including permissive parenting styles and exposure to family conflict or violence, as primary contributors. Conversely, the concept of "EBSA" in studies by Corcoran et al. (2022) and Chian et al. (2024) situated non-attendance as emotionally driven, and staff described within child and environmental factors. Staff in these studies emphasized the importance of building supportive relationships, understanding the triggers, and adapting school routines to ease students' anxieties.

This framing correlated with staff describing close collaboration with families and external professionals, working collectively to create an environment that fosters belonging and reduces stress. Furthermore, "emotionally based" conceptualisations appeared to facilitate staff describing students' non-attendance as intrinsically aligned with anxiety (Ford, 2018). This led to therapeutic approaches being described as a core facet of addressing student non-attendance (Devenney and O'Toole, 2021). When no firm non-attendance conceptualization was established in the rationale of the studies under review, school staff still viewed non-attendance as a complex, eco-systemic issue, aligning with existing research (Nuttall and Woods, 2013; Kearney et al., 2019). While it remains unclear how much of the researcher's conceptualisations of non-attendance were shared with participants, increased reflexivity about non-attendance terminology is needed (Havik and Ingul, 2021): this review has found the theoretical positioning of school non-attendance by researchers is likely to influence how other professionals and school staff interpret the causes of student non-attendance, and therefore, how they may respond to them.

To what extent does the current research on school staff views of non-attendance reflect the multidimensional nature of the issue?

The increased focus on school attendance issues in England is illustrated by Department for Education (2023) data, which highlights a significant rise in persistent non-attendance rates, from 10.9% before the COVID-19 pandemic to over 21% in 2022/23. For students with special educational needs, the rate is even more pronounced, with 36.6% reported as persistently absent in the same period. These statistics suggest a need to address attendance issues across diverse student populations, particularly those with additional needs, who may be at heightened risk for negative long-term outcomes associated with attendance difficulties (Sonuga-Barke and Fearon, 2021). Current attendance monitoring systems, however, often fail to capture the underlying reasons for non-attendance, underscoring the importance of qualitative, school-based perspectives that offer valuable insights into the complex, varied factors influencing student attendance (Corcoran et al., 2024; Sawyer and Collingwood, 2024).

Within-child factors, particularly anxiety and mental health difficulties, were consistently identified by staff as critical barriers to school attendance, an enduring trend reflected in existing literature (Kearney and Albano, 2004; Lereya et al., 2019). School staff frequently describe attendance difficulties as originating in episodes of panic or prolonged anxiety, an interpretation that resonates with findings from Havik and Ingul (2021), who discuss the relationship between anxiety-related avoidance and prolonged absenteeism. Additionally, special educational needs were seen by staff as intensifying attendance difficulties. SEN students often face academic environments that lack the necessary accommodations (Nnamani and Lomer, 2024), for example curricula which fail to account for neurodevelopmental needs exacerbating disengagement (Azpitarte and Holt, 2024). This review also reveals school staffs' frustrations with limited resources

and curriculum rigidity, which they felt can restrict their ability to adapt classroom environments to fully support students with additional needs.

The role of family environment in influencing attendance is also a well-established theme in the literature (Kearney, 2008). Staff frequently attribute non-attendance to permissive or unstructured home environments, suggesting that a lack of routine or support for school routines can destabilize students' commitment to school. Within the wider literature, school staff often perceive home-life as a primary driver of challenging student behavior (Carroll et al., 2023). The findings of this review offer some challenge to this assertion: while some school staff emphasized factors external to school (e.g., Gren-Landell et al., 2015), others gave a more eco-systemic conceptualization of school non-attendance, despite initial focus on home-life factors (e.g., Ford, 2018). This divergence may reflect differences in teacher attributions, as highlighted in the broader literature on educator perceptions. For instance, Weiner's (1985) attribution theory suggests that teachers may frame challenges like non-attendance based on perceived controllability and locus of causality. Educators who attribute non-attendance to external factors, such as home-life challenges, may perceive these issues as beyond their control, leading to less focus on school-based interventions. Conversely, those adopting an eco-systemic view may be influenced by growing awareness of the interplay between systemic and individual factors, as suggested by Havik and Ingul (2021) prompting them to consider broader contextual influences. Increasingly, school staff share many of the frustrations about the school environment itself reflected by parents and families (Lissack and Boyle, 2022). This positions parent-school partnerships as crucial for supporting children and young people experiencing attendance difficulties, as effective collaboration would seem to be a key factor in bridging the gap between home and school expectations (Corcoran et al., 2022).

Among school-based factors, academic pressures were cited as significant contributors to student absenteeism by school staff, echoing findings that link the pursuit of high-stakes academic performance with increased student stress (Pascoe et al., 2020). Staff frequently observed that students become overwhelmed by testing pressures, leading to avoidance behaviors that escalate into consistent absenteeism. This aligns with Gulliford's (2015) assertion that secondary students, in particular, face heightened risks of school refusal linked to examination-related stress, which can ultimately impact their overall health and wellbeing. The curriculums school staff were working within were noted as attendance to particularly for students with SEN or those who struggled with traditional academic content. This review reveals that staff often see the curriculum as misaligned with the diverse needs of their students, a challenge previously identified by Liasidou (2012) who argues that curriculum diversification, including vocational and experiential learning opportunities, can enhance engagement. Staff perceive that rigid curricular structures exclude some students, reinforcing the importance of more adaptable educational pathways to improve attendance.

Peer rejection and social isolation were also highlighted as attendance barriers, with staff noting that bullying or lack of social belonging often pushes students away from the school environment. Korpershoek et al.'s (2020) meta-analytic review underscores the role of positive peer and adult relationships and school belonging in reducing attendance difficulties. The

participants in the studies reviewed here spoke about the power of taking a relational approach with students. Building positive relationships with families is also referenced across the literature as important in providing useful EBSA support (Nuttall and Woods, 2013; Kearney and Graczyk, 2014) and building positive relationships with parents and carers assists with identifying the emerging signs of EBSA, which in turn can facilitate early interventions at a school and familial level (Ingul et al., 2019).

The review highlights how supporting non-attenders can take an emotional toll on school staff, manifesting in stress, role ambiguity, and resource strain. Staff reported that non-attendance support often demands a parental-like role, creating confusion around professional boundaries and stretching their emotional capacities, especially when they lack the training to navigate mental health issues. The reported barriers to student support within teacher roles are similar to those found by previous research (Graham et al., 2011; Mazzer and Rickwood, 2015), including excessive workloads, inflexible curriculums and external pressures on student attainment; limited support from school leaders about these pressures were found to further compound the negative effect of these factors on teachers' self-efficacy to support the wellbeing of children at school.

The findings of this review therefore map closely onto the Multi-Dimensional Multi-Tiered System of Supports (MD-MTSS) model proposed by Kearney and Graczyk (2020), particularly at Tier 1 and Tier 2 levels. School staff consistently described practices such as fostering strong relationships, adapting expectations, identifying early signs of distress, and maintaining close home-school communication, which are core features of Tier 1 prevention and engagement. Likewise, targeted responses for students with emerging needs, including individualized timetables, tailored emotional support, and curriculum adaptations, reflect Tier 2 selective interventions aimed at preventing escalation. While many of these practices are consistent with the MD-MTSS model, they were often informal or fragmented, rather than embedded in a formalized multi-tiered system. Few studies explicitly referenced a systemic framework for supporting attendance, suggesting a gap between implicit practice and structured implementation. Embedding MD-MTSS principles more formally in school policy could help strengthen coherence, ensure equity of support, and sustain staff capacity to respond proactively to attendance difficulties.

While this review focuses on school staff perspectives, it is important to consider how these align with student views. Research by Corcoran and Kelly (2023) and Hejl et al. (2024) has synthesized the voices of students experiencing school attendance problems, highlighting feelings of anxiety, social isolation, and a lack of understanding from adults. Students frequently report difficulty articulating their needs and often describe a sense of being pushed without support (e.g., "They just wanted to know why I didn't go to school, but I didn't know why, and I still don't know" Åhslund, 2021). These findings echo concerns raised by school staff in the current review, particularly around relational breakdowns, academic pressure, and insufficient systemic flexibility. However, students have also challenged the deficit-based framing of their experiences (e.g., "refusal"; Corcoran and Kelly, 2023), suggesting a disconnect in how their behaviors are interpreted. This underlines the need for greater co-construction of attendance support and more participatory approaches that include student voices

when addressing school attendance difficulties. Future research could explore points of convergence and divergence between staff and student perspectives to support more holistic, context-sensitive interventions.

Limitations

A primary limitation of this systematic literature review lies in the potential lack of representativeness in the perspectives of school staff included across the studies. Many studies rely on voluntary or convenience sampling, meaning that the views represented may be skewed toward staff members who are more invested in or have specific views on school non-attendance. This selection bias could exclude the perspectives of staff less directly involved in attendance difficulties or those in roles with less direct student contact, such as administrative staff, which may limit the scope of insights gathered.

Another limitation is that the professional roles of school staff participants vary considerably across studies, from teachers and teaching assistants to school leaders and special educational needs coordinators (SENCOs). Each of these roles entails distinct responsibilities, influencing how attendance issues are perceived and addressed. For instance, pastoral staff may emphasize relational and emotional aspects of attendance, whereas administrative staff may focus on procedural issues. These role-specific perspectives may affect the types of themes identified in the literature, as individual studies may not account for the full spectrum of staff experiences. Furthermore, most studies focus on secondary school staff, limiting the possible transferability of findings to other school contexts. As attendance-related challenges may manifest differently at various educational stages, particularly with younger children, this emphasis on secondary settings may not capture the nuances relevant to primary school staff. Future research should therefore include a more balanced representation across different educational stages to better understand age-specific challenges and strategies in managing school non-attendance.

Furthermore, many studies include participants from particular regions, which could further limit the transferability of findings to geographical contexts. For example, research conducted in urban schools may capture different challenges and resources than studies in rural settings, which may influence staff perspectives on attendance difficulties. Future research should aim for a diverse sampling of school contexts to better capture how regional, demographic, and cultural factors might influence staff views on non-attendance.

In addition to the limitations of the included studies, several methodological considerations relate to the systematic review process itself. While the search strategy aimed to be comprehensive, it is possible that relevant studies were missed due to the exclusion of gray literature or variations in terminology that limited retrieval (e.g., alternative framings of non-attendance not captured by core search terms). The screening and selection of studies were primarily undertaken by the first author, with consultation from the second author. This may introduce a risk of subjectivity in study inclusion and theme generation. Additionally, due to the qualitative nature of the synthesis, the interpretive construction of themes reflects the reviewers' perspective and may be shaped by their positionality and

professional background. While efforts were made to ensure rigor and reflexivity, these limitations should be acknowledged when interpreting the review's findings.

Conclusion

Given the complex, multi-layered influences on attendance, the review findings emphasize that eco-systemic, multi-level approaches are essential in understanding and responding to non-attendance. Existing research advocates for systemic frameworks that consider the child's entire environment—home, school, and broader community—to address root causes of non-attendance effectively (Elliott and Place, 2019). Staff descriptions of attendance barriers support this approach, suggesting that strategies such as family engagement, adaptive curricula, and supportive relationships between adults and peers alike are crucial for safeguarding against attendance difficulties. Furthermore, how school staff describe non-attendance, reveals insights into the challenges they encounter when trying to support students with attendance issues. Studies by Prosser and Birchwood (2024) and Ward and Kelly (2024) suggest that school staff often face barriers in implementing effective support for non-attendance. These barriers include systemic challenges such as resource constraints, the need for leadership support, and the complexities of aligning school practices with family and community expectations. The importance of a collaborative, multi-systemic approach has been highlighted by this review, indicating that non-attendance is best addressed through ongoing dialogue among school staff, families, and the students themselves, ensuring that interventions are both effective and respectful of individual needs (Boaler et al., 2024; Sawyer and Collingwood, 2024).

This review also illustrates the significant role that researcher conceptualizations seem to play in shaping how participants interpret and respond to non-attendance. Varied terminologies appear to influence a focus on specific factors, with open-definitions devoid of deficit focused language prompting a more eco-systemic understanding. Similarly, the conceptualizations used by professionals working with attendance issues, such as educational psychologists or external agencies, are likely to shape how school staff and parents perceive and address non-attendance. For example, deficit-focused language, such as “school refusal” or “persistent absentee” may reinforce within-child attributions, leading to interventions targeting the individual rather than the broader system. Conversely, eco-systemic or strengths-based terminology “school attendance barriers” or “supporting school attendance” can encourage collaborative, multi-agency approaches that consider environmental and relational factors, potentially resulting in more effective, context-sensitive strategies to mitigate attendance issues (Havik and Ingul, 2021). The findings provide support from a school staff perspective for an integrated model of non-attendance, one that combines therapeutic responses with school-level adaptations, family engagement, and child-centered strategies to create a supportive environment conducive to attendance.

Addressing the complex needs of non-attenders also requires consideration of staff wellbeing, as the emotional

toll of supporting high-need students impacts their wellbeing. Clearer role definitions, mental health and wellbeing training, and external support would enable staff to manage attendance-related challenges with more agency. As attendance challenges increase globally, emphasizing both student-centered and staff-supportive strategies may promote more sustainable improvements, ultimately fostering a school culture where both students and educators feel valued and supported.

Overall, the review aligns with existing literature suggesting that multi-level, ecosystemic approaches to non-attendance are essential in both understanding and addressing school non-attendance.

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EDITED BY

Douglas F. Kauffman,
Consultant, Greater Boston Area, MA,
United States

REVIEWED BY

Madhaviatha Maganti,
Krea University, India
Zack Maupin,
Chapman University, United States

*CORRESPONDENCE

Carolina González
✉ carolina.gonzalez@ua.es

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School non-attendance and learned helplessness: latent profiles and ROC curves

María Pérez-Marco, Andrea Fuster and Carolina González*

Department of Developmental Psychology and Didactics, Faculty of Education, University of Alicante, San Vicente del Raspeig, Spain

Due to the complex school reality, Learned Helplessness (LH) is a student's response characterized by lack of confident, interpretative bias and negative outlook of success in face of school challenges. These helpless students develop a negative attitude toward school, leading to a withdrawal of school engagement and anxious disorders, reporting links with emotionally based school non-attendance. Taking into account the heterogeneous causes of these problems, in recent years new instruments have been emerged, like *Assessing Reasons for School Non-Attendance* (ARSNA; Havik et al., 2015), of which there is a clear lack of research. The study aims to: (1) identify latent profiles of school absenteeism based on *Assessing Students' Reported Reasons for School Non-attendance* (ARSNA; Havik et al., 2015); (2) analyze differences between school non-attendance profiles and Learned Helplessness (LH); and (3) establish the predictive and discriminative capacity of LH to identify students of the high school non-attendance profile. Consequently, 759 adolescents ($M = 14.95$, $SD = 1.82$) fulfilled ARSNA (Havik et al., 2015) and *Learned Helplessness Questionnaire* (LHQ; Sorrenti et al., 2015). Pearson's correlation coefficients reported positive and statistically significant correlations between ARSNA dimensions and LH. Latent Profile Analyses revealed 3 school absenteeism profiles. ANOVA indicated statistically significant differences between these profiles and LH. Finally, Logistic Regression and ROC Curves found the predictive and discriminative ability of LH to identify individuals of the high school non-attendance profile. Results contribute to the literature on ARSNA dimensions and LH, highlighting the potential implications for schools and for the intervention against emotionally based school non-attendance.

KEYWORDS

learned helplessness, school non-attendance, adolescents, latent profile analysis, ROC curves

1 Introduction

Due to the massive competitiveness of education systems and the difficulty of today's societies, many students evidence emotional problems and different ways of coping with school complexities (Raufelder et al., 2017). Among these, Diener and Dweck (1980) classified the students' responses into Mastery-Oriented (MO), related to motivation and persistence to work harder against failure, and Learned Helplessness (LH), characterized by lack of confident, interpretative bias and negative outlook of success (Filippello et al., 2020).

Specifically, LH emerges as a psychological pattern of attributing failures to internal, stable and broad personal factor, while successes are attributed to external, changeable and specific factors (Abramson et al., 1989; Diener and Dweck, 1980; Filippello et al., 2020; Seligman and Maier, 1967). These helpless students tend to avoid challenging tasks or select easier ones to minimize the risk of failure, because they see it as confirmation of their perceived lack of ability

(Raufelder et al., 2017). Additionally, they do not attach any value to engagement, believing that it is not in their control to change or improve their learning process or academic success (Raufelder et al., 2017; Sorrenti et al., 2019).

Beyond academic behaviors, LH in adolescents is shaped by a complex interplay of psychosocial and contextual factors within the school environment. Empirical evidence indicates that maladaptive parenting styles, such as overprotection and excessive criticism, alongside limited social support from peers and teachers, can foster the internalization of helpless attitudes (Margolis and McCabe, 2006; Sorrenti et al., 2019). Adolescents exposed to repeated academic failure, compounded by unsupportive social interactions, are more likely to develop maladaptive attributional styles characterized by persistent feelings of incompetence and tendencies toward social withdrawal. Moreover, individual personality traits, particularly elevated levels of neuroticism, have been associated with increased susceptibility to LH. Adolescents high in neuroticism are more prone to emotional instability, negative affect, and maladaptive rumination in response to academic and social setbacks (Liu and Alloy, 2010; Mezulis et al., 2004). Contextual factors within the school setting, including highly competitive academic climates and rigid teacher expectations, may further exacerbate helplessness by diminishing students' perceived autonomy and self-efficacy (Raufelder et al., 2017). Collectively, these psychosocial and contextual determinants influence both the emergence and manifestation of LH in school-aged adolescents, with far-reaching implications not only for academic engagement but also for emotional well-being and interpersonal functioning.

Consequently, these helpless students develop a negative attitude toward school, leading to a withdrawal of school engagement, motivation and tasks (Filippello et al., 2020; Filippello et al., 2018). Moreover, students with LH tend to experience negative emotions, such as frustration, anger, stress, or anxiety, at the prospect of attending school (Filippello et al., 2020; Sorrenti et al., 2019), showing the relationship between LH and the School Attendance Problems (SAPs; Sorrenti et al., 2019; Sorrenti et al., 2016). SAPs has emerged to encompass a wide range of problems related to school attendance, like school refusal, school phobia, truancy, school withdrawal, etc. (Heyne et al., 2019; Kearney, 2016), due to the inconsistent terminology and definitions across studies (Heyne et al., 2019).

As multi-level approaches to address SAPs gain traction, the development of reliable assessment tools for SAPs has become increasingly critical (González et al., 2021). The *School Refusal Assessment Scale-Revised* (SRAS-R; Kearney, 2002) is the most widely used instrument, validated in multiple countries (e.g., US, Germany, France, Italy, UK, Turkey, Netherlands, and Spain), of which the combination of high and low scores across its four dimensions has identified distinct school refusal latent profiles (Delgado et al., 2019; Dube and Orpinas, 2009; Gallé-Tessonneau et al., 2019; González et al., 2020; González et al., 2023; Knollmann et al., 2013; Maynard et al., 2012; Pérez-Marco et al., 2024).

Taking into consideration the heterogeneity of causes that can explain school refusal behavior, in recent years new instruments have been published that aim to address new reasons not covered by the SRAS-R (González et al., 2021). One of them is the *Assessing Students' Reported Reasons for School Non-attendance* (ARSNA; Havik et al., 2015) developed and validated in Norway for students of 6th to 10th grade, which evaluates four common school absenteeism reasons:

Somatic Symptoms, Subjective Health Complaints, Unjustified Absences, and School Refusal. Despite its effectiveness, the ARSNA has been validated only in Spain, maintaining the factor structure of the original version and reporting adequate internal reliability indices (Martinez-Torres et al., 2024). Nevertheless, the identification of ARSNA profiles using latent profile analysis has not yet been applied.

There is a flawless gap in prior research on SAPs using the ARSNA dimensions in relation to LH. However, the numerous connections between these constructs should be acknowledged, given that multiple studies reveal associations between comparable aspects of SAPs and LH, even though the definitions and measurement of LH and SAPs differ across studies, as well as include populations with and without school attendance problems in school context.

Firstly, Somatic Symptoms and Subjective Health Complaints are highly associated with internalizing disorders (American Psychiatric Association, 2013), as well as LH (Sorrenti et al., 2019), because helpless students who refuse the school anxiously tend to feel their consequences on their own skin, like somatic symptoms or subjective health complaints, as a way of avoiding this school situations (Havik et al., 2015; Kearney, 2008; Kearney and Silverman, 1996; Thambirajah et al., 2008).

Therefore, it is shown statistically significant and positive correlations between LH and the appearance of Somatic Symptoms, such as feeling tired, trouble sleeping, indigestion, stomach pain or constipation, but among adult population (Ejdemyr et al., 2021). Moreover, Sorrenti et al. (2019) confirm the significant predictive capacity of LH on the appearance of the Somatic Symptoms of the internalizing disorders among children and adolescents. In terms of Subjective Health Complaints, Ree et al. (2014) found statistically significant and positive correlations between LH and Subjective Health Complaints, specifically high among male adults. However, regarding Somatic Symptoms and Subjective Health Complaints in children and adolescents, there is a clear lack of prior evidence.

In addition, students with low levels of school engagement tend to evaluate their academic life in a negative way, which can lead to school absenteeism, as well as they can present LH as a passive response to school problems (Mistry, 2024). Furthermore, this is confirmed by Raufelder and Kulakow (2021) and Raufelder et al. (2013), whom reported statistically significant correlations between LH and school belonging and school engagement, respectively, in a negative sense among adolescents. Moreover, Buzzai et al. (2021) affirm a significant and positive correlation between LH and School Alienation, which is the individual's sense of detachment from school issues. For that reason, it is expected that helpless students tend to reject school tasks and have unjustified absences in school, due to the desire of avoiding school challenges (Buzzai et al., 2021).

Finally, regarding School Refusal, Sorrenti et al. (2016) showed in an Italian child sample the statistically significant and positive correlations between LH and each SRAS-R factor, where the dimensions with higher magnitude was the functional factors associated to anxious disorders, such as (FI) Avoidance of general school-related distress, (FII) Escape from adverse social and/or evaluative situations, and (FIII) Attention-seeking toward significant people, as well as the predictive capacity of LH on developing each SRAS factor, specially, FI and FII. Furthermore, the relevant relationship between LH and anxiety about school-related aspects (e.g., test anxiety, etc.) is well-established (Akca, 2011; Fincham et al., 1989; Raufelder et al., 2017), given that helpless students tend to

experience anxious refusal to school to no deal with school tasks, due to their perception of lack of control over failures (Mistry, 2024; Raufelder et al., 2017). Likewise, in recent years, it has been observed that the levels of internalizing disorders have increased among the adolescent population, due to the health emergency situation experienced by COVID-19 (Fivush, 2025). Although there is no study that examines the level of learned helplessness among adolescents after this historical event, it can be expected that these helpless students now present higher levels of both learned helplessness and anxious disorders, and their possible somatization.

Previous research has not fully addressed the dimension of LH and the wide spectrum of reasons of school absenteeism, nor is there sufficient evidence regarding the links between latent school absenteeism profiles and LH, requiring more in-depth knowledge. Therefore, the primary objective of this study is to clarify the connection between LH and the ARSNA reasons of school non-attendance. Initially, the study aims to (1) identify latent profiles of school absenteeism based on ARSNA reasons. Although no prior theoretical evidence exists for ARSNA latent profiles, research on SRAS-R has found that the most common profiles include high or low scores across all factors, as well as mixed scores in different factors (Delgado et al., 2019; Dube and Orpinas, 2009; Gallé-Tessonneau et al., 2019; González et al., 2020; González et al., 2023; Knollmann et al., 2013; Maynard et al., 2012; Pérez-Marco et al., 2024). Consequently, three distinct profiles of school absenteeism are expected: (1) non-school absenteeism profile with low scores in all ARSNA reasons; (2) high school absenteeism with high scores in all ARSNA dimensions; and (3) mixed school absenteeism combining high and low scores in ARSNA dimensions.

Secondly, other purpose is to (2) carry out the analysis of the possible statistically significant differences between school absenteeism profiles as a function of the mean scores on LH. Despite the lack of previous research on the relationship of these latent profiles and LH, on the one hand, it is estimated that LH correlates positively and statistically significant with each dimension (Akca, 2011; Buzzai et al., 2021; Ejdemyr et al., 2021; Fincham et al., 1989; Raufelder and Kulakow, 2021; Raufelder et al., 2013; Ree et al., 2014; Sorrenti et al., 2016; Sorrenti et al., 2019); while, on the other hand, it is also expected that the high school absenteeism profile with high scores in ARSNA dimensions might score higher on LH, and the non-school absenteeism group would score lower on LH.

Finally, using variable-based perspective, this study aims to (3) establish the predictive capacity of LH of students belonging to the profile of high school absenteeism, and (4) its discriminative ability to identify individuals of the profile of high school absenteeism.

According to Sorrenti et al. (2016) and Sorrenti et al. (2019), it is foreseen that LH predicts to belong to high school absenteeism group.

2 Method

2.1 Participants

A random cluster sampling was employed to select participants. The primary sampling units were geographical areas of the province of Alicante (North, South, Center, East, West). Educational centers served as secondary units, with a total of 8 public and private high schools selected. Finally, students' groups constituted the tertiary units, with 4 groups randomly chosen from each high school. This sampling method produced a final sample of 759 Spanish students aged 12 to 18 ($M = 14.95$, $SD = 1.82$), comprising 328 boys, 419 girls and 12 students self-identifying as another gender. Table 1 presents the gender and age frequency distribution. No statistically significant differences across gender and age groups were observed, indicating a homogeneous distribution by gender and age ($\chi^2 = 13.37$; $p = 0.34$).

2.2 Measures

Assessing Reasons for School Non-attendance (ARSNA; Havik et al., 2015). This self-report, consisted of 17 items, was used to assess students' reasons for school absence on a 4-point Likert scale (0 = never, 1 = rarely, 2 = sometimes, 3 = very often). Students were asked to respond to each on a common question, 'How often have you been absent from school in the last 3 months because...?'. Responses span four factors: FI. *Somatic symptoms* (SS; e.g., '... you had a bad cold or flu?'); FII. *Subjective health complaints* (HC; e.g., '...you had a headache?'); FIII. *Reasons related to unexcused absences* (UA; e.g., '...you had a meeting?'); and FIV. *Reasons related to school refusal* (SR; e.g., '...you wanted to avoid unpleasant situations at school?'). Specifically, the ARSNA (Martinez-Torres et al., 2024) was used with internal consistency coefficients were 0.80, 0.85, 0.75 and 0.79 for each factor, respectively.

Learned Helplessness Questionnaire (LHQ). The LHQ (Sorrenti et al., 2015) is a self-reported instrument with 24 items assessing two sub-scales: *Learned Helplessness* (LH; e.g., 'Does not respond with enthusiasm and pride when asked how one is doing on a school/academic task') and *Mastery Orientation* (MO; e.g., 'Tries to finish homework/assignments, even when they are difficult'). Students rate their argument with each statement on a 5-point Likert scale, from 1

TABLE 1 Sample distribution by sex and age.

Gender	12 years	13 years	14 years	15 years	16 years	17 years	18 years	Total
Boys	35 4.6%	60 7.9%	55 7.2%	55 7.2%	58 7.6%	40 5.3%	25 3.3%	328 43.2%
Girls	37 4.9%	69 9.1%	70 9.2%	60 7.9%	76 10.0%	62 8.2%	45 5.9%	419 55.2%
Other	0 0%	0 0%	4 0.5%	2 0.3%	1 0.1%	2 0.3%	3 0.4%	12 1.6%
Total	72 9.5%	129 17%	129 17%	117 15.4%	135 17.8%	104 13.7%	73 9.6%	759 100%

(*not true*) to 5 (*absolutely true*). In this study, it is only assessed the dimension of LH, which reported acceptable reliability levels ($\alpha = 0.82$).

2.3 Procedures

Following approval from the Ethics Committee of the University of Alicante (UA-2023-03-07) and the guide of Declaration of Helsinki (Rickham, 1964), the research objectives were presented to the school councils, and written informed consent was obtained from students' parents and/or legal guardians. Students completed the self-reports questionnaires during the school day with anonymity and voluntary participation assured. During the 35-min assessment period, a researcher was present in the classroom to standardize the administration process.

2.4 Data analysis

Bivariate correlations between the four ARSNA factors and the LH were examined using Pearson's correlation coefficients. According the Cohen's d , the effect sizes were considered small with values between 0.10 and 0.29, moderate between 0.30 to 0.49, and large values over 0.50 (Cohen, 1988).

Secondly, a Latent Profile Analysis (LPA) was conducted, because it is considered optimal for classifying homogeneous groups of individuals, overcoming the limitations associated with K -means clustering (Schreiber, 2017). Model fit indices and criteria for selecting based on Song and Kim's (2019) were applied to select the optimal class, prioritizing the lowest values of the Bayesian Information Criteria (BIC) and the Akaike Information Criteria (AIC), p -values below 0.05 for the Vuong-Lo-Mendell-Rubin Likelihood Ratio Test (LRT) and the Bootstrap Likelihood Ratio Test (BLRT), entropy values close to 1, and ensuring that each profile includes at least 25 participants (Tein et al., 2013). Theoretical interpretability of the profiles was also considered (Wang and Wang, 2020). For each factor, z scores were classified as low (scores < -0.5), moderate (scores between -0.5 and $+0.5$), and high (scores $> +0.5$) (González et al., 2018).

An analysis of variance (ANOVA) was performed to identify differences between the school absenteeism profiles and the LH. *Post hoc* Bonferroni tests were applied to identify statistically significant differences among groups. Effect sizes were assessed using Cohen's d , with values below 0.49 representing small effects, between 0.50 and 0.79 moderate effects, and above 0.80 large effects (Cohen, 1988).

A Binary Logistic Regression analysis was performed following the Wald forward stepwise method to examine the predictive capacity of LH for identifying students in *High School Absenteeism* profile. This predictive ability was estimated by the OR (Odd Ratio) statistic, where $OR > 1$ indicates a positive prediction, $OR < 1$ a negative prediction, and a value of 1 no prediction (De Maris, 2003).

Finally, ROC curves (sensitivity vs. specificity) were generated to assess the discriminative capacity of LH scores in detecting the likelihood of belonging to the *High School Absenteeism* profile. Interpretation of the area under the curve (AUC) value followed these criteria: between 0.75 and 0.90, the test is considered good; between 0.90 and 0.97, the discriminative ability is very good; and values between 0.97 and 1, discrimination is excellent (Martínez and Pérez, 2023). Sensitivity (true positive rate) is defined as the percentage of *High School Absenteeism* subjects who are correctly classified based on

LH scores. Specificity (true negative rate) is the percentage of subjects not in this profile who are accurately identified by the LH scores. The Youden index was used to determine the cut-off point with optimal sensitivity and specificity.

Data analyses were conducted using IBM SPSS 28, Mplus 8.10 and MedCalc 19.

3 Results

3.1 Correlations between school absenteeism and learned helplessness

Table 2 presents the low to moderate correlations between School Absenteeism (SS, HC, UA, and SR) and LH. LH showed positive and statistically significant correlations with each ARSNA factor.

3.2 School absenteeism profiles

Table 3 provides fit indices for models with two to six profiles. Although the six- and five-profile models had the lowest AIC and BIC values, along with a $p < 0.001$ for the BLRT, they were rejected due to small cluster sizes (fewer than 25 participants) and suboptimal entropy. Similarly, the four-profile model was excluded, as it included a cluster with fewer than 25 subjects, despite its low AIC, BIC, and adjusted BIC values, as well as a significant BLRT ($p < 0.001$) and its entropy close to 1. The two-profile model was also dismissed, as it produced the highest BIC values. Consequently, the three-profile model was selected for its low AIC and BIC values, highest entropy (close to 1), and a significant BLRT ($p < 0.001$). All groups in this model were sufficiently representative of the sample and demonstrated superior classification utility, interpretability, and adequacy across all evaluated fit indices.

Figure 1 illustrates the three-profile model of School Absenteeism. The first profile, named *Non-School Absenteeism*, included 266 subjects (35%), who scored low across all four factors (-0.76 , -0.89 , -0.69 and -0.78 , respectively). The second group, *Moderate School Absenteeism*, comprises 453 subjects (59.7%) with low to moderate scores on each factor (0.26, 0.32, 0.27 and 0.30, respectively). Finally, the third profile, *High School Absenteeism*, consists of 40 participants (5.3%) who scored high on all ARSNA factors (2.07, 2.27, 1.54 and 1.82, respectively).

Table 4 presents the sociodemographic characteristics of the school absenteeism profiles. Regarding gender, it was observed that girls predominated across all three absenteeism profiles. Furthermore, the gender distribution among the profiles was reported to be homogeneous ($\chi^2 = 1.23$, $p = 0.873$). In terms of age, a disparity between the profiles was identified, which was supported by the Chi-square test ($\chi^2 = 30.69$, $p = 0.002$), indicating a non-homogeneous distribution across profiles. Specifically, students aged 16 predominated in Profile *non-School Absenteeism*, whereas

TABLE 2 Correlations between School absenteeism and learned helplessness.

Dimensions	SS	HC	UA	SR
Learned helplessness	0.25**	0.29**	0.12**	0.35**

SS, somatic symptoms; HC, subjective health complaints; UA, unjustified absences; SR, school refusal; * $p < 0.05$, ** $p < 0.001$.

TABLE 3 Fit statistics for each latent profile model.

Models	AIC	BIC	BIC-adjusted	LRT p	LRT-adjusted	BLRT	Entropy	Size
2	7997.55	8057.77	8016.49	<0.001	<0.001	<0.001	0.71	0
3	7613.78	7697.16	7640.01	<0.001	<0.001	<0.001	0.84	0
4	7495.26	7601.80	7528.76	0.089	0.094	<0.001	0.83	1
5	7394.14	7523.83	7434.92	0.006	0.007	<0.001	0.82	2
6	7303.93	7456.78	7351.99	0.169	0.178	<0.001	0.81	2

AIC, Akaike Information Criterion; BIC, Bayesian Information Criteria; LRT, Vuong-Lo-Mendell-Rubin Likelihood-Ration Test; BLRT, Bootstrap Likelihood Ratio Test.

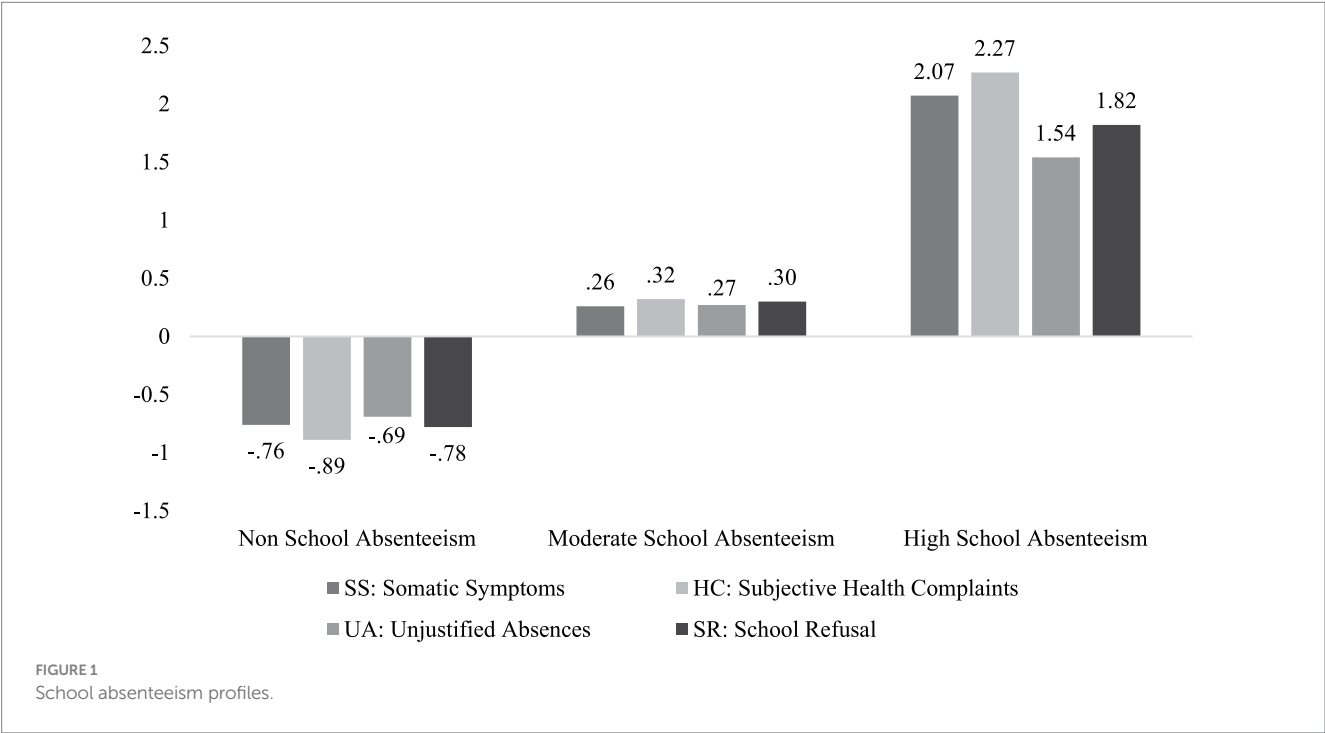


TABLE 4 Sociodemographic characteristic of the school non-attendance profiles.

Profiles		Gender			Age							Academic performance			Parents' studies				
		B	G	O	12	13	14	15	16	17	18	0S	1S	2S	NS	PE	SE	BV	UN
1	N	118	145	3	21	44	32	37	57	53	22	107	81	68	9	18	47	53	84
	%	44.4	54.5	1.1	7.9	16.5	12	13.9	21.4	19.9	8.3	41.8	31.6	26.6	4.3	8.5	22.3	25.1	39.8
2	N	195	250	8	47	73	92	72	75	47	47	112	134	194	14	48	96	107	99
	%	43	55.2	1.8	10.4	16.1	20.3	15.9	16.6	10.4	10.4	25.5	30.5	44.1	3.8	13.2	26.4	29.4	27.2
3	N	15	24	1	4	12	5	8	3	4	4	4	12	24	1	3	5	16	6
	%	37.5	60	2.5	10	30	12.5	20	7.5	10	10	10	30	60	3.2	9.7	16.1	51.6	19.4

Profile 1: non-school absenteeism; Profile 2: moderate school absenteeism; Profile 3: high school absenteeism; B: boys; G: girls; O: other; 0S: all approved signatures; 1S: 1/2 failed signatures; 2S: 3 or more failed signatures; NS: non-studies; PE: primary education; SE: secondary education; BV: bachiller/vocational education; UN: university.

Profiles of *Moderate School Absenteeism* and *High School Absenteeism* included a higher proportion of students aged 14 and 13, respectively. Concerning academic performance, students in Profile of *non-School Absenteeism* had passed all subjects, while in Profiles of *Moderate School Absenteeism* and *High School Absenteeism*, the majority of students had failed three or more subjects. This disparity was supported by the Chi-square test ($\chi^2 = 37.76$, $p < 0.001$), revealing statistically significant differences

in the proportion of students passing or failing subjects according to their cluster membership. Lastly, regarding the relationship between cluster membership and parental educational level, statistically significant differences were found ($\chi^2 = 19.42$, $p = 0.013$). Specifically, in Profile of *High School Absenteeism*, a lower percentage of students (19.4%) reported that their father held a university degree, followed by Profile of *Moderate School Absenteeism* (27.2%), while Profile of *non-School Absenteeism*

exhibited the highest percentage of students (39.8%) whose father had completed higher education.

3.3 School absenteeism profiles and learned helplessness

The ANOVA results indicate statistically significant differences between the School Absenteeism profiles and LH [Wilks' Lambda = 0.87; $F_{(2, 756)} = 29.45$; $p < 0.001$; $\eta_p^2 = 0.07$], as shown in Table 5. The *High School Absenteeism* profile scored the highest on LH, followed by the *Moderate School Absenteeism* group, while *Non-School Absenteeism* profile had the lowest grades on LH.

Table 6 provides *post hoc* comparisons to identify statistically significant differences in LH scores across School Absenteeism profiles. All profile combinations showed statistically significant differences in LH scores. Effect sizes were moderate between *Non-School Absenteeism* and *Moderate School Absenteeism* profiles ($d = 0.53$), and large between *High School Absenteeism* profile and the groups of *Non-School Absenteeism* ($d = 1.41$) and *Moderate School Absenteeism* ($d = 1.09$).

3.4 Logistic regressions

Table 7 shows the results of the logistic regression analysis for the likelihood of belonging to the *High School Absenteeism* profile based on LH scores. The model accurately classified 94.7% of cases, with Nagelkerke's R^2 at 0.17. LH was a positive and significant predictor of belonging to the *High School Absenteeism* profile, with an OR of 1.18, indicating an 18% increase in the probability of belonging to this profile for each additional point on LH scale.

3.5 ROC curves

Finally, Figure 2 displays the area under the curve (AUC), indicating LH scores' ability to distinguish individuals within *High School Absenteeism* profile. The AUC value at a cut-off score of 9 is 0.79 (95% CI = 0.75–0.81), which is significantly different above chance or a random ROC line ($p < 0.001$). Sensitivity reaches 90; specificity is 54.5 and the Youden index is 0.45, all suggesting that LH scores possess a solid discriminative capacity.

4 Discussion

This study seeks to explore the connection between SAPs and LH. Firstly, the latent profile analysis reported the existence of three

student profiles of *low*, *moderate* and *high school absenteeism*. The resulting latent profiles cannot be compared with other studies, given the lack of previous related data identifying SAPs profiles using the ARSNA. However, the continuity of occurrence of high and low score profiles like the previous profiles based on the SRAS-R is observed (Delgado et al., 2019; Dube and Orpinas, 2009; Gallé-Tessonneau et al., 2019; González et al., 2020; González et al., 2023; Knollmann et al., 2013; Maynard et al., 2012; Pérez-Marco et al., 2024). Although it differs in the occurrence of mixed profiles with varying scores on the different factors assessed by the SRAS-R, which has not been observed with the ARSNA dimensions. This may mean that the distribution of latent profiles may be influenced not only by the characteristics of the sample, but also by the measuring instrument and the different factors measured (Çimşir and Ülker Tümlü, 2022) in each study.

Furthermore, the identification of three distinct absenteeism profiles partly reflects underlying psychosocial and contextual processes that shape students' engagement with school. Specifically, the sociodemographic characteristics of the identified profiles indicate that variables such as age, academic performance, and parental educational level function as both individual and contextual factors that differentiate between opposing profiles, such as the *non-School Absenteeism* and *High School Absenteeism* profiles. More precisely, the *High School Absenteeism* profile predominantly consists of 13-year-old students who exhibit lower academic achievement and whose parents possess lower levels of educational attainment compared to those in the more adaptive profiles. Moreover, this maladaptive profile not only exhibited elevated levels of LH, but also experienced cumulative academic, interpersonal, and contextual risk factors that reinforce their disengagement from school. Prior research suggests that repeated academic failure and negative feedback can undermine students' sense of competence and foster maladaptive attributional styles characteristic of LH (Margolis and McCabe, 2006; Liu and Alloy, 2010). These students tend to attribute their difficulties to stable and internal causes, which perpetuates feelings of incompetence and resignation.

In addition to academic difficulties, peer relationships and family context play a pivotal role in determining profile membership. Adolescents facing low peer acceptance, bullying, or poor teacher-student relationships often report diminished school belonging and heightened emotional distress (Raufelder et al., 2017), which consequently increases school absenteeism (Leduc et al., 2024). Such experiences not only erode social support but may also exacerbate LH by reinforcing the belief that personal efforts cannot alter negative interpersonal outcomes. Furthermore, family dynamics characterized by low parental support, overprotection, or excessive academic pressure have been linked to increased vulnerability to helplessness, further compounding school disengagement and refusal (Gubbels et al., 2019; Sorrenti et al., 2019).

TABLE 5 Means and standard deviations obtained by the four groups in the dimensions of learned helplessness.

Dimensions	Non-school absenteeism (N = 266)		Moderate school absenteeism (N = 453)		High school absenteeism (N = 40)		Statistical significance		
	M	DT	M	DT	M	DT	$F_{(2,756)}$	p	η^2
Learned helplessness	8.43	5.82	10.44	5.74	16.85	6.87	38.27	<0.001	0.09

Regarding the ANOVA results, adolescents with *high school absenteeism* profile evidenced the highest means on LH, confirmed by the large magnitude of the effect size between the *high school absenteeism* profile with the profiles *non-school absenteeism* and *moderate school absenteeism* ($d = 1.41$; $d = 1.09$, respectively). This may be due to students' own perceived inability to respond to problems and challenges in order to improve and succeed academically (Raufelder et al., 2017; Sorrenti et al., 2019). This, in turn, results in young people who reject school developing a passive response to problems and a belief that they cannot control this helpless attitude, thus developing LH. Moreover, given the continuous succession of school failures, students have developed a school refusal because of the anxiety to attend there or even the belief of no control over failure. Therefore, these school refusers end up avoiding school challenges or difficult tasks (Buzzai et al., 2021; Mistry, 2024; Raufelder et al., 2017), and even procrastinating, as an avoidance response to unpleasant school situations (Wang, 2020).

The above results are supported by those derived from the variable-centered analysis. Logistic Regression showed that LH is a positively and significantly predictor of belonging to the *high school absenteeism* profile. In the same vein, the ROC curves revealed that the discriminative capacity of the LH is good, allowing the correct classification of 79% of the students belonging to the *high school absenteeism* profile, despite not being able to compare these results with previous studies given the lack of research on the subject. The cut-off point that best discriminates subjects who do or do not belong to the *high school absenteeism* profile is 0.90 for LH. In this case, sensitivity level above 0.90 is obtained, indicating that this cut-off point allows us to correctly classify the 90% of the *high school absenteeism* profile subjects (sensitivity), and with a lower percentage (54.8%) for those who do not actually belong to the *high school absenteeism* profile (specificity) (Martínez and Pérez, 2023).

Consequently, the results of the ANOVA and Logistic Regression analyses underscore that LH significantly predicts membership in the *high school absenteeism* profile. However, this association should be viewed not solely as an outcome of academic experiences, but as part of a broader psychological pattern. LH is a multidimensional construct with cognitive (pessimistic attributional style), emotional (low self-efficacy, anxiety), and behavioral (avoidance, passivity) components (Abramson et al., 1989; Seligman, 1975). School

absenteeism could be seen as a behavioral manifestation of these internal processes, but LH likely impacts other areas such as academic motivation, emotional regulation, and social interactions. Thus, interventions targeting only absenteeism without addressing underlying cognitions and emotions related to LH may have limited efficacy. Moreover, the ROC curves showing the good discriminatory capacity of LH supports its relevance as a potential screening marker in educational settings. Identifying students at risk of SAPs through their helplessness levels could facilitate early interventions.

Collectively, the proposed hypotheses have been confirmed by the above results, in line with preliminary studies in the field of SAPs and LH. Thus, the results found in this study provide sufficient evidence to suggest that the SAPs assessed by the ARSNA may be positively and significantly associated with LH. Certain aspects of SAPs, such as Somatic Symptoms, Subjective Health complaints or School Refusal, may be more strongly influenced by LH due to the anxiety-based factors. However, all of these ARSNA dimensions have been observed to correlate with LH.

This study presents certain limitations that should be acknowledged. Firstly, data collection relied on a self-report method, which could introduce biases related to social desirability. Secondly, caution is warranted when attempting to generalize these findings to different age groups or cultural contexts, due to the characteristics of community Spanish sample. Consequently, it could be beneficial to replicate this research in various countries to enable comparisons and explore whether cultural differences influence the relationship of SAPs and LH, as well as in specific groups (e.g., students with diagnosed school attendance problems). Moreover, a further limitation lies in the measurement of school absenteeism. Although absenteeism levels were classified into low and high groups through Z-scores and latent profile analysis, the exact number of unexcused absences could not be provided due to the absence of an established consensus on cut-off points. Future studies should aim to define standardized thresholds or include more precise measures of absence frequency.

With regard to the construct of LH, several limitations also should be recognized. On the one hand, it is important to recognize that LH is a multidimensional construct, with multiple theoretical frameworks and instruments available to assess and explain this students' self-perception. In the present study, only one measure, the Learned Helplessness Questionnaire (LHQ), was employed. Therefore, future research would benefit from examining the same sample using alternative theoretical models and assessment tools of LH, in order to enable comparative analyses and gain a more comprehensive understanding of how different conceptualizations of LH manifest within the same population. On the other hand, an additional important limitation is the omission of the Mastery Orientation (MO) subdimension from the analysis of the Learned Helplessness Questionnaire (LHQ). This omission restricts the ability to compare how students from the most maladaptive and the most adaptive school

TABLE 6 Cohen's d value for *post hoc* values between cluster groups of school refusal profiles.

Dimensions		Non-SA – Moderate SA	Non-SA – High SA	Moderate SA – High SA
Learned helplessness	p	<0.001	<0.001	<0.001
	d	0.35	1.41	1.09

SA, school absenteeism.

TABLE 7 Binary logistic regression for the probability of belonging to the High School Absenteeism profile as a function of the learned helplessness.

Variable		χ^2	R^2	B	E. T.	Wald	p	OR	I. C. 95%
Learned helplessness	Correctly classified: 94.7%	46.16	0.17	0.17	0.03	42.36	<0.001	1.18	1.13–1.25
	Constant			−5.10	0.45	129.89	<0.001	0.01	

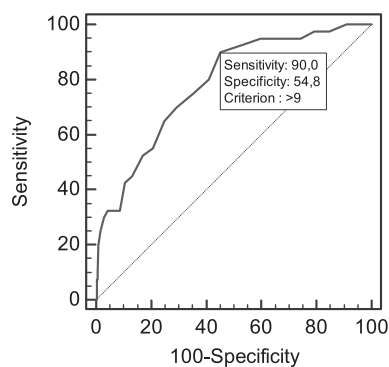


FIGURE 2
ROC curves for the discriminative capacity of the School Absenteeism scores over learned helplessness.

absenteeism profiles respond to academic challenges. Furthermore, future studies could categorize high and low levels of LH among students based on empirically established cut-off points, in order to more accurately and rigorously determine the extent to which this psychological condition is present within the student population. Lastly, due to the study's cross-sectional design, casual inferences between variables cannot be established. Therefore, future research should incorporate longitudinal data to examine students' school refusal across different stages of their education.

Despite its limitations, this research brings valuable new insights to the field of Educational Psychology. Specifically, it clarifies the relationship between ARSNA school absenteeism factors and the LH through a dual approach, combining variable analysis (correlations, logistic regression and ROC curves) and person-oriented analysis (latent profile analysis and ANOVA). Additionally, it is the first study to employ, on the one hand, the latent profile analysis with ARSNA dimensions to identify the groups of school absenteeism; and, on the other hand, ROC Curves analysis to assess the discriminative power of LH to distinguish students of *high school absenteeism* profile. It is also worth underlining the need to recognize among educational professionals that the intervention against LH can be a common and positive initiative to reduce SAPs in adolescents, as well as the sense of school exclusion and poor teacher-student relationships are risk factors that may increase the likelihood of developing LH among school refusers (Raufelder and Kulakow, 2021). Understanding how LH and school non-attendance are related might help schools create focused treatments, such as teacher training, mental health assistance, and flexible learning strategies, to address underlying issues and foster resilience. Furthermore, it is worth mentioning that measuring this aspect of students' mental health, such as LH, may improve the usefulness of the assessment in students with SAP who would have represented significant heterogeneity in their profiles, and their subsequent design of personalized intervention. These results can also guide community collaborations, parental involvement tactics, and legislative modifications to foster a positive atmosphere that minimizes absenteeism and its psychological effects, apart from to design intervention programs to reduce school absenteeism rates and, simultaneously, increase learned helplessness levels. For that reason, the use of Cognitive-Behavioral therapy and/or strategies (i.e., imaginary strategies, mindfulness, cognitive reconstruction,

progressive exposure, etc.) was confirmed, due to its effectiveness in the interventions against school absenteeism (Pérez-Marco et al., 2025) and learned helplessness (Aslam and Bano, 2019), separately, in order to improve the students' overall wellbeing. In this sense, possible future studies may develop a single program that allows the treatment of both variables through the same type of therapy.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by Ethics Committee of the University of Alicante (UA-2023-03-07). The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

MP-M: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft. AF: Data curation, Methodology, Software, Writing – review & editing. CG: Conceptualization, Funding acquisition, Project administration, Supervision, Writing – original draft.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Generative AI statement

The authors declare that no Gen AI was used in the creation of this manuscript.

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EDITED BY

Carolina González,
University of Alicante, Spain

REVIEWED BY

Carol Nash,
University of Toronto, Canada
Buyi Mbele,
University of Zululand, South Africa

*CORRESPONDENCE

Evelyne Karel
✉ Evelyne.karel@berkenschutse.nl

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School-based support for emotion-related attendance challenges: effectiveness of @School when implemented with neurodiverse adolescents, their parents, and school staff

Evelyne Karel^{1,2*}, Cynthia Defourny¹, Gil Keppens²,
Patricia A. Graczyk³, Floor Sauter⁴ and David Heyne^{5,6}

¹Department of Education and Innovation, De Berkenschutse, Centre for Educational Expertise, Heeze, Netherlands, ²Department of Sociology, Tilburg University, Tilburg, Netherlands, ³Department of Psychiatry, University of Illinois at Chicago, Chicago, IL, United States, ⁴De Banjaard, Outpatient Mental Healthcare Expertise Center for Youth with MID/BIF (Youz, Parnassia Group Psychiatric Institute), The Hague, Netherlands, ⁵Institute of Psychology, Leiden University, Leiden, Netherlands, ⁶School of Psychology, Faculty of Health, Deakin University, Burwood, VIC, Australia

Emotion-related school attendance challenges (ER-SAC) among neurodiverse adolescents are a growing concern due to their impact on both academic and social-emotional development. Despite the prevalence of ER-SAC, few school-based interventions specifically addressing this challenge have been evaluated in real-world settings. The current effectiveness study examined outcomes of the @School intervention, a modular, developmentally sensitive cognitive behavioral intervention that had previously only been evaluated in a research context. In this study, it was delivered by school-based psychologists in a specialized educational setting. Nineteen neurodiverse adolescents aged 12–17 years, all experiencing ER-SAC, participated in the study along with their parents. @School comprises individualized modules for adolescents and parents, as well as structured collaboration with school staff. Outcomes were assessed at pre-, post-, and five-month follow-up, and included adolescents' school attendance, anxiety, school-related fear, depression, and self-efficacy, together with parent self-efficacy. Results revealed significant improvements in school attendance, adolescent anxiety (reported by both adolescents and parents), adolescent depression (reported by parents), and school-related fear. No significant changes were observed in adolescent or parent self-efficacy. Post-hoc analyses indicated significant reductions in social anxiety symptoms, although these reductions did not predict school attendance outcomes. Findings support the effectiveness of the @School intervention, delivered in a real-world setting, for improving school attendance and reducing emotional distress among neurodiverse adolescents. The results also highlight the value of school-based interventions that integrate support across multiple levels—addressing the needs of adolescents, their parents, and the school environment—to respond to the complex emotional and contextual factors contributing to ER-SAC.

KEYWORDS

emotion-related school attendance challenges, school refusal, neurodiversity, school-based intervention, cognitive behavioral therapy, school attendance, anxiety, depression

1 Introduction

School attendance challenges (SAC) are a significant and growing concern worldwide. They are particularly prevalent among neurodiverse adolescents (Adams et al., 2019; Adams et al., 2025; Munkhaugen et al., 2017; Sasso and Sansour, 2024), defined in this study as those diagnosed with autism spectrum disorder (ASD) and/or attention deficit hyperactivity disorder (ADHD). Furthermore, SACs are associated with long-term consequences for academic achievement and mental health (Heyne et al., 2022a; Kearney et al., 2022). Within the broad array of SACs, Emotion-Related School Attendance Challenges (ER-SAC) represent a particularly complex form driven by emotional distress (Heyne et al., 2019). Although ‘school refusal’ was a commonly used term, consensus on terminology is evolving, and we use ER-SAC to reflect the shift toward more student- and parent-centered language. Given the potential impact of ER-SAC on adolescent development, there is an urgent need for interventions that not only support school attendance but also address the emotional factors contributing to absence.

Adolescence is a critical developmental period for ER-SAC, marked by increasing complexity in social, academic, and psychological demands, which can complicate intervention efforts (Heyne, 2022). Adolescents experiencing ER-SAC often demonstrate a poorer response to intervention compared to children, a pattern linked to the increasing complexity of social, academic, and psychological challenges in adolescence (Heyne, 2022). The transition to secondary education presents heightened academic demands and greater autonomy expectations, which can exacerbate SACs (Melvin et al., 2025). These developmental challenges underscore the importance of tailoring interventions to the unique psychological, academic, and social needs that emerge during adolescence (Waite and Creswell, 2014).

Adolescent mental health difficulties are among the most significant influences on school attendance, representing a growing global concern due to rising prevalence rates (World Health Organization, 2021). Currently, one in seven (14%) individuals aged 10–19 years experiences a mental disorder, accounting for 15% of the global disease burden in this age group (World Health Organization, 2021). Anxiety and depressive disorders, in particular, are common and have significant implications for school attendance and academic performance (Finning et al., 2019; Finning et al., 2022; World Health Organization, 2021). These conditions often contribute to social withdrawal, isolation, and loneliness, further exacerbating the risk of school absence (World Health Organization, 2021). Because anxiety and depression are key early drivers of school non-attendance (Adams et al., 2025; Heyne et al., 2019), there is a need to integrate emotional support into interventions for ER-SAC.

Neurodiverse adolescents are particularly vulnerable to factors contributing to ER-SAC (Fleming et al., 2017, 2020; Nordin et al., 2023; World Health Organization, 2021). Increasingly, research suggests that adolescents facing neurodiversity have a heightened risk of school non-attendance due to, among other factors, increased susceptibility to mental health difficulties, particularly anxiety and depression (Adams, 2021; Morales-Hidalgo et al., 2023; Munkhaugen et al., 2017; Orm et al., 2024; Totsika et al., 2020). Recent findings by Adams et al. (2025) suggest that, among children with autism, anxiety is more strongly linked to school non-attendance than any other factor

examined. Additional factors contributing to school non-attendance among neurodiverse adolescents include an increased likelihood of experiencing bullying (Bitsika et al., 2020; McClemon et al., 2020; Ochi et al., 2020), familial influences (Niemi et al., 2022), and insufficient accommodations within current educational settings (Connolly et al., 2023; Li et al., 2024; May et al., 2021; White et al., 2024).

Research also shows that neurodiverse adolescents have a higher likelihood of school non-attendance compared to their neurotypical peers (Adams, 2021; Black and Zablotzky, 2018; Niemi et al., 2022; Totsika et al., 2020). ER-SAC is a particularly prevalent type of attendance challenge among neurodiverse adolescents, with rates substantially higher than the 1–7% observed in the general population. Estimates of school non-attendance in adolescents with autism spectrum disorder (ASD) range from 9% to as high as 72.6% (Adams, 2021; Totsika et al., 2020), while in adolescents with ADHD, reported rates vary between 5.2 and 16%, depending on age and context (Black and Zablotzky, 2018; Niemi et al., 2022). Comorbid anxiety has been shown to further increase the likelihood of school non-attendance in these groups (Niemi et al., 2022). Totsika et al. (2020) found that ER-SAC accounted for 43% of non-attendance in their study population of neurodiverse adolescents. Further, Adams (2021) highlighted that ER-SAC contributed to half of all recorded full-day and partial-day school absences, emphasizing its role as a primary factor in chronic absence.

Cognitive Behavioral Therapy (CBT) is a widely used intervention for ER-SAC, among both neurotypical and neurodiverse adolescents, (Finning et al., 2022; Heyne et al., 2020; Johnsen et al., 2021; Maynard et al., 2018), yet it fails to adequately support one-third to two-thirds of adolescents displaying ER-SAC (Heyne, 2023). The Maynard et al. (2018) review found that CBT significantly improved school attendance but did not significantly reduce anxiety symptoms. Improved school attendance is a valuable outcome, as it allows adolescents to access academic, social, and emotional resources that support their development. However, increasing time at school alone is not sufficient. Emotional support is essential to disrupt patterns of avoidance and promote sustained school engagement and psychological well-being (Heyne et al., 2022b; Finning et al., 2019). To achieve both improved attendance and reduced emotional distress, interventions must adopt a multi-level approach that addresses the psychological and contextual factors contributing to ER-SAC (Melvin et al., 2019; Sasso and Sansour, 2024).

The @School intervention (Heyne and Sauter, 2013) is a developmentally sensitive and modular CBT-based program designed to support adolescents with ER-SAC through a multi-system approach. It addresses individual, family, and school systems—enabling a comprehensive response to the complex interplay of factors that contribute to ER-SAC. It includes 12 youth-focused and 12 parent-focused modules, composed of both standard and optional modules that allow for individual tailoring based on a carefully prepared case formulation. The school-focused modules foster school staff involvement in addressing academic, emotional, behavioral, organizational, and social factors that may impact attendance. Examples of adolescent modules include: ‘Solving Problems’, ‘Managing Stress’, and ‘Attending School’, while parent modules include ‘Thinking about the Teenage Years’, ‘Addressing Maintenance Factors’, and ‘Facilitating School Attendance’. Simultaneously, the intervention engages schools to create supportive environments for

academic and socio-emotional growth, ensuring that systemic factors contributing to ER-SAC are addressed. Recognizing that sustainable support for school attendance requires alignment across the individual, family, and school systems, the @School intervention integrates them into a cohesive approach, through coordinated goal setting, joint sessions, and shared communication strategies involving adolescents, parents, and school staff. A complete overview of all modules, including their objectives and key techniques, is provided in [Supplementary material 1](#). For additional background and theoretical rationale, a more detailed description of the intervention is available in [Heyne and Sauter \(2013\)](#), and interested readers may contact the first author for access to the manual.

The [Heyne et al. \(2011\)](#) efficacy study provided support for the @School intervention under controlled research conditions. These conditions included strict inclusion and exclusion criteria (e.g., no adolescents with autism), standardized intervention delivery in a clinical setting, and therapist adherence monitoring to ensure fidelity to the treatment protocol. Study results showed significant improvements in school attendance, reductions in school-related anxiety, and enhanced self-efficacy among adolescents and parents. These findings point to the potential of a developmentally sensitive modular CBT approach—one that is grounded in a multi-level framework—to meaningfully support adolescents experiencing ER-SAC and their families.

The @School intervention was initially evaluated under standardized research conditions. Since then, related initiatives have emerged that build on its principles. One such initiative is the Back2School (B2S) program, which adapts core elements of @School for broader application ([Johnsen et al., 2024](#); [Thastum et al., 2019](#)). The current study contributes to this body of work by evaluating the original @School intervention in a real-world educational context, specifically a school for students with special educational needs. Data collection for the study began in 2017 and proceeded slowly due to the modest resources available for the project, limited capacity in terms of available therapeutic staff, and disruptions caused by the COVID-19 pandemic.

The question remains as to whether the positive outcomes reported in the 2011 efficacy study of the @School intervention, conducted under optimal research conditions, extend to implementation in a real-world setting and with neurodiverse adolescents experiencing ER-SAC. We contribute to the literature by examining the effectiveness of the @School intervention in an educational context, specifically targeting neurodiverse adolescents with ER-SAC. In general, research on ER-SAC interventions has largely been conducted in controlled settings ([Hannan et al., 2019](#); [Heyne et al., 2011](#); [Heyne, 2023](#); [Tolin et al., 2009](#)). Effectiveness studies, which assess interventions in real-world settings, are crucial for understanding how interventions function outside controlled conditions. They account for the complexities of school environments, the practical challenges of implementation, and the diversity of youth receiving the intervention, many of whom would be excluded from controlled trials due to comorbidity. The current study offers insight into the functioning of an existing intervention when delivered by school-affiliated psychologists in a real-world educational context.

This study was developed in response to a gap observed in practice and noted in the literature. That is, while professionals in clinical settings often prioritize the emotional well-being of adolescents displaying ER-SAC, they may not explicitly address school

reintegration ([Heyne and Sauter, 2013](#)). Conversely, professionals in education settings may prioritize school attendance while overlooking underlying emotional barriers, potentially limiting sustained progress for adolescents ([Thambirajah et al., 2008](#)). This study assessed the effectiveness of the @School intervention, embedded within a school setting and addressing mental health needs, for neurodiverse adolescents experiencing ER-SAC. This also permits comparison with outcomes from the original efficacy study ([Heyne et al., 2011](#)), evaluating whether similar benefits are found when the intervention is delivered under real-world conditions. To evaluate the impact of this intervention, a non-randomized trial has been conducted within a special educational needs school, delivered by school-based psychologists. We hypothesized that the intervention would lead to increased school attendance and reductions in school-related fear and anxiety. Additionally, we expected decreases in depressive symptoms and improvements in adolescent and parent self-efficacy.

2 Method

2.1 Participants

2.1.1 Study context

Adolescents in the study were enrolled at De Berkenschutse, an expertise center for specialized education, located in the south of the Netherlands. This school provides education and training for adolescents with epilepsy, long-term illness, learning difficulties, multiple disabilities, and neurodevelopmental problems.

2.1.2 Criteria for inclusion and exclusion

Adolescents aged 10–17 years were included in the study if they met the criteria for ER-SAC presented in [Heyne et al. \(2011\)](#) and refined for the current study: (a) school attendance was below 80% in the prior 2 weeks; (b) parents confirmed awareness of their child's whereabouts during each absence in the 2 week period; (c) the adolescent's level of anxiety and/or depression was above the clinical cutoff based on adolescent or parent reports of emotional distress, assessed via standardized instruments (see Section 2.3.2); (d) the adolescent displayed no severe externalizing behavioral problems; (e) both the adolescent and parents demonstrated willingness to support the adolescent's school attendance; and (f) the adolescent did not meet criteria for truancy.

Adolescents were excluded according to the following criteria: (a) IQ score below 80; (b) no medical clearance by the primary physician for treatment initiation; (c) presence of a DSM-5 psychotic disorder ([American Psychiatric Association, 2022](#)); (d) significant communication challenges or selective mutism; (e) developing personality disorder; (f) presence of addiction issues; (g) presence of eating disorders; (h) presence of severe suicidality; (i) other ongoing intensive treatment; (j) Post Traumatic Stress Disorder (k) changes in pharmacological treatment during the intervention period; and (l) severe conflict arising from a hostile parental divorce.

Eligibility for inclusion was determined through a two-stage process: an initial telephone screening conducted with one of the therapists of the @School intervention (Gate 1), during which preliminary information was collected to assess the likelihood of meeting the inclusion criteria, followed by a comprehensive pre-intervention assessment conducted with one of the therapists of

the @School intervention (Gate 2), incorporating clinical interviews and standardized measures (see Section 2.2.2).

Sixty-six families were referred for telephone screening, with 33 families meeting the preliminary criteria and participating in pre-intervention assessment. Following assessment, 7 families (21%) were excluded due to: absence of clinical anxiety or depression ($n = 1$), severe externalizing behavioral problems ($n = 1$), psychiatric issues requiring (inpatient) care ($n = 3$), and transition to another school ($n = 2$).

2.1.3 Description of included participants

Of the 26 families initially enrolled in the study, 3 withdrew during the intervention due to either a lack of motivation because the adolescent achieved full school attendance ($n = 1$), or a preference not to have to attend scheduled appointments ($n = 2$). A decision was made to exclude 4 of the remaining 23 families because they received more than 25% of their treatment online during COVID-19 lockdowns. Their experience of the intervention differed substantially from families who participated under pre-pandemic or post-pandemic conditions. The remaining 19 families completed post-intervention assessments, with 17 participating in follow-up assessments.

The completer sample comprised 10 females and 9 males, aged 12–17 years ($M = 14$, $SD = 1.3$). Diagnoses included ASD ($n = 15$), ADHD ($n = 2$), and other neurodevelopmental disorders ($n = 2$). The majority (79% $n = 15$) pursued higher general or pre-university secondary education, with adolescents distributed across the first to fourth years of secondary education in the Dutch school system. Family composition included 84% two-parent households ($n = 16$) and 16% single-parent households ($n = 3$).

Using the internationally recognized Tier system (Kearney, 2016; Kearney and Graczyk, 2020), all adolescents (100%) were classified as chronically absent ($\leq 90\%$ attendance, Tier 3) before the intervention.

2.2 Procedure

2.2.1 Ethics

During pre-intervention assessment, adolescents and parents were briefed about the study and asked to provide written consent for participation. For ethical reasons, families were not denied intervention if they chose not to participate in the study, although this scenario did not occur in practice. Because the study evaluated standard practices at De Berkenschutse, it received a waiver from the ethics committee at Leiden University Medical Centre.

2.2.2 Pre-intervention assessment

Families were referred to the LANS program, a Dutch acronym for 'Leerlingen Allemaal Naar School' ('All Students to School'), a school-based initiative that includes the @School intervention as a core component. Referrals were made either by team leaders in the school's internal care team or by the school's admissions team for newly enrolled adolescents.

These teams identified adolescents displaying ER-SAC who and were considered likely to benefit from the intervention provided by LANS.

Families referred to the @School intervention by the internal care team or the admissions department participated in telephone screening conducted by one of the @School intervention therapists. If

screening indicated that the inclusion criteria were likely to be met, families proceeded to a pre-intervention assessment, conducted in two in-person sessions at the school. These sessions, spaced 1 week apart, involved a semi-structured clinical interview with the adolescent and their parents, conducted by separate therapists. Families also completed questionnaires at home (see Section 2.3).

2.2.3 Intervention

The @School intervention (Heyne and Sauter, 2013) incorporates 12 youth-focused and 12 parent-focused modules. As described in the manual, individualized intervention per family was based on a case formulation developed using information from the pre-intervention assessment. Individualization included the selection, dosing, and tailoring of modules. A flexible reintegration approach was applied, adjusting the pace of physical school attendance to the individual capacity of the adolescent. In some cases, school attendance was gradually increased from the start of the intervention, while in others, initial treatment was prioritized before systematically building up school participation. Sessions were conducted weekly, with individual sessions lasting 45 min and family sessions (where the adolescent, parents, and therapists participated) lasting 90 min. On average, adolescents attended 15 individual intervention sessions ($M = 15.22$, $SD = 4.01$), while parents attended 11 individual sessions ($M = 10.84$, $SD = 2.83$). In addition, families participated in 2 to 3 joint sessions ($M = 2.5$, $SD = 0.86$) involving both the adolescent and their parents, focusing on family communication and problem solving. Booster sessions were optional for all families, only five adolescents opted to participate. Collaboration with school staff was actively integrated through multidisciplinary meetings approximately every 2 weeks, involving therapists, school staff, and parents—and, when possible, the adolescent as well. These meetings served to align academic, emotional, and behavioral support strategies and to coordinate shared planning for school reintegration.

2.2.4 Post-intervention and follow-up assessments

Each family participated in a post-intervention assessment scheduled 2 weeks after the intervention ended, and a two-month follow-up assessment thereafter. On average, post-intervention assessments were conducted approximately 2.4 weeks after the completion of the intervention, while follow-up assessments were conducted on average 5.4 months after intervention completion. Although follow-up was planned at 3 months post-intervention, variation in questionnaire return times led to a longer average follow-up period. All questionnaires were completed at home.

2.2.5 Therapists and supervision

Four psychologists conducted the telephone screening, pre-intervention assessment, and intervention sessions. Two of the psychologists had postgraduate degrees and registrations in health care psychology, one had a postgraduate degree in school psychology, and one was completing the final year of postgraduate education in health care psychology. Three of the four had participated in a 100-h post-masters training in CBT. To support treatment fidelity, monthly group supervision sessions were held, totaling approximately 30 h and guided by one of the co-authors of the @School intervention. Supervision encompassed discussions on case formulations and treatment sessions, ensuring

adherence to the intervention manual while optimizing therapeutic outcomes.

2.3 Measures

Outcomes were the adolescents' school attendance and emotional distress (symptoms of anxiety, symptoms of depression, and school-related fear) as well as adolescents' and parents' self-efficacy.

2.3.1 School attendance

The percentage of school attendance over the 20 school days preceding the assessment (i.e., pre-, post-, or follow-up assessment) was based on: (a) school records, in which teachers at the school had recorded attendance for every hour of the school day; or (b) attendance records from the previous school, for adolescents whose pre-intervention assessment occurred shortly after their enrolment at the school. Attendance status was categorized based on school attendance percentages, with Tier 1 representing good attendance (>95%), Tier 2 moderate attendance (90–95%), and Tier 3 chronic absence ($\leq 90\%$). These classifications were used to analyze attendance outcomes over time.

2.3.2 Emotional distress

Anxiety symptoms were measured using two validated instruments. First, adolescents and parents completed the Multidimensional Anxiety Scale for Children (MASC/MASC-P; March et al., 1997), Dutch version by Utens and Ferdinand (2000), the instrument used in the original 2011 study. The MASC and MASC-P contain 39 items rated on a 4-point Likert scale and assess four anxiety domains: physical symptoms, social anxiety, avoidance of harm, and separation anxiety. The MASC has been widely recognized as a reliable measure for evaluating treatment outcomes (Brooks and Kutcher, 2003) and continues to be applied in research on youth anxiety (Franke et al., 2024). The total score ranges between 0 and 117, with higher scores indicating greater anxiety severity.

Second, adolescents completed the Screen for Child Anxiety Related Emotional Disorders (SCARED; Monga et al., 2000), Dutch version by Muris et al. (2007), an instrument routinely used at the school where the study was conducted. The SCARED consists of 69 self-report items measuring symptoms across multiple anxiety disorders, including separation anxiety, panic disorder, specific phobia, social phobia, obsessive-compulsive disorder, post-traumatic and acute stress disorder, and generalized anxiety disorder. Responses are given on a three-point scale (never or almost never, sometimes, often). The total score ranges between 0 and 138, with higher scores indicating greater anxiety severity. The Dutch version of the SCARED has demonstrated good internal consistency (Muris et al., 2007) as well as discriminant validity (Monga et al., 2000), and it remains a commonly used instrument in anxiety research (Sourander et al., 2025).

School-related fear was measured using the School Fear Thermometer (SFT; Heyne and Rollings, 2002), a visual analog scale ranging from 0 (no fear) to 100 (maximum fear). Adolescents rated their fear regarding school attendance for: (i) the next school day; and (ii) their worst day in the past 2 weeks. Researchers have reported high reliability and acceptable validity for the fear thermometer and its

variants (Kleinknecht and Bernstein, 1988), and the SFT has demonstrated good test-retest reliability (Heyne, 1999).

Depressive symptoms were assessed using youth and parent versions of the Children's Depression Inventory-2 [CDI-2; Kovacs, 2016; Dutch version by Bodden et al. (2016)] which continues to be widely used in research (Stewart et al., 2025). The youth version consists of 28 items, each comprising three response statements (0 = 'not at all' to 2 = 'always'). The total score ranges between 0 and 56, with higher scores indicating greater depressive symptoms. The internal consistency of the CDI-2 is high for both the general Dutch population and clinical samples (Bodden et al., 2016). The parent version consists of 17 statements rated on a 4-point scale (0 = 'not at all' to 3 = 'always'), with similar reliability metrics (Kovacs, 2016). The internal consistency of the parent CDI-2 is good, for both the general Dutch population and the clinical population (Kovacs, 2016).

2.3.3 Self-efficacy

Adolescents and parents reported on their own self-efficacy, via the Self-Efficacy Questionnaire for School Situations (SEQ-SS) and the Self-Efficacy Questionnaire for Responding to School Attendance Problems (SEQ-RSAP), respectively. The 23-item SEQ-SS (Heyne et al., 2007) used in this study is a Dutch adaptation of the original 12-item SEQ-SS (Heyne et al., 1998). It measures the strength of the adolescent's belief that they could cope with potential stressful or anxiety-provoking situations associated with school attendance (e.g., how certain are you that you could go to school if you feel anxious or scared). Items are responded to on a 5-point scale (1 = 'really sure I could not' to 5 = 'really sure I could'). The total score ranges between 23 and 115, and higher scores represent a higher level of self-efficacy. The Dutch SEQ-SS has good internal consistency and convergent validity (Duijzer, 2007; Van der Leden, 2008), and translations of the instrument continue to be employed in studies of school attendance challenges (González et al., 2021; Johnsen et al., 2024).

The 25-item SEQ-RSAP (Heyne et al., 2007) assesses the extent of parents' confidence in their capacity to assist a child facing school attendance challenges, remain composed in such situations, and utilize problem-solving and communication skills to effectively address attendance issues. Items are responded to on a 4-point scale (1 = 'totally disagree' to 4 = 'totally agree'), yielding a total score between 25 and 100, with higher scores representing higher levels of self-efficacy. The instrument shows promising convergent validity and good temporal stability (Lavooi, 2010).

2.4 Statistical analyses

Data from the completer sample were used to evaluate intervention effects. Repeated measures ANOVAs were conducted for school attendance, anxiety (MASC/MASC-P, SCARED), depression (CDI-2), school-related fear (SFT), and self-efficacy (SEQ-SS, SEQ-RSAP). Greenhouse-Geisser corrections were applied when sphericity assumptions were violated. Pairwise comparisons with Bonferroni correction examined differences between assessment points. Within-subject effect sizes (Cohen's *d*) were calculated and interpreted based on Cohen's (1988) criteria: 0.20 = small effect, 0.50 = medium effect, and 0.80 = large effect. Correlations between self-efficacy and school attendance changes were explored. Missing data were not included in the analyses. Statistical tests were performed

using SPSS. All father-report data were excluded from the analyses due to low response rates. As a result, all parent-report measures reflect responses provided by mothers only.

3 Results

3.1 Effectiveness of the @School intervention

The main outcomes are summarized here to provide an overview of the intervention's effects, with detailed results presented below. Repeated measures analyses of variance (ANOVA) with pairwise comparisons revealed significant improvements in school attendance, self-reported anxiety (MASC & SCARED), parent-reported anxiety (MASC-P), parent-reported depressive symptoms (CDI-2), and school-related fear (SFT). No significant changes were observed for self-reported depressive symptoms (CDI-2) and self-efficacy (SEQ-SS and SEQ RSAP) (see Table 1). Pairwise comparisons were used to examine specific differences between time points, following the approach used in previous research. The average effect size of improvements between pre-intervention and follow-up (M Cohen's $d = 0.82$) was larger than the effect size between pre- and post-intervention (M Cohen's $d = 0.69$), indicating a sustained impact over time.

3.1.1 School attendance

Repeated measures ANOVA indicated a significant main effect of time on school attendance [$F(1.45, 18) = 28.17, p < 0.001$], demonstrating a general increase over time. Pairwise comparisons

revealed significant improvements from pre-intervention ($M = 17.22, SD = 28.52$) to post-intervention ($M = 74.85, SD = 30.76$), but no significant difference between post-intervention and follow-up assessment, indicating that school attendance remained stable after the intervention.

Based on the attendance classification described in the Methods section, at post-intervention, 31.6% of participants met the criteria for good attendance (Tier 1), 5.3% were in Tier 2, and 63.2% had attendance levels categorized as Tier 3. By follow-up, almost half (47.4%) of participants had attendance levels corresponding to Tier 1, 5.3% remained in Tier 2, and 47.4% still had attendance in Tier 3. Further examination of attendance patterns within Tier 3 at follow-up revealed that 37.8% had attendance rates between 40 and 90%, with most in the 50–90% range, indicating varying levels of improvement. Specifically, 10.5% had attendance between 80 and 90, 5.3% between 70 and 80, 5.3% between 60 and 70, and 16.7% between 50 and 60%. Only one participant remained at 0% attendance.

3.1.2 Anxiety and school-related fear

3.1.2.1 MASC, SCARED and MASC-P

Adolescents' self-reported anxiety (MASC) changed significantly over time [$F(1.86, 12) = 7.81, p = 0.003$]. Pairwise comparisons revealed significant reductions from pre-intervention ($M = 57.17, SD = 19.68$) to follow-up ($M = 41.21, SD = 22.82, p = 0.013$), while no significant change was observed between pre- and post-intervention. The second measure of self-reported anxiety (SCARED) also revealed a borderline significant change over time [$F(2, 12) = 3.41, p = 0.050$]. Pairwise comparisons indicated that pre-intervention fear scores ($M = 50.58, SD = 21.37$) were significantly higher than

TABLE 1 Mean scores (standard deviations) of outcome measures at pre-intervention, post-intervention and follow-up.

Variable	Pre-intervention	Post-intervention	Follow-up	F	d Post	d FUP
Attendance (%) ^a	17.22 (28.52)	74.85 (30.76)	76.56 (28.26)	$F(1.45, 18) = 28.17^{***}$	1.90	1.97
Self-report						
Anxiety (MASC) ^b	57.17 (19.68)	46.59 (18.63)	41.21 (22.82)	$F(1.86, 12) = 7.81^{**}$	−0.62	−0.62
Anxiety (SCARED) ^c	50.58 (21.37)	41.47 (20.96)	37.00 (25.63)	$F(2, 12) = 3.41^*$	−0.51	−0.57
School-related fear (FSSC-R-SI) ^d	54.00 (41.20)	54.00 (41.20)	54.00 (41.20)	$F(1.23, 8) = 8.59^*$	−0.83	−0.83
Depression (CDI-2) ^e	16.95 (7.49)	19.24 (18.72)	15.14 (17.79)	$F(2, 12) = 0.13$	0.20	−0.10
Self-efficacy (SEQ-SS-NL) ^f	80.83 (11.48)	90.41 (13.37)	87.14 (26.42)	$F(1.23, 12) = 1.04$	0.61	0.21
Parent-report						
Anxiety (MASC-P) ^g	62.65 (16.85)	51.62 (16.02)	48.36 (18.51)	$F(2, 12) = 15.11^{***}$	−1.00	−1.58
Depression (CDI-2) ^h	16.95 (7.49)	19.24 (18.72)	15.14 (17.79)	$F(2, 12) = 0.13^*$	0.20	−0.10
Self-efficacy (SEQ-RSAP) ⁱ	39.24 (3.63)	41.75 (3.66)	42.62 (4.39)	n.s.	0.66	0.72

All parent-report data was based on mothers' reports given low completion rates by fathers. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

^aPercentage School Attendance.

^bMASC: Multidimensional Anxiety Scale for Children.

^cSCARED: Screen for Children Anxiety Related Emotional Disorders.

^dFSSC-R-SI: School-related fear.

^eCDI: Children's Depression Inventory.

^fSEQ-SS-NL: Self-Efficacy Questionnaire for School Situations—Dutch Version.

^gMASC-P: Multidimensional Anxiety Scale for Children—Parent Version.

^hCDI-2: Children's Depression Inventory-Parent Version.

ⁱSEQ-RSAP: Self-Efficacy Questionnaire for Responding to School Attendance Problems.

post-intervention ($M = 41.47$, $SD = 20.96$, $p = 0.024$), but the further reduction from post-intervention to follow-up was not statistically significant.

Parent reports of youth anxiety (MASC-P) also changed significantly over time [$F(2, 12) = 15.11$, $p < 0.001$]. Pairwise comparisons showed that anxiety scores were significantly higher at pre-intervention ($M = 62.65$, $SD = 16.85$) compared to post-intervention ($M = 51.62$, $SD = 16.02$, $p = 0.017$) and follow-up ($M = 48.36$, $SD = 18.51$, $p < 0.001$).

3.1.2.2 SFT

There was a significant main effect of time on fear about going to school, as measured by the SFT [$F(1.23, 8) = 8.59$, $p = 0.12$]. Pairwise comparisons indicated that pre-intervention levels ($M = 54$, $SD = 41.2$, $p = 0.026$) were significantly higher than post-intervention ($M = 20.85$, $SD = 34.19$), with no further significant change from post-intervention to follow-up.

3.1.3 Depressive symptoms

Adolescents' self-reported depressive symptoms (CDI-2) showed no significant change over time [$F(2, 12) = 0.13$, $p = 0.88$], with a mean score of 16.95 ($SD = 7.49$) at pre-intervention and 15.14 ($SD = 17.79$) at follow-up. However, parent reports of adolescents' depressive symptoms revealed significant change over time [$F(2, 12) = 3.97$, $p = 0.032$], with significantly higher scores at pre-intervention ($M = 23.56$, $SD = 4.99$) compared to follow-up ($M = 17.50$, $SD = 5.03$).

3.1.4 Self-efficacy

No significant main effect of time was found for self-efficacy, based on either adolescents' self-reports using the SEQ [$F(1.23, 12) = 1.037$, $p = 0.345$] or parents' reports of their own self-efficacy using the SEQ-RSAP [$F(2, 11) = 2.626$, $p = 0.095$]. However, for adolescents, a trend towards significance was observed between pre- and post-intervention ($p = 0.052$).

3.2 Post-hoc analyses: social anxiety and school attendance

3.2.1 Changes in social anxiety over time

Post-hoc analyses were conducted to further explore changes in social anxiety symptoms over time and their association with school attendance at different time points. Clinically relevant levels of social anxiety were determined using validated cut-off scores on specific subscales. The Social Anxiety subscale of the MASC and MASC-P, and the Social Phobia subscale of the SCARED were used to categorize adolescents' social anxiety as either clinically elevated or non-clinical. Fisher's exact tests were conducted to examine changes in social anxiety symptoms over time using validated self- and parent-report measures. At pre-intervention, 33% ($N = 18$) of adolescents scored in the clinical range for self-reported social anxiety as measured by the MASC and 63% ($N = 19$) as measured by the SCARED. By post-intervention, these percentages declined to 18% ($N = 17$) and 42% ($N = 17$), respectively. At follow-up, they further decreased to 14% ($N = 14$) and 21% ($N = 14$). Fisher's exact tests indicated a significant reduction in social anxiety symptoms from pre- to post-intervention for the MASC ($p = 0.018$) and the SCARED ($p = 0.009$), but no longer

statistically significant from pre-intervention to follow-up. Effect size calculations (*Cohen's d*) showed small-to-moderate differences. For self-reported social anxiety (MASC), *Cohen's d* was -0.19 at pre-intervention and -0.57 at follow-up. For social phobia (SCARED), effect sizes were -0.25 at pre-intervention and -0.08 at follow-up. Parent-reported social anxiety (MASC-P) showed medium effect sizes at pre-intervention ($d = 0.45$) and follow-up ($d = 0.63$).

Parent-reported adolescent social anxiety decreased from 53% ($N = 17$) in the clinically elevated range at pre-intervention to 19% ($N = 16$) at post-intervention, followed by a slight increase to 21% ($N = 14$) at follow-up. None of these changes were statistically significant.

3.2.2 Association between social anxiety and school attendance

Independent samples t-tests were conducted to compare school attendance rates between adolescents with and without clinically elevated social anxiety. At pre-intervention, adolescents with clinically elevated social anxiety on the MASC had a mean school attendance of 22.03% ($n = 6$, $SD = 36.57$) compared to 16.25% ($n = 12$, $SD = 26.12$) for those without [$t(16) = -0.388$, $p = 0.703$]. At follow-up, adolescents with clinically elevated social anxiety had an attendance rate of 91.18% ($n = 2$, $SD = 5.81$) compared to 74.78% ($n = 12$, $SD = 30.14$) for those without [$t(12) = -0.743$, $p = 0.472$].

4 Discussion

This effectiveness study evaluated outcomes following the delivery of the @School intervention in a real-world setting, focusing on neurodiverse adolescents experiencing ER-SAC. While previous research has focused on predictors of school non-attendance among this group (Adams et al., 2025), less is known about which interventions benefit these adolescents. Our findings help close this knowledge gap by providing evidence on a school-based CBT approach tailored to support neurodiverse adolescents experiencing ER-SAC.

The study built upon the Heyne et al. (2011) efficacy study, which was conducted under ideal research conditions and did not include neurodiverse adolescents. Key findings from the current study suggest that the @School intervention—a modular, developmentally-sensitive CBT integrating adolescent-focused intervention, structured parent involvement, and collaboration with school staff—was associated with significant positive outcomes that were maintained at five-month follow-up when delivered in a real-world educational setting. These outcomes included increased school attendance, reduced anxiety symptoms and school-related fear, and reduced depressive symptoms as reported by parents. The following discussion considers these and related results.

4.1 Interpreting the increase in school attendance

School attendance improved substantially following the @School intervention. Average attendance rose from 17% at pre-intervention to 80% at follow-up. Only one adolescent (5%) had 0% attendance at follow-up. In comparison, the Heyne et al. (2011) efficacy study

reported an increase from 15% at pre-intervention to 48% at follow-up, with 45% of adolescents remaining entirely absent. These outcomes suggest that delivering the intervention within a school setting may offer added benefits for improving attendance.

One factor that may explain the apparent higher attendance rates in the present study compared to Heyne et al. (2011) is the structured, school-based delivery of the intervention, which facilitated sustained support and engagement from school staff. While school involvement was also present in the 2011 study, the current approach emphasized direct collaboration between therapists and school staff as a core element of the intervention, ensuring real-time adaptations and ongoing coordination between the two professional groups. This reflects a shift from a more peripheral role for schools in the Heyne et al. (2011) study, to a central, proactive, and integrated role in the current study—potentially contributing to sustained attendance improvements at follow-up. The integration of individual, family, and school-based support in the @School intervention aligns with the KiTeS model (Melvin et al., 2019), which offers a bioecological framework for understanding school attendance difficulties. This model emphasizes that attendance problems emerge from the dynamic interplay between individual vulnerabilities and contextual factors across multiple ecological systems, including family, school, and the broader environment. This ecological perspective helps explain why addressing support needs, across the various ecological systems, may have been particularly effective for neurodiverse adolescents facing complex, layered attendance challenges.

The centralized structure of the intervention, in which healthcare and education providers worked together in a single integrated organization, was seen by both parents and adolescents as helpful for streamlining communication and coordination. This integrated model facilitated real-time collaboration between school staff and mental health professionals, ensuring adolescents received cohesive and timely support. While models in which educational and mental health teams operate in separate organizations can also be effective, integration within a single organization allowed for smoother information exchange through regular in-person interaction and shared access to adolescent monitoring systems. Also, school-based therapists were well-informed about the curriculum, the constraints teachers face, and the educational goals set for the adolescents. In turn, educational staff had, while respecting confidentiality through explicit consent procedures, access to insights from the therapeutic process regarding the challenges faced by adolescents and their families, enabling more tailored academic and emotional support. The shared organizational structure fostered consistency in how the intervention was delivered by psychologists and teaching staff, it supported alignment between educational and therapeutic goals, and reduced the coordination challenges often encountered when services span multiple agencies.

The Tiered system for addressing attendance and absence offers a broader lens for interpreting the current results (Kearney, 2016; Kearney and Graczyk, 2020). Prior to the intervention, all adolescents (100%) met the criteria for Tier 3 ‘chronic absence’ (i.e., $\leq 0\%$ attendance). At post-intervention, the attendance of 32% of adolescents met the threshold for Tier 1 ‘good attendance’ (i.e., $>95\%$), increasing to 47% at follow-up. Viewed this way, the intervention had a lasting positive effect for nearly half the participants, although the attendance rates of 47% remained in Tier 3 with ‘chronic absence’ at

follow-up, indicating ongoing attendance challenges for a subset of adolescents.

A closer examination revealed that 38% of the adolescents with chronic absence had attendance rates between 40–90%, indicating that some adolescents made substantial progress despite not attending school at a level warranting Tier 1 or 2 classification. The current outcomes align with prior research showing that interventions for school attendance can yield substantial improvements but may not be equally effective for all adolescents (Finning et al., 2019; Heyne, 2023; Maynard et al., 2018).

Notably, the tiered classification system referred to above is based on relatively conservative cut-off scores. As emphasized by Melvin et al. (2025), there is currently no international consensus on the thresholds used to define chronic absence, and in some countries, adolescents with 80% attendance would be considered to have acceptable or even good attendance (Kreitz-Sandberg et al., 2022). These contextual differences may influence the interpretation and perceived success of interventions across countries (Heyne et al., 2022a), highlighting the importance of cultural and policy contexts when interpreting school attendance outcomes.

Even with substantial progress for a notable proportion of the adolescents in the current study, full attendance remained out of reach for some—highlighting the need to consider individual and contextual factors when interpreting outcomes. That some adolescents made notable progress in building their school attendance but still remained within tier 3 suggests that long-term attendance outcomes may be influenced by factors beyond the intervention itself, such as mental health, family support, and school climate (Finning et al., 2019; Kearney, 2016). Additionally, improvement in school attendance may take longer for some adolescents. Clinicians involved in this study observed that some adolescents were able to increase their school attendance but reached a threshold where further in-person attendance was not feasible due to factors such as sensory sensitivities or emotional exhaustion. In such cases, adjustments such as part-time attendance combined with structured home-based learning were necessary to sustain learning. These adaptations enabled adolescents to regulate sensory input while maintaining academic progress, and they highlight the importance of flexible attendance strategies within school-based interventions for neurodiverse adolescents (Adams et al., 2025; White et al., 2024).

4.2 Interpreting the reduction in emotional distress

4.2.1 Reduced anxiety

Reductions in anxiety symptoms, as measured by the SCARED and MASC, suggest that the intervention was effective not only in improving school attendance but also in alleviating emotional distress, which is a defining feature of ER-SAC. Adolescents reported substantial decreases in anxiety and school-related fear, with effect sizes ranging from medium to large. Parent-reported outcomes (MASC-P) reflected similar reductions in the adolescents’ anxiety, indicating both subjective and observed improvement emotionally. The current findings align with those from (Heyne et al., 2011), which also reported reductions in anxiety and school-related fear among participants. This consistency suggests that the @School intervention may be effective in alleviating both anxiety and school-related anxiety.

These findings align with prior research showing that school-based interventions incorporating structured exposure can effectively reduce anxiety-driven avoidance behaviors (Perihan et al., 2021).

4.2.2 Disparate reports of reduced depression

The effects on depressive symptoms were not consistent across informants. While self-reported depressive symptoms did not show significant change over time, parent-reported symptoms decreased significantly from pre-intervention to follow-up, with a large effect size. Notably, the pattern of findings in the present study differs from those of Heyne et al. (2011), who reported reductions in depressive symptoms across adolescent and parent reports. The following discussion considers the lack of change in self-reported depression and the substantial parent-reported improvements.

First, the wide variability in self-reported depressive symptoms indicates that while some adolescents improved, others did not, which likely obscured group-level trends.

Second, two factors may affect the validity of self-reported depressive symptoms in neurodiverse adolescents: symptomatic overlap and challenges in emotional introspection. Although the CDI-2 is a widely validated tool for assessing depressive symptoms in adolescents, research suggests that it may not fully capture the unique manifestations of depression in neurodiverse adolescents (Cassidy et al., 2018). Some behaviors traditionally associated with depression, such as social withdrawal, disruptions in sleep–wake cycles, and reduced activity levels, may overlap with neurodiverse characteristics rather than reflecting a clear depressive state. For example, disrupted sleep patterns may not necessarily indicate depression but instead could result from sensory processing sensitivities common among neurodiverse adolescents. This symptomatic overlap complicates the interpretation of changes in depressive symptomatology. In the current study, the CDI-2 may have captured neurodiversity-related behaviors rather than mood-related distress, thereby masking meaningful improvements. Furthermore, standard self-report tools rely on an individual's ability to reflect on and report internal emotional states. Pezzimenti et al. (2019) note that neurodiverse adolescents may experience difficulties with emotional introspection. Consequently, stable CDI-2 scores may reflect limitations in emotional self-awareness rather than a lack of change in psychological functioning.

Third, it is possible that mood-related difficulties require a longer timeframe to decrease compared to anxiety symptoms. Research suggests that mood-related difficulties in neurodiverse adolescents may persist longer than anxiety symptoms due to their interaction with cognitive rigidity, social stressors, and emotional regulation challenges (Pezzimenti et al., 2019). Beyond school stressors, factors such as sensory sensitivities, difficulties in forming social connections, and struggles with emotional regulation further contribute to these persistent mood disturbances (Perihan et al., 2021). Given that depression in ASD is often tied to challenges in processing social information and heightened stress sensitivity, adjustments were made throughout the implementation of the intervention to meet the specific needs of neurodiverse adolescents. These adaptations are now being specified in the @School protocol to support future application.

Parent reports provided a valuable complementary perspective, revealing significant reductions in depressive symptoms not captured in adolescent self-reports. Parents reported higher levels of depressive symptoms than adolescents at pre-intervention

($M = 23.56$, $SD = 4.99$), with scores significantly decreasing by follow-up ($M = 17.50$, $SD = 5.03$). However, follow-up scores remained in the clinical range, suggesting that while improvement was observed, on average, depressive symptoms had not fully resolved.

Understanding the discrepancy between parent and adolescent reports requires consideration of how each informant assesses and interprets depressive symptoms. Parents typically evaluate their child's emotional well-being based on observable behaviors, such as engagement in social activities or sleep patterns, whereas adolescents assess their internal emotional state (Olinio et al., 2018). These behaviors may not necessarily indicate symptoms of a depressive disorder but could reflect the consequences of prolonged school absence, including reduced peer interactions, decreased daily structure, and altered bedtimes. As school attendance improves, these behaviors often normalize, leading parents to perceive emotional improvement even when internal distress persists (Smith and White, 2020). This aligns with our findings, where parent reports indicated significant reductions in depressive symptoms, while self-reports showed more stability.

These findings highlight the complexity of assessing depressive symptom changes in neurodiverse adolescents, where discrepancies between parent and adolescent reports reflect different but equally valuable perspectives on emotional well-being. Rather than being seen as contradictory, these perspectives offer a more comprehensive understanding of the intervention's impact.

4.3 Interpreting the lack of change in self-efficacy

The improvements in school attendance and emotional wellbeing were not accompanied by improvements in adolescents' or parents' self-efficacy, with scores remaining stable across all time points. This contrasts with the findings of Heyne et al. (2011), who reported significant increases in both adolescent and parent self-efficacy following the intervention. However, we noted a trend towards increased adolescent self-efficacy between pre- and post-intervention ($p = 0.052$), suggesting that some individuals may have experienced initial gains. Several factors may help explain why self-efficacy did not significantly improve, including challenges related to introspection in neurodiverse adolescents, and the role of external support in shaping self-efficacy beliefs.

The measurement of self-efficacy in neurodiverse adolescents presents specific challenges. Weiss et al. (2015) found that individuals with ASD often struggle with introspective assessments of their own abilities, which could result in difficulties accurately reporting changes in self-efficacy. Moreover, Silva et al. (2023) emphasize that self-efficacy in neurodiverse individuals is not solely influenced by performance but also by sensory sensitivities, executive functioning difficulties, and social challenges. The SEQ-SS was not developed with these issues in mind and may therefore fail to adequately account for self-efficacy among neurodiverse young people displaying ER-SAC.

The lack of significant change in parental self-efficacy aligns with prior research suggesting that parents of adolescents with ASD often experience lower self-efficacy due to ongoing stress and the complexity of managing their child's needs, which can persist despite interventions (Weiss et al., 2015).

Finally, research suggests that self-efficacy develops when individuals attribute their successes to their own efforts rather than external support (Usher and Pajares, 2008). The structured nature of the intervention may have provided adolescents with external reinforcement but limited opportunities for independent problem-solving, which is crucial for fostering self-efficacy. Silva et al. (2023) highlight that in neurodiverse populations, high levels of external support may inadvertently reduce an individual's sense of autonomy and personal agency, potentially explaining the lack of significant self-efficacy gains.

4.4 Interpreting the role of social anxiety in school attendance outcomes

In interpreting our study's findings, we explored whether social anxiety symptoms influenced school attendance outcomes among participating adolescents. Social anxiety can create significant barriers to full participation in school life, and studies show links with absence from school (Finning et al., 2019; González et al., 2019; Tekin and Aydın, 2022). In the efficacy study by Heyne et al. (2011), 65% of adolescents had a social anxiety diagnosis at pre-intervention; 40% with a primary diagnosis and 25% with a secondary diagnosis. Of those with a social anxiety diagnosis at pre-intervention, 54% still met criteria at follow-up. Moreover, school attendance at follow-up was significantly lower among those with social anxiety disorder at follow-up (18% attendance) compared to those without this diagnosis at follow-up (68%).

Unlike that study, which relied on clinical diagnoses, we assessed symptoms of social anxiety or social phobia (hereafter 'social anxiety symptoms') using validated self- and parent-report measures (MASC, MASC-P, and SCARED). Adolescents were classified as having either clinically elevated or non-clinical levels of social anxiety based on established cut-off scores. No significant differences in school attendance were found between adolescents with and without clinically elevated symptoms at pre-intervention, post-intervention, or follow-up. This might suggest that, in contrast to Heyne et al. (2011), social anxiety symptoms did not act as a barrier to school attendance in the current study.

Although both the current study and the 2011 study evaluated the @School intervention, important differences in how the intervention was delivered may help explain the differing outcomes. The school-based approach in the current study on the @School intervention likely played a pivotal role in mitigating the impact of social anxiety by providing several advantages. It is worth noting that in the current study several adolescents transitioned into a specialized education setting where accommodations for neurodiversity were provided. These tailored supports may have reduced environmental stressors, allowing adolescents to maintain school participation regardless of social anxiety levels. Adolescents who transitioned to specialized education settings often experienced a sense of normalization, recognizing they were no longer an exception compared to their peers, potentially further reducing social anxiety. Furthermore, the intervention as employed in the current study facilitated close coordination between mental health professionals and educational staff, ensuring precise tailoring of exposure tasks matched to each adolescent's readiness level. Teachers were thus able to provide a secure and predictable environment, helping adolescents feel safer during these steps.

While the school-based intervention may have reduced the impact of social anxiety symptoms on attendance, another factor that could explain these findings is the way social anxiety was defined and measured in this study. Heyne et al. (2011) focused on adolescents with a formal clinical diagnosis of social anxiety disorder, while the present study assessed social anxiety symptom severity using self- and parent-report measures. Adolescents with a clinical diagnosis may experience more severe and persistent anxiety-related school avoidance, making their school attendance patterns more distinct from those without social anxiety disorder.

4.5 Contextualizing outcomes through comparative perspectives

To contextualize our findings beyond the preceding comparisons with the 2011 efficacy study, a recent evaluation of the Back2School program (B2S) (Daniel B Johnsen et al., 2024) provides a useful point of reference. B2S, also a modular CBT intervention, draws on components from the @School intervention (Heyne and Sauter 2013; Heyne et al., 2014) and the When Children Refuse School protocol (Kearney and Albano, 2018). Whereas @School was designed specifically to address ER-SAC, B2S was developed to address a broader range of SACs and was described as applicable for "truancy, school refusal, school withdrawal, and school exclusion" (Johnsen et al., 2024).

Notably, B2S was associated with improvements in adolescent self-efficacy, whereas this was not observed in our study (see Section 4.3). On the other hand, average school attendance at three-month follow-up in the B2S study was 58% (measured in school hours), compared to 80% at 5.4 months follow-up intervention in the current study (also measured in school hours).

These differences may reflect variation in numerous factors, including the focus of the intervention and the level of collaboration with schools. Regarding focus, @School was specifically designed for adolescents experiencing ER-SAC, whereas B2S was developed to address absence more generally. Regarding school involvement, @School was fully embedded within an educational setting, with mental health and education professionals working in tandem. B2S involved more limited collaboration, consisting of an average of three 1-hour meetings between the mental health professionals delivering B2S and school personnel.

While comparisons across studies must be approached with caution, given differences such as in population (e.g., country, age) and timing of follow-up, they can nevertheless inform reflection on how intervention focus and setting may shape outcomes. For researchers, these kinds of cross-study comparisons can guide future investigations into which components drive specific outcomes, for whom, and under what conditions. For practitioners and program developers, they underscore the importance of selecting or adapting interventions to match both the needs of the target population and the intended outcomes, and of carefully considering the nature and extent of collaboration between education and mental health sectors to optimize effectiveness.

4.6 Strengths and limitations

This study offers several strengths. First, the intervention targeted the adolescent directly through individual support, while also

addressing the family and school systems, ensuring that support strategies address not only the required intensity of intervention, but also the specific nature of the attendance problem being targeted. Second, it focused on neurodiverse adolescents, a group at heightened risk for school non-attendance but often underrepresented in intervention research. Third, delivering the intervention in a school-based setting bridged the gap between mental health care and education, enhancing accessibility and real-world relevance. This contextualized implementation, with active involvement of educational staff, likely contributed to sustained improvements at follow-up by aligning academic accommodations with mental health needs.

Despite these strengths, the study has several limitations. First, the small sample size limits statistical power, reducing confidence in detecting smaller effects. It also restricts generalizability, as the findings may not extend to broader populations. Second, the study lacks a control group, preventing definitive conclusions about the intervention's causal effects. Third, the absence of longer-term follow-up data restricts our ability to assess the durability of improvements in school attendance and emotional well-being beyond 5 months post-intervention. Lastly, the intervention was delivered in a specialized setting by psychologists with extensive clinical experience. While this likely contributed to consistent implementation and may have supported treatment outcomes, it also raises questions about replicability in less specialized or less experienced contexts.

4.7 Implications for research and practice

The findings of this study carry important implications for both research and practice. Future research should explore strategies to enhance self-efficacy within ER-SAC interventions, particularly for neurodiverse adolescents. Targeted approaches, such as structured mastery experiences, problem-solving exercises, and coping skills training, may help build confidence in managing school-related challenges (Usher and Pajares, 2008). Including school staff as informants could also enrich outcome evaluation by capturing observations of adolescent support needs and progress. Moreover, qualitative methods, such as interviews with adolescents, parents, and educators, could offer deeper insight into individual experiences of intervention and guide refinement of intervention strategies.

The Multi-Dimensional Multi-Tiered System of Supports (MD-MTSS) framework offers a helpful conceptual foundation for applying the current findings in school contexts. This framework conceptualizes attendance support as a three-dimensional model that combines levels of intervention intensity (Tiers) with types of attendance problems. While the field has traditionally focused on levels of support, our findings underscore the importance of also considering the nature of the attendance challenge. Attending to both the severity and nature of attendance problems allows for more precise intervention matching, ensuring that support strategies address not only the required intensity of intervention, but also the specific nature of the attendance problem being targeted (Kearney and Graczyk, 2020).

To implement this effectively, schools should promote close collaboration between educators and mental health professionals,

fostering alignment between academic expectations and emotional support systems. Training school staff to identify attendance barriers early and respond with appropriate interventions is essential for improving outcomes, particularly for neurodiverse adolescents who often face multifaceted attendance challenges.

5 Conclusion

This study provides support for the effectiveness of the @School intervention for neurodiverse adolescents experiencing ER-SAC, when implemented in a school setting. A school-based, modular approach, involving adolescents, parents, and school staff contributed to improvements in school attendance and meaningful gains in emotional well-being. Differences between parent- and adolescent reported depressive symptoms, along with the absence of significant gains in self-efficacy, highlight the challenges of accurately assessing internal change processes in neurodiverse adolescents, particularly emotional distress and self-beliefs. These findings underline the need of more sensitive tools that can better capture such changes and inform more targeted support within interventions for neurodiverse adolescents experiencing ER-SAC. In sum, a structured and integrated approach, such as @School, offers a promising model for addressing both the emotional and the academic needs of neurodiverse adolescents experiencing emotion-related school attendance challenges, particularly when implemented within a school setting.

Data availability statement

The data are not publicly available due to ethical and legal restrictions. Participants did not provide consent for their data to be shared outside the research team. For questions regarding the dataset, please contact the corresponding author: Evelyne Karel, Evelyne.karel@berkenschutse.nl.

Ethics statement

The studies involving humans were approved by Commissie Medische Ethiek, Leids Universitair Medisch Centrum. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

EK: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Writing – original draft, Writing – review & editing. CD: Investigation, Methodology, Writing – review & editing. GK: Validation, Writing – review & editing. PG: Writing – review & editing.

FS: Writing – review & editing. DH: Conceptualization, Investigation, Methodology, Supervision, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

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EDITED BY

Trude Havik,
University of Stavanger, Norway

REVIEWED BY

Patricia Schuler,
Zurich University of Teacher Education,
Switzerland
Katarina Alanko,
University of Turku, Finland

*CORRESPONDENCE

George Alaimo
✉ galaimo@live.co.uk
Catherine Kelly
✉ catherine.kelly@manchester.ac.uk

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Exploring the implementation of relational practice in a primary school to support school attendance

George Alaimo* and Catherine Kelly*

The School of Environment, Education and Development (SEED), The University of Manchester, Manchester, United Kingdom

School attendance difficulties are increasingly recognised as complex challenges, rooted in emotional, relational, and systemic influences. This study explores how relational practice can be implemented in a primary school to support attendance, using the term School Attendance Barriers to avoid deficit-based language and emphasise systemic drivers. The study examined school staff perceptions of the key factors influencing the implementation of relational practice. A qualitative action research design was used, underpinned by critical realism and conducted over one academic year in a primary school in Northwest England. Seven staff members, including senior leaders, teachers, and teaching assistants, formed a collaborative research group. Data were gathered from four recorded meetings, transcribed and analysed using inductive qualitative content analysis. Findings identified key facilitators, including strong leadership buy-in, a shared relational ethos, and psychological input to support reflective practice. The co-developed implementation of Emotion Coaching was particularly valued for offering a feasible, relational way of being. Barriers included curriculum pressures, staffing inconsistencies, limited training, and tensions between relational approaches and wider educational policies. The study highlights the value of participatory approaches, such as action research, in embedding sustainable, school-owned relational practice. It challenges prescriptive models of social and emotional learning, calling instead for flexible, context-sensitive implementation tailored to staff experience and school systems.

KEYWORDS

EBSA, implementation, relational practice, whole school approach, action research, whole school intervention, supporting school attendance, emotion coaching

Introduction

Difficulties in children attending school has been described using a range of terms, from truancy to persistent absenteeism (Heyne, 2019). The diversity and inconsistency in terminology have created barriers to accurately reporting prevalence, understanding the nature of the issue, and designing effective support strategies (Elliott and Place, 2019; Heyne, 2019). In recent years, the term Emotionally Based School Avoidance (EBSA) has gained prominence, reflecting growing awareness of the emotional drivers of school attendance difficulties (Heyne, 2019).

This study adopts the term School Attendance Barriers (SAB), aligning with recent literature that challenges deficit-based language and calls for terminology that better reflects systemic influences rather than locating the problem within the child (Want and Gulliford, 2024; Ward and Kelly, 2024). Additionally, the phrase “supporting school attendance” is used to emphasise early, preventative strategies aimed at fostering school

belonging and addressing the complex, multi-layered factors that influence attendance (Callwood and Goodman, 2018; Bond et al., 2024a).

Indicators of SAB exist along a continuum ranging from early signs, such as occasional lateness or reluctance to attend, through to chronic and sustained absences (Kearney et al., 2019). Manifestations of SAB can vary significantly depending on the individual child's context and stage along this continuum (Havik and Ingul, 2021). Indicative behaviours include visible distress, anxiety during reluctant attendance, verbal or physical aggression, threats of self-harm, and escape attempts from distressing situations (Thambirajah et al., 2008).

Underlying causes of SAB are multifaceted and occur across ecological contexts, including personal, school-based, familial, and wider community factors (Malcolm et al., 2003; Kearney and Albano, 2004). Effective home-school communication and multi-agency professional support are among the key facilitators of positive SAB intervention (Corcoran et al., 2022), while an interactionist, functionalist approach to early intervention can support school attendance across eco-systemic levels (Nuttall and Woods, 2013). Anxiety and depressive symptoms commonly co-occur with SAB, exacerbating barriers to attendance (Ek and Eriksson, 2013). Key educational transitions, such as starting primary or secondary school, have also been identified as critical risk points (Pellegrini, 2007), particularly for children with special educational needs and disabilities (SEND) and those from lower socioeconomic backgrounds (Bond et al., 2024b). SEND refers to learning difficulties or disabilities that make it harder for children and young people to learn than most others of the same age, and schools in England have a legal duty to identify and support these needs in line with the SEND Code of Practice (Department for Education and Department of Health, 2015).

Supporting school attendance requires comprehensive, ecologically-informed interventions (Thambirajah et al., 2008). Kearney (1996) outlined core functions behind SAB presenting behaviours, including avoidance of negative emotions, reducing separation anxiety, gaining attention, and pursuit of tangible reinforcers outside school. Effective strategies must, therefore, target both preventative and responsive approaches (Kearney and Graczyk, 2020). However, within the complex ecology of school attendance problems, no easy solution has been identified, with behavioural, academic and home-school partnership interventions showing modest or no effects (Eklund et al., 2022). Pupils themselves describe relationships with school staff and other pupils as key factors in school attendance and related to a sense of school belonging (Corcoran and Kelly, 2023). Indeed, interventions focussed on school bonding or engagement, aimed at strengthening the relationship between pupil and school, have been found to benefit pupils experiencing SABs (Keppens and Spruyt, 2020).

It has long been acknowledged that the quality of implementation of an approach is key to achieving its expected outcomes (Lendrum and Humphrey, 2012), and poor implementation of interventions to support school attendance has been suggested as a key challenge (Heyne et al., 2020). With respect to relational approaches, Keppens and Spruyt (2020) indicate that the likelihood of success seems to depend on the extent to which all stakeholders at the school share and support the same goals, i.e., when the tendency to invest in pupil-school relationships is shared among all school personnel. This study therefore explores how one primary school sought to implement a relational approach with the aim of reducing SABs.

The present research was conducted with a primary school in the Northwest of England, involving close collaboration with the headteacher and a dedicated action research group consisting of senior leaders, teaching and pastoral staff. From the outset, the headteacher and group members were eager to explore relational approaches, recognising their potential to proactively address attendance concerns before they escalated into persistent difficulties. By focusing on strengthening relationships across the school community, the group sought to embed a preventative SAB approach that would foster connectedness and school belonging, thus reducing the likelihood of SAB (Chian et al., 2024).

Relational practice acknowledges the critical role of secure adult-child relationships in children's mental health, emotional regulation, and academic engagement (Bergin and Bergin, 2009; Roorda et al., 2011), and is characterised by a commitment to fostering secure, empathetic, and responsive relationships within schools, supporting children to feel safe, connected, and understood (Babcock, 2020). Central to this approach is the understanding that behaviour communicates emotional and unmet needs, particularly among children who have experienced trauma, relational disruptions, or adverse life experiences (Siegel, 2012; Bomber and Hughes, 2013). By prioritising relationships as fundamental to learning, relational practice is considered to have the potential to shape whole-school systems, ethos, policies, and daily interactions, promoting inclusivity and a sense of belonging for all students, including those most vulnerable to social, emotional, and behavioural difficulties. Relational approaches can also provide school staff with the skills to empathetically respond to children's emotional needs, co-regulate during moments of distress, and restore relationships after conflict, thereby fostering an environment conducive to emotional well-being and academic success (Thorsborne and Blood, 2013; Babcock, 2020).

Emotion Coaching (EC), an accessible relational approach grounded in Gottman et al.'s (1996) meta-emotion philosophy, involves empathetic communication, validation of emotions, and guided problem-solving aimed at fostering emotional self-regulation and resilience. While there is a growing evidence base regarding outcomes (Gus et al., 2015), there is little literature on how EC is implemented in schools (Romney et al., 2022) and a dearth specifically in the context of supporting student attendance.

The effective implementation of new practices in real-world educational settings is increasingly recognised as critical to intervention outcomes (Durlak and DuPre, 2008; Bertram et al., 2015). Interventions need to be implemented with fidelity, sensitivity to context, and sufficient support from key stakeholders to achieve their intended outcomes (Lendrum and Humphrey, 2012). Implementation quality is particularly pertinent in complex interventions such as those targeting relational and emotional dimensions of school environments, given their dependence on consistent interactions, nuanced application, and whole-school commitment (Humphrey, 2013), understanding and addressing the practical realities of EC as relational practice within school contexts is a core consideration in this research, influencing both the design and evaluation of the intervention.

Existing frameworks for implementation in schools often concentrate on universal or targeted interventions that are clearly defined, structured, and typically delivered over fixed, time-limited periods (Humphrey, 2013; Bond et al., 2024a). For example, structured Social and Emotional Learning (SEL) programmes

commonly follow manualised procedures, making fidelity easier to define and measure (Durlak et al., 2011). Similarly, targeted interventions addressing specific student populations or needs typically come with prescribed timelines, delivery protocols, and measurable outcomes (Weare and Nind, 2011; Humphrey et al., 2018). However, relational practices aimed at supporting school attendance and engagement differ significantly due to their embeddedness within everyday interactions and ongoing, systemic changes within the school environment (Nuttall and Woods, 2013). These approaches require flexible, responsive implementation frameworks that account for dynamic, continuous, and complex whole school relational approaches rather than discrete or finite intervention periods, of which only one is currently known (Ward and Kelly, 2024).

This research, therefore, sought to explore how a relational approach can be put into practice to support student attendance, examining the factors influencing these processes. It aimed to understand school staff perceptions of the process associated with implementing a whole-school relational approach in order to generate insights to support educators in effectively embedding relational practices to achieve their intended outcomes. This research aimed to do this through answering the following research question:

What do school staff perceive as the key factors influencing the implementation of relational practice to support school attendance?

Materials and methods

Epistemological position

The research design is shaped by its underlying critical realist epistemological position (Coolican, 2018). Traditional positivist and relativist epistemologies have been critiqued in relation to social research. Positivism faces challenges in replicating real-world complexities, while strict relativism is criticised for its focus on researchers co-constructing realities (Robson and McCartan, 2015). Critical realism sits between these positions, acknowledging an objective reality while recognising the role of interpretation in understanding social contexts. Critical realism aligns with research exploring lived experiences, making it particularly relevant to this study, as it considers how ecological factors shape school staff's perceptions and experiences of supporting children to attend school.

Action research approach

Aligned with this epistemology, the study employed a collaborative action research (AR) approach. AR is widely recognised for its collaborative and practice-focused nature (Cohen et al., 2017); aiming to bridge the gap between research and practice, enabling participants to reflect on and refine their approaches while fostering sustainable change (Morales, 2019). Its flexibility makes it well-suited to educational settings, where dynamic and context-specific solutions are often required (Dusty, 2024). Involving practitioners in the research process enhances both the relevance and longevity of the outcomes, as McNiff and Whitehead (2005) highlight the importance of building internal capacity rather than relying on external interventions.

The Research and Development in Organisations (RADIO) model (Timmins et al., 2003) was used to structure the AR process. This model aligns with existing frameworks in education, such as the assess, plan, do, review cycle (Department for Education and Department of Health, 2015), making it particularly relevant for school-based research. The RADIO model provides a systematic approach to organisational change, ensuring that research findings are actionable and embedded within school systems. Previous research has found the model effective for both individual reflective practice and wider organisational development (Ward and Kelly, 2024). However, its success depends on key factors such as participant motivation, their ability to implement change, and the extent to which the research aligns with the organisation's priorities (Ashton, 2009).

Ethical approval statement

This study received ethical approval from the host institution Research and Ethics committee (approval number: 2024-18329-32992).

The process

After the headteacher of the primary school expressed interest in the research, the researcher met with them and the research commissioner. The research commissioner was an Educational Psychologist (EP) within the local Educational Psychology Service (EPS) who had contributed to the development of SAB guidance. Initially, the school was seeking to understand the implementation of the guidance and sought the support of the researcher to enable this. The scope of the research was considered, and the headteacher facilitated the formation of a group of staff members with varying roles within the school who were interested in being part of the research (see Table 1). The researcher met with this group in school to discuss the aims of the research, exploring their experiences and school context, the invitation to act, and clarifying the stakeholders and areas of need (see Table 2). The 12 stages of the RADIO model, although presented sequentially, were fluid in practice, often overlapping or being revisited and refined as the research evolved (Timmins et al., 2003). This approach aimed to remain dynamic and responsive to the school's needs, incorporating diverse participant

TABLE 1 Participant characteristics.

Participant	Job role
Participant 1	Headteacher
Participant 2	Deputy headteacher
Participant 3	Class teacher
Participant 4	SENCo ¹ and class teacher
Participant 5	Teaching assistant and pastoral support
Participant 6	Teaching assistant
Participant 7	Teaching assistant and pastoral support

¹The Special Educational Needs Coordinator (SENCo) is a statutory role in all mainstream schools, responsible for overseeing the day-to-day operation of the school's SEND provision, ensuring early identification of needs, and coordinating support in accordance with the SEND Code of Practice (Department for Education and Department of Health, 2015).

TABLE 2 RADIO stages of the AR (Timmins et al., 2003).

RADIO stages (Timmins et al., 2003)		RADIO activities
Phase 1: Understanding the needs of the organisation and forming research relationships	1. Awareness of need	The EPS had developed SAB guidance in response to raising rates of school non-attendance, however, its implementation was in the early stages. The university commissioning process was initiated by the link EP within the service.
	2. Invitation to act	The research was initially negotiated between the EPS and researcher, a Trainee EP (TEP) on the Doctorate in Educational and Child Psychology course. School-based research was considered, owing to staff's use of the guidance being unknown. The headteacher of a primary school expressed interest to commissioner of the research and meeting was held between headteacher, commissioner and TEP in November 2023. At was at this point that a formal invitation to act was received and developed.
	3. Clarifying organisational change and cultural issues	The context of the primary school was carefully considered through ongoing discussions between headteacher and TEP. Further discussions were held with key school staff members to understand their priorities. Key considerations were: relative affluence of area; driving staff development; relationships; preventative SAB approach.
	4. Identifying stakeholders in area of need	The researcher met with the headteacher and staff members who were interested in the research through awareness being raised within the school. The range of staff roles within the group meant there was good representation of a primary school staff base. The TEP periodically updated EPs within the commissioning EPS as key stakeholders.
Phase 2: Establishing the research design and methods for information-gathering and evaluation	5. Agreeing focus of concern (research aims)	During the first AR meeting potential aims and a focus were considered linked to the needs of the EPS. Staff found the existing SAB guidance heavy-going, lengthy, and lacking preventative strategies. They valued its focus on relationships but were seeking clearer, practical applications. Exploring relational approaches to prevent SAB, improve staff consistency in restoring relationships, and enhancing parental engagement for student well-being and attendance were agreed as foci.
	6. Negotiating framework for information gathering	Information gathering was an adaptive process. It was agreed that the transcripts of the AR meetings were a primary information source. However, the group gathered further information, including: a survey of children's views of their relationships with staff; ongoing parental discussions; meeting whole school to develop and implement actions.
	7. Gathering information	Agreed methods used to gather information. A research diary was also kept.
	8. Processing information with research sponsors/stakeholders	After each AR meeting, the researcher reflected on the transcripts and sent summaries via email to the headteacher to share with the wider staff base. These identified the implications or findings and the aims according to cycles of AR. The researcher also continued to meet with the commissioner.
Phase 3: Developing and implementing organisational change	9. Agreeing areas for future research	Guided by the findings, areas for future were agreed throughout each AR group meeting. These included: developing a whole-school relational approach; implementing EC; strengthening support for staff and children during break and lunch times.
	10. Action planning	Actions were coproduced and recorded in the AR meeting transcripts. This included: reviewing guidance materials to trial tools; school-audit of relational practice.
	11. Implementation/action	The implementation of the agreed actions by school staff generated further development of relational practice and whole-school attendance support over the year.
	12. Evaluating action	Action was evaluated through reflective discussions within the AR group meetings. The group monitored the impact of their actions through their interactions with children and parents, along with progress made with individual children experiencing attendance difficulties or emotional dysregulation.

perspectives to enhance engagement and support the development and implementation of changes in policy and practice.

Participants

The staff members that agreed to be part of the research and form an AR group consented to their job roles being shared (see Table 1).

The researcher was aware of the power dynamics of having senior leaders, teachers and teaching assistants as part of one AR group. It was proposed to participants that a separate 'stakeholder' group of senior leaders could be formed, however, the teachers

and support staff expressed a strong desire to work as one cohesive group.

The headteacher raised awareness of the research within the school. Those interested in the research expressed interest to the head, before meeting with the researcher as a group to hear more about the scope of the research and decide whether they would like to participate. The AR group was limited to a maximum of eight participants to ensure effective discussion and manageability. Larger groups can be challenging to facilitate and may complicate the transcription process (Barbour, 2007). Research suggests that groups with three to five participants are optimal for smooth interactions, as larger groups can make it harder to capture individual contributions

(Peek and Fothergill, 2009). Keeping the group size manageable allowed for meaningful participation, ensuring that all voices were heard while maintaining the collaborative nature of the AR process. It should be noted that although there were seven participants in total, the AR group meetings were not always attended by all consenting participants every time, owing to the realities of primary school life, such as staff needing to cover classes. This meant that over the course of the research, attendance ranged from four to six participants.

Data gathering

Four AR meetings were recorded by the researcher and transcribed by the host institution's official transcription service provider. Three meetings took place in person in the primary school staff room, and one was held online. For the online meeting, Zoom's audio-only recording feature was used for data collection. While building rapport can be more challenging in an online setting, research suggests this does not necessarily impact the depth of participant responses (Richard et al., 2021). To encourage reflection, the researcher used verbal affirmations such as “mmhmm” (Galletta, 2013) along with paralinguistic strategies, such as nodding, smiling, and allowing pauses. These techniques helped maintain the flow of conversation and enabled participants to build on each other's reflections more naturally.

The meetings involved activities in accordance with the AR process. These involved planning future actions, problem solving together, and reflecting on actions implemented. Additional activities were incorporated into the meetings to deepen development. In the first meeting, staff critiqued the existing SAB guidance to identify aspects that were useful and areas where it could be developed further. In the second meeting, participants reflected on the findings from a survey of pupils they had conducted related to how they perceive relationships with staff. Across the first and second meeting, the researcher introduced frameworks, models and psychological approaches matched to the needs of the action group. These included Babcock's (2020) Guidance for Developing Relational Practice and Policy, the Authentic Warmth Interaction Style model (Cameron and Maginn, 2008), and EC approaches and resources (Gottman et al., 1996). The third meeting focused on the impact of implementing relational practice. The final meeting focused on evaluating the AR process, reflecting on its impact, and reviewing the implementation for future development.

Data analysis

This study employed qualitative content analysis to explore school staff perspectives on implementing relational practice to support school attendance. Content analysis provides a structured yet flexible approach for identifying recurring patterns within qualitative data (Silverman, 2018). Grounded in a critical realist epistemology, this method acknowledges the reality of social phenomena while recognising that participants' accounts and researcher interpretations are shaped by context and subjectivity (Robson and McCartan, 2015).

Step 1: immersion and initial coding

The first author, who also facilitated the AR meetings, engaged deeply with the data through repeated transcript readings. An

inductive approach was applied, meaning themes were co-constructed with participants from the data itself rather than being guided by pre-existing frameworks (Bengtsson, 2016). Codes were captured using participants' exact phrasing (e.g., “singing from the same hymn sheet,” “pressure to fix”). This approach aligns with the democratic and collaborative ethos of action research (Dusty, 2024) and helped foreground the voices of participants (see Table 2).

A codebook was iteratively developed from these initial codes, with frequency counts used to indicate salience and support the organisation of data. NVivo 12 software was used to manage the data and support code refinement, facilitating the identification of patterns across multiple transcripts (Leech and Onwuegbuzie, 2011).

Step 2: categorisation and refinement

The next stage involved categorising codes into subthemes by identifying recurring patterns, conceptual groupings, and interrelationships. This process involved weighting and merging codes that reflected similar ideas, while reviewing less frequent codes for conceptual relevance. For instance, “staff unity,” “openness between staff,” and “staff emotionally supporting each other” were grouped under the broader subtheme of *staff collaboration and emotional support*. This process allowed the analysis to remain sensitive to nuance while avoiding fragmentation. Initially, nine facilitator categories and five barrier categories were developed, which were then further refined through iterative abstraction into a smaller number of overarching themes and subthemes guided by both the frequency and richness of coded data (Elo and Kyngäs, 2008).

Step 3: development of themes and reflexive process

The final themes represent a distillation of the coding process. Subthemes were supported by multiple codes and cross-checked for internal coherence and external distinctiveness. Each stage of the analysis was discussed collaboratively with the second author, who provided oversight and critical challenge to the coding, interpretation, and theme development. This process of peer debriefing and reflexive dialogue helped ensure analytic rigour and reduce bias (Thomas and Harden, 2008).

Trustworthiness and transparency

Bengtsson (2016) outlined four ways to demonstrate trustworthiness within qualitative research:

- **Credibility:** Categories were agreed with the second author and member checking was conducted during AR sessions through group reflection and feedback on emergent findings. Themes were further validated through repeated data engagement and alignment with the research aims.
- **Dependability:** To support the consistency of coding over time, the researcher noted down the boundaries of each category and tracked decisions and changes during the process using a research diary and discussion with the second author.
- **Transferability:** A “thick description” relating to the research context and methods used to collect and analyse data are shared so that others can make judgements about potential transferability of the current research.

- **Confirmability:** Illustrative quotes were selected based on their clarity, representativeness, and relevance to subthemes and are presented in Table 3 and throughout the findings section, with each quote attributed by participant and AR session for transparency (e.g., Participant 2, AR 3).

Findings

What do school staff perceive as the key factors influencing the implementation of relational practice to support school attendance?

Facilitators

Theme one: supportive school culture and leadership

The data highlighted the importance of a supportive school culture and leadership 'buy-in' in implementing relational practice. A whole-school ethos and senior leadership commitment were crucial for ensuring consistency, while inter-staff collaboration and emotional support helped sustain the implementation.

Whole-school approach and leadership buy-in

Participants highlighted the importance of a whole-school approach and leadership buy-in in embedding relational practice. A unified ethos across all staff roles, including teachers, teaching assistants, and midday supervisors, was perceived as key to ensuring relational strategies were supportive. One participant highlighted that "we all need to be singing from the same hymn sheet" (Participant 6, AR 2). Whole-staff meetings were used to reflect on practice outside of the AR meetings, though it was noted that some groups, such as midday supervisors, were not always included. While whole-staff understanding of relational practice was initially varied, there was "no negativity" detected by senior leaders towards the approach, with staff recognising its value (Participant 1, AR 2). Leadership support and ongoing training were at the core of driving whole-school implementation.

Staff collaboration and emotional support

Participants highlighted staff collaboration and emotional support as key facilitators in embedding relational practice. A strong sense of unity and awareness of each other's well-being was described, with one participant noting, "we're good as a school that we're mindful of each other" (Participant 7, AR 3). Staff described a culture where they could rely on colleagues for emotional and practical support, particularly

TABLE 3 Thematic structure of facilitators and barriers, with associated codes and illustrative quotes.

Theme	Subtheme	Codes (with frequency)	Example quote
Facilitators			
Supportive School Culture and Leadership	Whole-School Approach and Leadership Buy-In	Whole school approach (3), Senior leader buy-in (2), Safe school culture (1), Shared understanding (2), Staff communication (1)	"We all need to be singing from the same hymn sheet." (P6, AR 2)
	Staff Collaboration and Emotional Support	Staff emotionally supporting each other (7), Staff humility (7), Staff unity (3), Self-care (2), Acknowledging progress (5)	"We're good as a school that we are mindful of each other." (P7, AR 3)
Co-developing Practical Strategies	Consistent Yet Flexible Staff Approaches	Soft start (5), Check-ins (1), Flexible approach from staff (1), Consistency and shared language (3), Scripts (1)	"What's worked really well here now is the soft start." (P3, AR 3)
	Psychological Input and Reflective Practice	Emotion Coaching (3), Push Pull (4), Reflective space (6), Sharing psychology (2), Authentic Warmth (1), Action research (4), Affirming good practice (2)	"If we did not have this time, we would not be able to have these conversations." (P6, AR 4)
Barriers			
Structural and Resource Pressures	Curriculum Pressures and Competing Demands	Curriculum (12), Time (6), Competing priorities (1), Unprotected time (1), Resource pressure (3)	"Because of curriculum demands... not having the time with staff to work on it because we have got to do some work on writing, I've got to do maths." (P3, AR 1)
	Staffing Constraints and Inconsistencies	Staffing (4), Staff absence (2), Support staff availability (1), Swapping adults (5), Unstructured times (9), Midday supervisors (9)	"Lunchtime is the most unstructured part of the day... it's the time when children are most crammed together." (P1, AR 2)
	Limited Training and Guidance	Lack of training (6), SEND training (1), Behaviour policy (1), Definitional ambiguity (5), Relying on instinct (1)	"Children have changed; behaviours have changed... I'm not quite sure how to deal with it myself." (P2, AR 1)
Systemic Challenges within Education	Staff Hierarchies	Role divisions and hierarchy (6), Midday supervisors (9), Coordinating staff (1)	"We want class teachers to take some more responsibility... but things still get passed on." (P2, AR 1)
	Wider Educational Policy	DfE constraints (4), Behaviour policy (3)	"The DfE at the moment is quite... I'd say punitive... there are parts of our policy that they'd probably hate." (P1, AR 2)
	Job Role Expectations	Role pressures (5), Pressure to 'fix' (3), Tiredness (4)	"You kind of can feel yourself bubbling... and you need that time to regulate yourself before you can support a child." (P4, AR 2)

when faced with challenging situations. Inter-staff emotional support was perceived as central to the implementation, owing to the inherent emotionality of working relationally with children: “we’ve got better at sharing... other staff can check in and say, ‘Do you need to offload it?’” (Participant 7, AR 3).

Theme two: co-developing practical strategies

The data highlighted the importance of co-developing practical strategies to implement relational practice effectively. Consistent yet flexible staff approaches were viewed as facilitative to children experiencing predictable and supportive interactions with staff. Selective use of the existing SAB guidance was also facilitative of supporting school attendance relationally. A shared language across staff helped reinforce these strategies, promoting greater consistency. Psychological input and reflective practice through the AR process itself also played a crucial role, with staff valuing strategies that were accessible and feasible to implement within their capacities. EC was perceived as a step-by-step ‘way of being’ that made relational approaches accessible and less nebulous. Clarifying definitional ambiguity about relational practice through psychological input was key to ensuring staff had a common understanding and could implement strategies with confidence.

Consistent yet flexible staff approaches

Consistent yet flexible staff relational approaches, including soft starts, and check-ins with children, were seen as essential in helping children experience predictable and supportive interactions with staff. Soft starts were widely praised for reducing early-morning stress, allowing children to settle before engaging in learning. One participant noted, “I think what’s worked really well here now is the soft start... because the amount of issues you do get at the start of a day...” (Participant 3, AR 3). Another described the shift in approach, stating, “normally, we’d be like, ‘Right, five past nine... lesson...’ Whereas now, it’s so much more relaxing” (Participant 2, AR 3).

Flexibility in responding to children’s needs was facilitative of relational practice, with staff recognising the importance of adjusting routines when necessary. One participant described how they built in time for children to process social difficulties before engaging in lessons: “I know the first 15 min, I write off every week... just let them talk, let them tell you what’s happened, let’s have a sort out and then we get into our topic” (Participant 2, AR 1).

A shared relational language among staff reinforced these strategies, ensuring greater consistency across different roles. One participant highlighted the importance of all staff being “on the same page” (Participant 6, AR 2).

Psychological input and reflective practice

Psychological input and structured reflection were perceived as essential in supporting staff to implement relational practice effectively. EC was particularly valued, as it provided staff with practical strategies to help children regulate their emotions. One participant described its impact, stating, “I’ve noticed a quick turnaround... when they’re starting to go into meltdown but not quite there” (Participant 4, AR 2). Staff found it helpful in validating children’s emotions and de-escalating situations. Having clear guidance and crib sheets was also beneficial, with one participant emphasising, “examples of what you can say and then what you do is really, really useful” (Participant 4, AR 2).

As part of this work, staff engaged with the Babcock’s (2020) Relational Practice guidance and Cameron and Maginn’s (2008) Authentic Warmth framework, which provided a structured model for relational interactions. Staff reflected on their strengths in developing relationships but identified repairing relationships after conflict as an area for further development. The Authentic Warmth framework (Cameron and Maginn, 2008) was particularly helpful in guiding relational responses, ensuring consistency in maintaining high expectations while offering emotional support.

The push and pull factors framework from the existing SAB guidance (exploring factors which push away from school and pull towards home) helped staff pinpoint factors influencing attendance. It was facilitative to them being relational because it encouraged them to see attendance difficulties through the lens of the child. One participant noted, “everyone having an understanding of what push and pulls children to school or home” was key (Participant 2, AR 1). One participant described using the push-pull model to analyse a child’s engagement, explaining, “he’s got a real pull to home and less of a pull to school... so we need to try and build those things in school to increase that pull” (Participant 1, AR 4). The model was perceived as useful because it helped staff identify and implement changes within the school environment to foster school belonging for individual children.

Dedicated time for reflection through the AR meetings was perceived as fundamental to embedding relational practice. One participant explained, “if we did not have this time, we would not be able to have these conversations,” highlighting the need for structured opportunities to refine approaches (Participant 6, AR 4). Reflection also reduced pressure on staff, with one noting, “it’s not necessarily fixing something being the answer... it’s okay for it to take that bit of time” (Participant 4, AR 4). The process helped staff identify strengths and areas for development, as one participant explained, “it’s helped us... identify what’s going well, and then... think about, okay, well, we need to treat this” (Participant 1, AR 4). Reflection also affirmed good practice, reinforcing staff confidence, with another adding, “you’ve not sat there and gone, ‘I can’t believe you do that.’ You’ve offered us other ways, but you’ve also affirmed us” (Participant 1, AR 4).

Barriers

Theme three: structural and resource pressures

School staff identified curriculum pressures as limiting opportunities for implementing relational practice, with academic demands and workload making it difficult to prioritise developing their relational practice. Staffing constraints and inconsistency were also highlighted, with shortages, absences, and unstructured times disrupting continuity in support. Additionally, staff noted a prior lack of training and guidance in being relational with children, expressing the need for more Continuing Professional Development (CPD), SEND training, and practical strategies to implement relational approaches effectively.

Curriculum pressures and competing demands

Staff identified curriculum pressures and competing demands as key barriers to implementing relational practice. The academic focus and workload often limited opportunities to embed relational practice, along with inflexibility in the timetable. As another participant

explained, “because of curriculum demands... not having the time with staff to work on it because we’ve got to do some work on writing, I’ve got to do maths” (Participant 3, AR 1).

Teachers also felt pressured by assessment and academic expectations, particularly for older pupils preparing to transition to the next year group. One participant described feeling this pressure being passed onto students, stating, “I’m thinking, ‘Oh crikey! We’ve not done this; we’ve not done this.’ That pressure is being put onto them” (Participant 2, AR 3). Others expressed frustration at the rigidity of the curriculum, with one noting, “If you were talking about something and the kids were really enthusiastic... well, we are supposed to be doing maths now, so you can’t do that anymore” (Participant 6, AR 3).

Additionally, staff reported time constraints and lack of designated time for relational work, with one participant explaining, “at the minute, the timetable is horrendous... we’re juggling so much... to do it properly, we need an allotted time rather than *ad hoc*” (Participant 4, AR 3). These pressures made it difficult to consistently implement relational strategies, with staff feeling stretched between academic priorities and connecting with children emotionally.

Staffing constraints and inconsistencies

Staff identified shortages, absences, and unstructured times as significant barriers to implementation. Others noted that relational approaches were harder to sustain without adequate cover, explaining, “if you give more time... that impacts on budget because that is cover for people” (Participant 2, AR 1).

Unstructured times, particularly lunchtimes and playtimes, were described as flashpoints for relational breakdowns. One participant noted, “lunchtime is the most unstructured part of the day... it’s the time when children are most crammed together,” leading to increased challenges in behaviour and staff response (Participant 1, AR 2). Staff also reported inconsistencies in training and relational responses, with one noting, “you might have one member of staff who’s come in the top playground... and they’re not trained the same way” (Participant 3, AR 2).

Additionally, variability in staff confidence and approach was seen as a challenge, with one participant explaining, “some staff take things and run with them... and some don’t” (Participant 2, AR 1). These inconsistencies were barriers to implementation because they made it harder to ensure a shared, predictable experience for children.

Limited training and guidance

Staff identified a lack of prior training and guidance as a barrier to implementing relational practice effectively. Many felt uncertain about how to respond to changing behaviours, with one participant admitting, “children have changed; behaviours have changed... I’m not quite sure how to deal with it myself” (Participant 2, AR 1).

There was also a lack of shared understanding of restorative practice, with one participant explaining, “it was a general lack of understanding of what restorative practice is... we need to go right to the beginning of that” (Participant 4, AR 2).

Gaps in SEND training were also noted, particularly in understanding the needs of autistic children and those with Attention-Deficit/Hyperactivity Disorder (ADHD). One participant highlighted how some staff without in-depth training tended to focus only on behaviour, stating, “some staff... will just jump on the behaviour and... not spend the time unpicking it” (Participant 1, AR 2).

Theme four: systemic challenges within education

Staff identified systemic challenges that impacted the implementation of relational practice. Hierarchical structures influenced how pastoral responsibilities were distributed, with expectations often conflicting with the reality of who had the strongest relationships with children. Wider educational policy was also seen as a constraint, as Department for Education (DfE) guidance on behaviour sometimes conflicted with a more relational approach. Additionally, role expectations placed emotional strain on staff, with the pressure to “fix” situations leaving little time for self-regulation.

Staff hierarchies

Staff hierarchies were viewed as a barrier to consistent relational practice, with differing roles affecting how expectations and relations with children were managed. Class teachers were expected to take on more pastoral responsibility, but in practice, support was often passed between staff. One participant noted, “we want class teachers to take some more responsibility... but things still get passed on” (Participant 2, AR 1). Others emphasised that relationships, not roles, should guide pastoral support, stating, “it’s better that the person with the strongest relationship works with them” (Participant 1, AR 4).

Midday supervisors were perceived differently by children and often lacked training, leading to inconsistencies. One participant explained, “they’re not part of all these staff meetings, all these discussions” (Participant 2, AR 3). While staff felt hierarchies were now less rigid, historical divisions were described, with one recalling, “I wasn’t allowed in this room [the main staff room]” as a new staff member (Participant 7, AR 4).

Wider educational policy

Staff identified DfE guidance on behaviour as a barrier to fully embedding relational practice. While school had adapted their behaviour policies to be more relational, this sometimes conflicted with DfE expectations, which were perceived as more punitive. One participant explained, “the DfE at the moment is quite... I’d say punitive... there are parts of our policy that they’d probably hate because it is more on the relational and understanding side” (Participant 1, AR 2).

Engaging in AR also led staff to re-evaluate their own policies, recognising areas for further development. One participant reflected, “three months ago... I’d have said the behaviour policy is good. But now... perhaps it needs to be adapted” (Participant 3, AR 2). Participants perceived a balancing act between needing to comply with DfE requirements while shifting towards a more relational approach.

Job role expectations

Staff described educational roles as diverse and emotionally demanding and perceived an external expectation to “fix” situations. This pressure could be overwhelming, especially when balancing other classroom demands. This emotional burden was particularly heightened when staff felt unable to step back, even when a change of face was needed. One participant reflected, “it’s then hard sometimes to get that adult to understand that they need to withdraw.” (Participant 4, AR 2). Without time to regulate their own emotions, staff could become overwhelmed, “you kind of can feel yourself bubbling... and you need that time to regulate yourself before you can support a child” (Participant 4, AR 2).

Summary of findings

The current study aimed to understand what school staff perceive as the key factors influencing the implementation of relational practice to support school attendance within a primary school in the Northwest of England. Internal and external systems, along with the current context, significantly influenced the implementation process (Ward and Kelly, 2024). Key facilitating factors included a supportive school culture, strong leadership buy-in, and collaboration amongst staff, particularly in terms of emotional support and a unified relational ethos. Co-developed practical strategies, including consistent yet flexible approaches and the adoption of a shared relational language were, supported by accessible psychological input tailored to the developmental needs of the school. This was facilitated through structured reflective practices, which enhanced staff confidence and, therefore, their professional practice. Barriers identified encompassed structural and resource pressures, notably curriculum demands, staffing constraints, and prior inconsistent training. Systemic challenges such as hierarchical role expectations, external educational policies perceived as punitive, and emotional demands experienced by staff further constrained effective relational practice implementation.

Discussion

This discussion explores the experiences of a primary school seeking support to implement a more relational approach to address emerging attendance difficulties. Recognising the complexity of school attendance challenges, the school identified EC as an appropriate method to foster supportive relationships and enhance emotional responsiveness. The focus of this discussion is to explain how AR was used to support school in implementing their chosen relational approach. The discussion also examines how the research findings align with an existing implementation framework for whole-school approaches (Ward and Kelly, 2024, see Figure 1), identifying divergences and highlighting unique insights. This model is UK-based and derived from practical experiences of implementing SAB guidance within a secondary school context, making it particularly relevant to the present research. Although the current study explores a primary school setting, Ward and Kelly's (2024) framework provides a robust foundation for understanding the complex, interrelated elements required to implement relational practices effectively at a whole-school level.

The current study strongly supports Ward and Kelly's (2024) emphasis on leadership commitment as a pivotal facilitator, linking directly with the theme *Supportive School Culture and Leadership*, particularly the subtheme *whole-school approach and leadership buy-in*. Staff consistently emphasised the importance of a whole-school ethos and explicit leadership buy-in for embedding relational practices effectively. Findings indicated that when senior leaders explicitly endorsed relational approaches, this facilitated coherence across the school community, aligning closely with Admiraal et al.'s (2021) assertion that learning-oriented leadership significantly enhances professional development through shared visions. Participants stressed the necessity of unified messaging and cohesive actions, succinctly captured by one participant's perception that "we all need to be singing from the same hymn sheet" (Participant 6, AR 2). Leaders were crucial in endorsing relational values and explicitly

facilitating structures for collaborative professional learning, ongoing inquiry, and reflective practice (Kennedy, 2014; Admiraal et al., 2021).

Collaboration among staff emerged as another essential facilitator within Ward and Kelly's (2024) "cohesion" component. This was mirrored in the subtheme *staff collaboration and emotional support*, which included codes such as "staff emotionally supporting each other," "staff humility" and "self-care." Participants valued collective reflection and mutual emotional support, enhancing their confidence and capacity to engage relationally with students. This aligns with Johannesson (2022) insights, highlighting how professional learning communities developed through AR contribute significantly to sustained professional development and emotional resilience. Staff in the present study perceived inter-staff emotional support as indispensable, fostering an environment where colleagues reliably sought emotional and practical support.

The accessible and practical development of EC through AR was crucial in embedding a relational approach to support attendance within everyday practice, indicated through the theme *Co-developing Practical Strategies*, specifically the subtheme *consistent yet flexible staff approaches*. Staff perceived a need to co-develop a step-by-step, 'way of being' when responding emotionally with children. This approach aligned closely transformative professional development being achieved through professional learning community approaches rather than traditional, didactic methods (Kennedy, 2014). It was a key implementation driver (Bertram et al., 2015) because school staff perceived EC as realistic and tailored to their professional practice and whole school needs, leading to high levels of feasibility, meaning it became embedded easily (Ward and Kelly, 2024). While this partially aligns with Romney et al.'s (2022) identification of high-quality, context-sensitive training as essential for effective implementation of EC, the nature of the training is divergent: the present study makes the argument that relational practice, such as EC, is best implemented iteratively and inductively alongside school staff, rather than delivered as a deductive, often one-time CPD session (Romney et al., 2022).

The subtheme *psychological input and reflective practice* further illustrates this point, as implementing EC through AR allowed staff to shape EC strategies collaboratively and contextually, further enhancing ecological validity and ownership. Consequently, EC became an accessible method for empathetically responding to children's emotional needs, facilitating confidence in their abilities to be relational by perceiving benefits in practice, such as strengthened child-staff relationships. This aligns with self-efficacy being fostered through performance accomplishments (Bandura, 1997); as the AR process progressed, there was a growing perception from staff that supporting pupil wellbeing was an integral part of their roles. These beliefs are known to significantly enhance school staff's confidence and capacity to offer emotional support (Mazzer and Rickwood, 2015).

Effective implementation of relational practice therefore necessitates transformative professional development that is collaborative, reflective, and deeply embedded within everyday school practice. These characteristics are optimally supported through ongoing coaching, sustained leadership engagement, and structured reflective processes (Kennedy, 2014; Admiraal et al., 2021).

Significant implementation barriers, however, were identified in implementing relational approaches, as identified in the overarching theme *Structural and Resource Pressures*. The subtheme *curriculum pressures and competing demands* was the most frequently coded,



FIGURE 1
Ward and Kelly (2024) implementation framework for whole-school approaches.

reflecting Romney et al.'s (2022) findings that curriculum constraints impede relational strategy adoption. *Staffing constraints and inconsistencies* were further barriers, consistent with prior research focused on whole-school SAB implementation (Ward and Kelly, 2024). Participants also identified prior targeted CPD gaps, particularly regarding SEND and restorative practices, echoing advocacy for theoretically informed CPD to enhance effectiveness (Kennedy, 2014).

Systemic challenges within education identified align closely with Ward and Kelly's (2024) "systems around the school" category, emphasising interactions with external educational structures and policies. Hierarchical staff structures created tensions that undermined consistent relational responses, particularly affecting midday supervisors, who often lacked integration into whole-staff initiatives, highlighting the challenges of truly inclusive, whole school development in practice (Admiraal et al., 2021). Similarly, *Wider educational policies*, particularly DfE guidance (Department for Education, 2024), emerged as significant barriers, with staff noting tensions between relational and more punitive behaviour management expectations.

While the majority of findings aligned closely with Ward and Kelly's (2024) model, some divergences emerged. The subtheme *job role expectations* highlighted the emotionality and relational fatigue experienced by school staff. While Ward and Kelly's (2024) model acknowledges the need for a "supportive staff environment," it does not explicitly account for the emotional labour of consistently relational work, particularly the pressure staff felt to 'fix' emotionally complex situations without adequate space for self-regulation. The current findings suggest that emotional sustainability should be more

explicitly integrated into implementation frameworks, particularly those supporting relational approaches, recognising relational fatigue as a distinct barrier to long-term practice change.

Furthermore, the subtheme *psychological input and reflective practice* revealed the critical role of embedded psychological support, delivered through AR and EP collaboration, in enabling real-time adaptation and contextual refinement of relational strategies. While Ward and Kelly (2024) include "professional development" as a school-level factor, the current study points towards a more iterative, collaborative model of psychological input that is co-constructive and fluid, blurring the boundary between learning and implementation.

These divergences may be explained by the fact that Ward and Kelly's (2024) framework was developed alongside a secondary school and places more emphasis on the early implementation stage being exploratory, involving clarification of purpose and planning. This situates it in the "exploration" and "installation" stages of the implementation process (Bertram et al., 2015). In contrast, this study found that the school, having already identified EC and committed to a relational ethos, moved more directly into "installation" and "initial implementation" (Bertram et al., 2015). This may reflect a greater degree of 'school readiness' to engage with relational practice, with prior exposure or attitudinal alignment accelerating progress through initial stages. It may also reflect the primary school context, where smaller staff teams and more informal communication structures often allow for swifter adaptation (Earley and Porritt, 2014).

In conclusion, schools represent complex, dynamic systems requiring supportive rather than prescriptive approaches to supporting relational practice and school attendance. AR, characterised by its

democratic, inductive nature (Dusty, 2024), offers an effective framework for sustainable school improvement particularly when compared to packaged, manualised SEL interventions that may lack contextual relevance (Demkowicz et al., 2023). By actively involving school staff in the development and refinement of interventions, AR fosters self-efficacy, ownership, and ecological validity; critical factors for embedding interventions into school-level systems (Humphrey et al., 2018). This inclusive, reflective process helps ensure that interventions are perceived as feasible and meaningful by staff, consequently increasing the likelihood of positively influencing both internal school systems and external systems around the school (Kennedy, 2014; Ward and Kelly, 2024). Consequently, the nuanced implementation of relational practices challenges traditional implementation frameworks, necessitating context-sensitive approaches that emphasise relational fidelity and ecological validity over procedural compliance.

Limitations

The primary focus of this research was to support and enhance school attendance through implementing relational practices. Changes in attendance behaviours typically require extended periods to become evident and measurable (Bond et al., 2024b) and therefore, attendance outcomes were not explicitly captured or quantified in this study, which is a limitation. However, this limitation was inevitable, given that effective measurement of outcomes such as attendance improvements presupposes robust and sustainable implementation of the relational approaches themselves. Recognising this, the research intentionally prioritised exploring the process of implementation, aligning closely with the overarching aim of capturing a detailed narrative of embedding relational practices. This focus facilitates greater replicability and provides insights into the practical complexities and elements required for successful implementation in similar school contexts.

The final stage of the AR process could have explicitly identified the key implementation drivers for the research site and agreed a plan for how these would be sustained in order to continue implementation without external supports.

Implications for practice and future research

Given the complexity and emotional labour of supporting school attendance, schools implementing relational approaches should prioritise providing protected time for reflection, collaborative problem-solving, and staff supervision. This study highlights the importance of these practices for ensuring the sustainability and effectiveness of relational practice. Specific attention should be given to relational consistency during unstructured periods such as breaks and lunchtimes, where relational practice is often challenging but most needed.

EPs are uniquely positioned to support schools in implementing relational approaches inductively, tailoring interventions to each school's distinct context. EPs should stand by school staff through methods such as AR, reflective practice, and ongoing coaching to

facilitate sustainable change. The current study underscores the value of EPs as facilitators of professional learning and highlights the broader potential of collaborative EP-school partnerships beyond attendance and relational practices alone.

Future research would benefit from longitudinal studies examining the impact of sustained relational practices on attendance outcomes and pupil well-being over extended periods. Understanding the long-term effectiveness and identifying core components of successful relational interventions would strengthen stakeholder buy-in and guide effective resource allocation. Additionally, further exploration into the systemic integration of relational practices within wider educational policy contexts would enhance the ecological validity and practical relevance of future intervention.

Data availability statement

The datasets presented in this article are not readily available because participants did not consent for data to be shared. Requests to access the datasets should be directed to George Alaimo, george.alaimo@postgrad.manchester.ac.uk.

Ethics statement

The studies involving humans were approved by Research and Ethics committee, The University of Manchester. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

GA: Writing – review & editing, Writing – original draft. CK: Writing – review & editing, Supervision, Writing – original draft.

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The authors declare that no Gen AI was used in the creation of this manuscript.

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Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2025.1602057/full#supplementary-material>

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EDITED BY

Carolina González,
University of Alicante, Spain

REVIEWED BY

Claudia Neves,
Universidade Aberta, Portugal
Patricia Schuler,
Zurich University of Teacher Education,
Switzerland

*CORRESPONDENCE

Chiara Enderle
✉ chiara.enderle@uni-leipzig.de

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Their voices matter: student and professional perspectives on overcoming school attendance problems in the context of social, emotional, and behavioral difficulties

Chiara Enderle^{1,2*}, Louisa Kotschy¹, Heinrich Ricking¹ and
Susanne Kreitz-Sandberg³

¹Faculty of Education, Institute of Special and Inclusive Education, Leipzig University, Leipzig, Germany, ²Department of Education with a focus on Emotional and Social Development, Institute for Special Education, Europa-Universität Flensburg, Flensburg, Germany, ³Department of Education, Stockholm University, Stockholm, Sweden

School attendance problems (SAPs) are a growing concern worldwide, particularly among students with social, emotional, and behavioral difficulties (SEBD), who are at elevated risk of school-related stress and disengagement. While much research has focused on the factors contributing to SAPs, effectively addressing these challenges requires insights into the viewpoints of those most affected and involved in school. This qualitative study explores commonalities and differences in the perspectives of students and school-based professionals regarding prevention-focused supports and interventions for SAPs related to SEBD across levels of support. Data were collected through focus groups with school-based professionals and individual interviews with students aged 15-16 in alternative and special education settings in Saxony (Germany). Qualitative content analysis was used to identify key support strategies and elements, which were then mapped across the levels of the Multi-Dimensional Multi-Tiered System of Supports (MD-MTSS) framework. The findings reveal that trust-based relationships, coordinated school-based care, flexible learning pathways, and clear communication were central strategies identified by both groups. At the same time, differences emerged at the level of intensive interventions. Professionals emphasized legal and procedural responses, while students stressed the need for emotionally responsive environments, reduced academic pressure, and having a voice in shaping their own reintegration process. The study underscores the value of participatory, context-sensitive approaches that integrate learning and mental health support to strengthen well-being and promote school attendance, especially among students with SEBD.

KEYWORDS

school attendance problems, school absenteeism, youth, teachers, social, emotional and behavioral difficulties (SEBD), emotional and behavioral difficulties (EBD), qualitative research, multi-tiered system of supports (MTSS)

1 Introduction

School attendance problems (SAPs) represent a pervasive challenge across education systems worldwide. The COVID-19 pandemic appears to have intensified this trend, with rising numbers of students experiencing attendance difficulties linked to both disrupted learning (Alejo et al., 2023; Dee, 2024) and heightened emotional distress (Benninger et al., 2022; Haddad and van Schalkwyk, 2021). Beyond individual consequences, SAPs pose risks for long-term educational and societal outcomes. Research links chronic absenteeism to lower academic achievement, reduced educational attainment, heightened psychosocial vulnerabilities, and increased dropout rates (Ansari and Pianta, 2019; Rogers et al., 2024; Yahaya et al., 2010).

The school environment plays a central role in children's development, acting as both a source of support, and, at times, a source of stress (Bilz, 2023), influencing whether school attendance is promoted or hindered. Students with emotional difficulties – typically associated with internalizing behaviors – are particularly vulnerable to experiencing school as stressful, increasing the likelihood of developing SAPs (Hamilton, 2024; Lawrence et al., 2019; Lereya et al., 2022). A large body of literature has identified emotional disorders, such as anxiety and depressive disorders, as significant contributors to school absenteeism. Associated risk factors include bullying, punitive disciplinary approaches, strained teacher–student-relationships, academic difficulties, and family-related stressors (e.g., Egger et al., 2003; Finning and Dubicka, 2022; Gubbels et al., 2019; Havik et al., 2015; Tekin and Aydın, 2022). Emotional, social and behavioral difficulties are intertwined, compromising a person's ability to cope and appropriately respond to situations, which in turn may undermine attendance through symptoms such as fatigue, concentration problems, or avoidance behaviors (O'Hagan et al., 2024; Panayiotou et al., 2021). In contrast, positive social-emotional experiences in school are associated with lower rates of absenteeism and fewer symptoms of anxiety, depression, and oppositional behavior among youth with attendance difficulties (Allison and Attisha, 2019; Hascher and Hagenauer, 2020; Hendron and Kearney, 2016; Korpershoek et al., 2020). It remains important to understand which supports are effective in improving student attendance, wellbeing, and a positive connection with education for this vulnerable group (Heyne et al., 2022, 2024). Behavioral and cognitive-behavioral approaches have been demonstrated to reduce absenteeism and associated symptoms (e.g., Pina et al., 2009; Strömbeck et al., 2021). However, much of the current research centers on the effectiveness of intervention programs, with less attention paid to the lived experiences of students and professionals within everyday school contexts (Pérez-Marco et al., 2025).

Relatively little is known about student and school staff views regarding effective supports for improving school attendance. Qualitative inquiry into these perspectives can reveal both barriers and enabling factors related to addressing SAPs, thereby complementing the predominantly quantitative focus of existing research. For instance, youth perspectives stress the importance addressing the root causes of truancy and involving students in co-developing solutions (Gase et al., 2014), whereas educational practitioners tend to emphasize

resource constraints and concentrate more on individual and family-related factors than on school-level contributors (Chian et al., 2024; Finning et al., 2018). Such divergent opinions can pose challenges for implementing collaborative, multi-faceted support systems. Input from key actors in the school environment is essential to developing of sustainable solutions to address SAPs (Heyne and Brouwer-Borghuis, 2022). Giving equal importance to the perspectives of school-based stakeholders helps reveal common facilitators to support attendance, while differences in their views can point to specific needs or obstacles to successful support. These insights are critical for informing the collaborative design of inclusive approaches to SAPs by bridging perspectives and fostering mutual understanding (Heyne, 2024).

The present research responds to this call by giving equal weight to the perspectives of both school-based professionals and students. The article presents findings from a qualitative study conducted in an alternative and a special school setting in Saxony (Germany). The study aimed to identify support strategies for the prevention and intervention of SAPs at multiple levels, based on the perspectives of students experiencing SAPs associated with social, emotional, and behavioral difficulties (SEBD) and the professionals who support them.

2 Theoretical foundations for understanding and addressing school attendance problems

2.1 Conceptualizing school attendance problems and social, emotional, and behavioral difficulties

Concurrent concepts and definitions inform the present understanding of SAPs. This may be reflected in how professionals and students perceive the interplay of factors and supports they consider appropriate for promoting attendance. In line with the conceptual understanding of the International Network for School Attendance (Heyne et al., 2019a), this study uses SAPs as working term to describe a range of patterns and challenges that manifest in multiple forms, typically associated with difficulties in attending school or with absences that are considered problematic due to their frequency, duration, or underlying issues that interfere with learning and emotional or behavioral functioning (Kearney, 2021). In terms of broader categories, attendance policies and school laws often distinguish between unexcused absences (non-attendance without permission) and excused absences (valid reason, e.g., medical certificate) (Gottfried, 2009). Heyne et al. (2019b) provide an internationally recognized differentiation of SAPs, describing four prominent types: *school refusal*, *truancy*, *school withdrawal*, and *school exclusion*. This differentiation is made on the grounds of empirically substantiated primary causes and associated characteristics, e.g., school refusal mainly related to emotions like anxiety (Ricking, 2014). The concept behind SAPs shifts the focus from absence rooted in individual deficits to the problems experienced by students and their environment (Gentle-Genitty et al., 2020). Following,

we advocate for an expanded, dimensional understanding that emphasizes fluid boundaries between the traditional categories as well as the flowing transition of patterns and signs of SAPs on a continuum: beginning with full attendance, emotional distress before and/or during school, tardiness through to hourly or complete absences (Kearney et al., 2019; Kearney and González, 2022; Kearney, 2021). These signs may indicate that a student experiences SAPs.

Along these lines, SAPs are understood as systemic, multidimensional phenomenon, influenced by the dynamic interplay of proximal and distal risk and protective factors across ecological systems (Gren Landell, 2021; Melvin et al., 2019). These factors can exert both an initiating and a maintaining effect, and they are not unidirectionally related to specific types or signs. Rather, they interact in a compounding, multidirectional manner, thereby increasing the risk of SAPs (Kearney, 2021). Bronfenbrenner's (2005) bioecological theory offers a valuable framework for describing these complex interrelations between system levels, encompassing the Process-Person-Context-Time (PPCT) model. It outlines four fundamental components that influence a child's individual development: the *person* engages in (proximal) *processes* (e.g., typically occurring everyday activities and interpersonal interactions with people, symbols, and objects) within its immediate environment (e.g., microsystem school) in interaction with other *contexts* (meso-, exo-, and macrosystems) over *time* (also known as the chronosystem) (Rosa and Tudge, 2013; Tong and An, 2024; Tudge, 2008).

Figure 1 reflects the four types (Heyne et al., 2019b) and manifestations or signs (e.g., observable behaviors/patterns) (Kearney, 2016; Kearney et al., 2019; Ricking, 2014) alongside the interrelated ecological systems and PPCT components (Melvin et al., 2019; Tong and An, 2024; Tudge, 2008) as underlying mechanisms in the development of SAPs over time. The outwarded arrows symbolize the multidirectional and multifactorial interplay of factors in the emergence and persistence of SAPs.

In this research, the term *social, emotional, and behavioral difficulties* (SEBD) is adopted to describe the multifaceted social, emotional, and behavioral mental health needs that act as barriers to young learners' personal, social, cognitive, and emotional development in various social contexts, including the classroom and school (de Leeuw et al., 2018; Müller, 2021). In the literature, labels such as Emotionally Based School Avoidance (EBSA) (West Sussex Guidance, 2020) or school refusal are frequently used to describe situations in which emotional distress or heightened anxiety are connected to absence (Shilvock, 2010). Subsequently, we consider SAPs related to SEBD as contexts and/or situations in which young learners experience distress and challenges that disrupt their relationship with education and impact their ability to attend school. These challenges are rooted in dynamic person–environment interactions and are typically accompanied by, or expressed through, observable emotional and behavioral symptoms. Such symptoms may manifest as *internalizing* behaviors, such as anxiety and depression, which are often associated with school refusal (Egger et al., 2003; Tekin and Aydın, 2022), and/or *externalizing* behaviors, including disinterest, boredom, hyperactivity, or disruptive behaviors, commonly linked to truancy (Havik and Ingul, 2021). From this interactionist standpoint, the overt manifestations of all SAPs types can be understood as stress responses influenced by a combination of

internal and external factors that onset or maintain difficulties (Peeters et al., 2025).

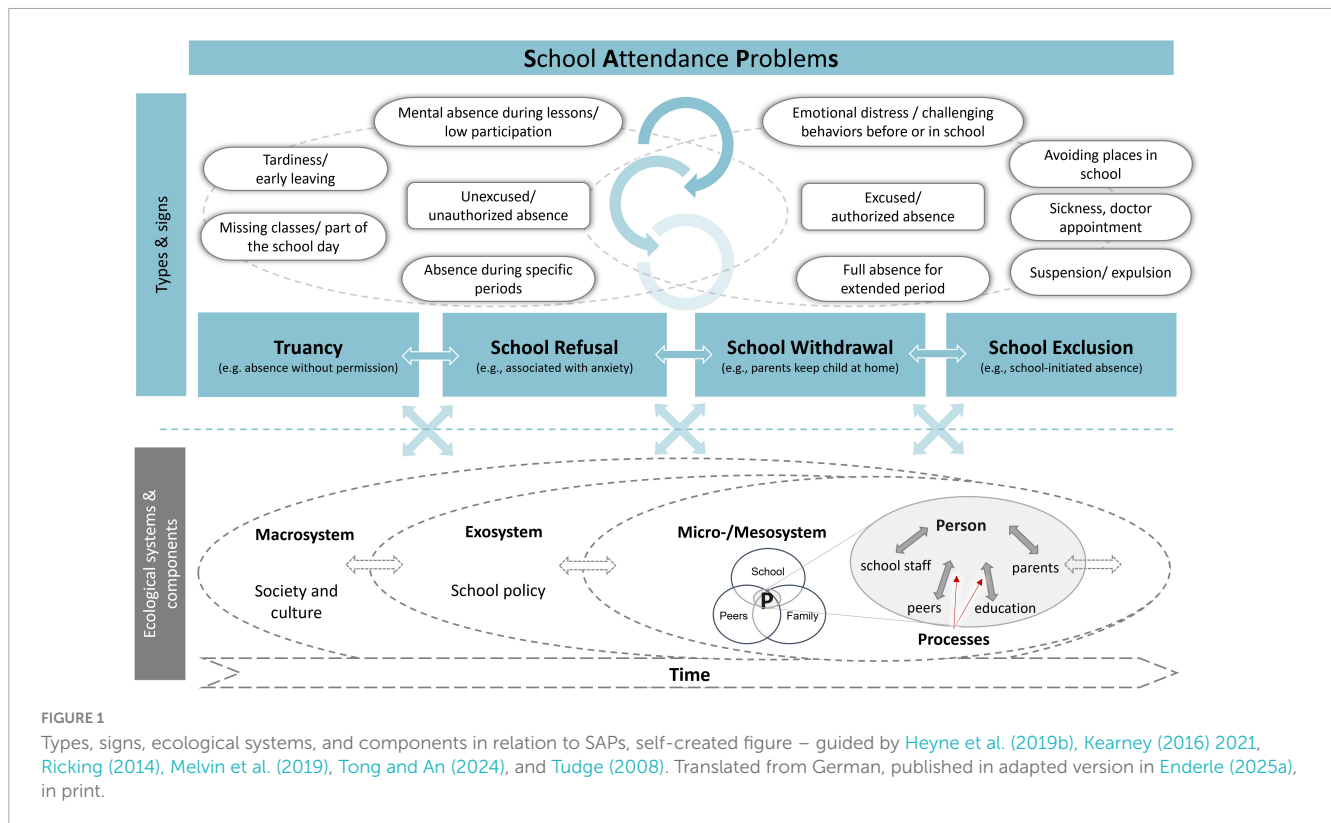
2.2 The multi-dimensional multi-tiered system of supports as a central framework for supporting school attendance

The multi-dimensional multi-tiered system of supports (MD-MTSS) framework is known as integrated, tiered approach to organizing supports for SAPs at levels of intensity, depending on students' complex and evolving needs (Kearney and Graczyk, 2014, 2020). The framework is rooted in a whole-child (Goldberg et al., 2019) and ecological systems perspective, thereby connecting well with the multi-systemic and interactionist perspective outlined above for addressing SAPs in the context of SEBD. In this study, the MD-MTSS serves as central theoretical framework to explore attendance-related support strategies and elements, as identified by both students experiencing SAPs and the professionals who support them.

The MD-MTSS structures supports in three basic tiers (Kearney, 2016; Kearney and Graczyk, 2022; Kearney and Graczyk, 2020). Tier 1 (universal) focuses on school-wide supports designed to promote the functioning and positive conditions for school attendance for all students. These strategies are implemented proactively to support the whole school community. Tier 2 (targeted) focuses on students who exhibit emerging signs of attendance issues or other risk factors for SAPs. The goal of strategies at this level is to reduce absence and address emerging SAPs in a more reactive manner. Tier 3 (intensive) comprises intensified interventions for students experiencing severe or chronic absence (e.g., high proportion of absence relative to attendance) and/or complex social, emotional, and behavioral needs with the goal to manage underlying causes of their SAPs through coordinated, individualized support (Heyne, 2024).

The three-dimensional or pyramidal structure facilitates the simultaneous addressing of multiple domains, including the academic, behavioral, social, emotional, and contextual dimensions of school attendance. This is achieved through a tiered continuum of supports that are responsive and tailored to students' varying levels of need (Graczyk and Kearney, 2023; Kearney and Graczyk, 2020; White, 2022). The MD-MTSS model recognizes that students' SAPs occur along a continuum (e.g., severity) and differ from student to student (e.g., types of attendance problems) (Kearney, 2016). Furthermore, the framework addresses systems as well as student groups alongside individual students (Kearney and Graczyk, 2020).

Overall, the MTSS-based model of school attendance can be blended and complemented with similar MTSS-approaches and interventions, for example, Positive Behavioral Interventions and Supports (PBIS) and Social Emotional Learning (SEL) (Cook et al., 2015; Horner et al., 2010). Systemic resilience-based practices are compatible as well with the aim of enhancing students' ability and fostering positive conditions for school attendance (Enderle et al., 2024). The Protective Processes and Promotive Factors model by Ungar and Theron (2020), for example, offers aspects and practices from resilience research that focus on factors to promote positive outcomes among psychosocially vulnerable youths. Integrating



components from resilience frameworks to school attendance may enhance the overall impact and outcome of tiered interventions for school attendance (Dray et al., 2017; Ungar et al., 2019).

One of the guiding principles of a multi-tiered prevention framework is the use of evidence-based, practices to reduce the likelihood of difficulties and to enhance positive outcomes in various domains of student achievement, social and emotional learning, positive behaviors or engagement (e.g., Bradshaw et al., 2014; Stoiber and Gettinger, 2016). This is achieved through data-driven decision making to match support to students at specific levels of need. Accordingly, monitoring of attendance data is central to the MD-MTSS framework, extended to the assessment of contextual variables and data in multiple domains of functioning (Kearney and Graczyk, 2022; Kearney and Graczyk, 2020; Ricking, 2014).

Finally, the MD-MTSS provides a flexible and theoretically grounded framework for delineating practices and supports that are critical to the prevention and intervention of SAPs from the perspectives of students and professionals that can be leveraged to inform the implementation of an integrated approach into existing school structures.

3 Earlier research on student and professional perspectives

Capturing the voices of multiple stakeholders is essential to gain a comprehensive understanding into the complex dynamics of SAPs related to SEBD as well as the effectiveness of prevention and intervention measures targeting these challenges. Overall, some reviews have provided a more comprehensive overview

of studies focusing on different actors' views concerning SAPs. A recent qualitative synthesis identified a body of literature in the Nordic countries that includes 11 studies exploring the perspectives of children and adolescents and 8 studies examining the views of school staff (Hejl et al., 2024). Corcoran and Kelly (2023) provide a meta-review on lived experiences of school non-attenders in the United Kingdom. Another systematic review highlights professionals' attitudes toward SAPs from international quantitative and qualitative research (Hamadi et al., 2024). Existing research shows that both youth and school professionals recognize the multifaceted origins of SAPs, including individual, social, and contextual factors (e.g., Hejl et al., 2024; O'Toole and Æiríæ, 2024), and express the need for systemic, tailored interventions that involve families, schools, and mental health professionals (e.g., Chian et al., 2024; Finning et al., 2018; Gase et al., 2014). Predominantly, the themes emerging from qualitative studies focus on perceptions surrounding the determinants of SAPs and/or barriers to addressing them (e.g., Melander et al., 2022; Oehme, 2007; Richards and Clark-Howard, 2023). Comparatively less attention is given to the working elements that underpin successful returns or improvement of school attendance (e.g., Halligan and Cryer, 2022; Heyne and Brouwer-Borghuis, 2022). Despite this, some reviews and qualitative studies focus on the experiences of stakeholders in alternative education settings or intervention programs to investigate successful support practices and protective elements in these contexts (Halligan and Cryer, 2022; Heckner, 2013; Heyne and Brouwer-Borghuis, 2022; McKay-Brown and Birioukov-Brant, 2021; Sundelin et al., 2023; Walther-Hansen et al., 2024).

Previous qualitative studies conducted on student perspectives offer important insights into attendance-enabling elements at the

student- and context-levels. These include individual supports (Halligan and Cryer, 2022; Hejl et al., 2024; Flynn et al., 2024), positive class climate, supportive relationships with peers and teachers, structured, safe, or adapted learning environments (Chian et al., 2024; Corcoran and Kelly, 2023; Enderle et al., 2024; Gase et al., 2014; Heyne et al., 2021; Sundelin et al., 2023; Walther-Hansen et al., 2024), alongside family involvement and individual factors, such as motivation and hope (Enderle et al., 2024; Heckner, 2013; Nuttall and Woods, 2013; Walther-Hansen et al., 2024).

In studies focused on professional perspectives, systemic and organizational aspects, such as team-based approaches, resource allocation, and interdisciplinary collaboration are frequently highlighted (Dennis, 2020; Finning et al., 2018; Melander et al., 2022; Nuttall and Woods, 2013; O'Toole and Æiríe, 2024). In addition, relational and pedagogical approaches include supporting positive relationships and wellbeing, home-school collaboration and flexible, adjusted teaching (Devenney and O'Toole, 2021; Finning et al., 2018; Halligan and Cryer, 2022; Hejl et al., 2024; Martin et al., 2020; McDonald et al., 2023; Nuttall and Woods, 2013; O'Toole and Æiríe, 2024).

However, much of the existing qualitative research on SAPs focuses on single-informant approaches and interventions (e.g., Keppens and Spruyt, 2020), with few studies considering the perspectives of multiple groups, such as students and school staff, simultaneously (Chian et al., 2024). Furthermore, while prior research highlights barriers and facilitators in the management of SAPs, there is a need to explore the experiences of these groups regarding supportive factors and effective strategies for prevention and intervention, with a focus on the interplay between mental health and attendance.

4 Aim and research questions

This article responds to the outlined gaps in concurrent research, particularly the limited amount of qualitative research on supports and protective factors for SAPs related to SEBD from multiple perspectives in the German context. The aim of the present study is to explore the perspectives of (a) students with SEBD and (b) school-based professionals on support practices and elements they consider effective and appropriate in the prevention and intervention of SAPs. The following research questions guide the study:

- RQ1: What do students and school-based professionals perceive as effective supports for the prevention and intervention of SAPs associated with SEBD?
- RQ2: How can key support strategies and elements be filtered and mapped in relation to the levels of the MTSS framework?
- RQ3: What commonalities and differences emerge in the supports identified by both groups for the prevention and intervention of SAPs?

In addressing these questions, we aim to focus on commonalities and differences between both groups, considering the support levels (universal, targeted, or intensive). This inclusive approach enables a deeper understanding of shared attendance-enablers and working elements across levels (Peeters et al., 2025), while also identifying points of divergence that reveal unmet needs

or gaps that require more nuanced, collaborative solutions in these specific contexts. Ultimately, this approach can inform the translation of qualitative insights into practical applications and policy development.

5 Materials and methods

5.1 Context of study

This study is part of a larger international research project SAPIC (International Comparative Perspectives on School Attendance Problems: Analysis of statistics, risk groups and prevention in four countries) (Kreitz-Sandberg et al., 2021) based on quantitative large-scale data and qualitative studies across Sweden, the UK, Germany and Japan (Fredriksson et al., 2023, 2024; Kreitz-Sandberg et al., 2022). In the qualitative part, interviews were conducted with school leaders, teachers, and other support professionals as well as youths to understand their views on support systems related to SAPs in these countries. This article specifically draws on focus group interviews with teachers and support professionals and individual interviews with students at secondary school level aged 15–16 in rural and urban areas of Saxony, Germany. Subsequently, we generally refer to these groups as (school-based) professionals and students.

5.2 Ethical considerations

The data collection was approved by the Saxony State Office for School and Education (Landesamt für Schule und Bildung, LaSuB) on October 17, 2023. (R15-6490t6t220-20231135214) before conducting the study. The data were handled in accordance with the GDPR (DSGVO) and the local legislation and institutional requirements. The Swedish Ethical Review Authority has approved the project design of SAPIC (Dnr 2020-05441, Linköping department, Decision 24.11. 2020). To ensure the anonymity and confidentiality of both the schools and the participants involved in this study, the exact locations and setting of data collection cannot be disclosed.

5.3 Study design and procedure

Focusing on the qualitative case study, interviews with 11 school-based professionals in three focus groups and 11 individual student interviews were conducted in an alternative and a special education setting in Saxony, Germany, as a follow-up to the case study conducted in Hamburg (Enderle et al., 2024).

The focus group interviews involved special and mainstream education teachers, career changers to teaching and social workers from a special education center and a Productive Learning (PL) program. The student participants were of compulsory schooling age, with some enrolled in an alternative learning setting (referred to as PL program) where students have made progress in terms of attendance at the time of the study. The intention was to apply a strength-based perspective for the purpose of understanding what support measures and elements were perceived as effective by students in overcoming SAPs.

In the recruitment, the research team used a snow-balling strategy (Friebertshäuser et al., 2013) by contacting several secondary schools, a special education center and an organization serving young learners with SAPs and their families via email in the urban and rural areas of Saxony. The majority of schools contacted were secondary schools, with two of them offering the PL program as part of their school profile. For schools expressing interest in participating, further details were clarified via phone calls or email exchanges. Additionally, study information and consent forms were distributed in simplified language versions to enhance accessibility and understanding for students. Within the recruitment process, the study relied on responses from schools. The scope of the collected material was dependent on the voluntary participation and consent of the individuals involved. In the case where schools confirmed their participation, teaching staff was asked to identify potential students in the age range of 15–17, who have experienced SAPs in the mainstream school setting. The schools were provided with the information letter, informed consent form, and several interview appointments options. Written informed consent was obtained from all participants and the guardians of students, who were informed that their participation in the study was voluntary, their data would be kept confidential, and they could stop participating in the study at any time without any negative consequences. The students were interviewed individually in separate rooms at school to capture their personal experiences and perspectives on overcoming SAPs.

The study used a semi-structured interview guide for individual and focus group interviews which has been tested in an earlier qualitative case study (Enderle et al., 2024). The thematic focus in students’ interviews was directed toward their previous experiences and facilitating or hindering factors to their SAPs (e.g., what challenges have you experienced related to school attendance?). Furthermore, the students were asked to provide advice to schools, parents, or guardians regarding what they perceived as helpful support measures. To ensure suitability, minor modifications were made to some questions to improve their relevance in the specific context of PL. Further, the interview guide developed for the focus groups involved questions about what support systems are implemented to promote regular school attendance and address issues related to SAPs as well as barriers and opportunities within existing support systems. The interviews were conducted in German from April to June 2024. Before commencing the interviews, the researchers explained the aim and background of the study. All interviews were audio recorded, transcribed verbatim and pseudonymized (Dresing and Pehl, 2018). The individual student interviews took approximately 16–32 min. The focus group interviews lasted between 50 and 68 min. The first author (female, doctoral researcher) and two student assistants (Masters level, special education teacher program) from the project team conducted the interviews.

5.4 Participants

Initially, our aim was to include all 11 student interviews in the analysis, but related to the article’s objective, students who reported

TABLE 1 Student participants’ characteristics, reported risks, and symptoms associated with school attendance.

Student (gender)	Characteristics, risks and symptoms associated with school attendance
S1 (f)	–School anxiety (psychosomatic complaints, e.g., headaches and complaints)
	–High stress levels and feelings of social isolation
S2 (f)	–Stress, anxiety, and depressive moods
	–Diagnosed eating disorder
	–Low sense of self-efficacy, attention problems
S3 (m)	–Diagnosed anxiety disorder
	–Nausea, panic attacks before and during school attendance
S4 (m)	–Low motivation and engagement
	–Conflicts with teachers due to rule-breaking behaviors
S5 (m)	–Loneliness/sadness due to family problems
	–Low motivation
	–Conflicts with teachers due to disruptive behaviors in classroom
S6 (m)	–Suspected depression
	–Stress experiences due to bullying

having SEBD were selected. One student had special educational needs in emotional and social development. Throughout an initial review of the data, a final sample of $n = 6$ was deemed sufficient for data saturation to illustrate diverse student perspectives according to their reported SEBD and school experience (Hennink and Kaiser, 2022). Four youths attended the PL program and two youths attended different secondary schools (*Oberschule*) in an urban area. Two students identified as female. All students showed an improvement in attendance at the time of the study. Table 1 displays the students’ characteristics in terms of reported SEBD, particularly internalizing and/or externalizing behaviors (Enderle, 2025a). Central risk factors and challenges are also reflected that either led to the onset or maintenance of students’ SAPs (Enderle, 2025b). This allows for a better understanding of students’ perspectives in the context of SEBD.

The final sample of school-based professionals includes $n = 10$ individuals – employed as teachers or other support professionals – who were interviewed in three focus groups. The first two focus groups took place in a special education center for students with emotional and behavioral needs (Grades 1–6). The school is situated in a rural area in Saxony. The third interview was conducted in the building of the PL program. The setting and professional roles of focus group participants are summarized in Table 2. The interview IDs used in the table and quotations are fictitious.

5.5 The educational context – Saxony in Germany

To better understand the educational environment and its influence on the participants’ experiences, it is essential to consider the educational context in Saxony (Germany). This context

TABLE 2 Professionals' characteristics, role, and setting of focus group interviews.

Focus group	Setting and professional role (speaker position)	Interview ID
Focus group 1	Special education center	FG-SEN
	<i>n</i> = 3 qualified special education teachers (B1–B3)	
Focus group 2	Special education center	FG-MIX
	<i>n</i> = 1 school social worker (B1)	
	<i>n</i> = 1 trainee social worker, completing training at the special education center (B2)	
	<i>n</i> = 1 qualified special education teacher (B3)	
Focus group 3	Productive learning (PL) program	FG-PL
	<i>n</i> = 2 qualified (lower and upper) secondary education teacher (B2 and B3)	
	<i>n</i> = 2 career changers to teaching (<i>Quereinsteiger</i>) (B1), one of whom has specialized training in PL (B4)	

provides the structural and systemic background for the alternative school settings and special schools involved in the study. In Germany, compulsory education requires all children from the age of six to attend a public or state-approved school for 12 years: this often includes 9 years of full-time schooling at general education schools plus 3 years at a full-time general school or part-time at a vocational upper secondary school (Eurydice, 2025).

The education system in Saxony encompasses a wide range of school types and institutions, such as primary school (*Grundschule*), secondary school (*Oberschule*), grammar school (*Gymnasium*), vocational schools (*Berufsbildende Schule*), and adult education centers offering second-chance qualifications for general education degrees (*Schulen des zweiten Bildungswegs*). Saxony has one of the highest rates of students attending special schools (KMK [Standing Conference for the Ministers of Education and Cultural Affairs], 2024). Students with disabilities, including emotional and behavioral problems, are supported in special needs schools (*Förderschule*) through targeted support and individualized adjustments. Special schools focused on supporting emotional and social development usually encompass years 1–4, after which the students usually continue their education at mainstream schools. The region supports the special education offer, called Productive Learning (PL). It provides flexible and practice-oriented curricula to a tailored target group of students in grades 8 and 9 within the lower secondary school track. It is aimed at supporting students who struggle in mainstream settings of compulsory school to acquire the lowest school-leaving qualification with entrance qualification to a vocational school and/or become prepared for specific career and educational pathways at the end of year 9 (SMK, 2020). Additionally, interested students have to apply for the program and undergo an admission process. The program involves a modified timetable, linking practical experience with school-based education. Students spend 13 h per week learning in school (core subjects and interdisciplinary topics) and 20 h at a practical learning site (e.g., business, government agency, and

cultural or social organization). Teachers working in the PL setting participate in a 3-year professional development program offered by the Institute for PL in Europe (IPLE e. V.) (IPLE, 2025). The PL has many common organizational features with special schools: individual learning plans, adjustment/adapted instruction, small teaching groups and high density of school staff.

These settings play a critical role in accommodating students at risk of academic disengagement, including those who participated in this study. By situating the research in specialized educational contexts, it can capture supportive strategies designed for students who are at higher risk of SAPs in terms of understanding protective factors in these settings.

5.6 Data analysis

In line with the scope of this article, we applied qualitative content analysis following Kuckartz's methodology (Kuckartz and Rädiker, 2022). This method enables a detailed exploration and comparative analysis of aspects perceived and expressed by the participants as supportive in addressing SAPs.

The data were coded individually by student assistants, then peer-checked, and reviewed by the lead researcher in consensus discussions. In an explorative step of the coding process, relevant text passages in the transcriptions were identified in which students or school-based professionals refer to supports, aimed at promoting attendance, preventing and reducing SAPs. Both statements about elements of (school-based) support as well as rather implicit perceptions of support and engaging factors that counteracted the development of SAPs were included. These meaning-carry units were condensed, abstracted into codes and organized into topics. The sorted codes served as the basis for developing thematic main and subcategories. The analysis primarily follows an inductive approach, meaning that categories are developed from the material. Kuckartz and Rädiker (2022) emphasize that the inductive process is inherently linked to an active, reflective engagement with the material and the researcher's prior knowledge. Using a deductive approach, the coded units were further examined in connection with theory and literature to organize supports into prevention (Tier 1) and interventions (Tier 2 and 3) (Kearney and Graczyk, 2022), thereby minimizing potential bias. As such, supports aimed at preventing SAPs or social-emotional difficulties as well as proactively promoting attendance were categorized as *prevention-focused* support. The efforts focused on reducing SAPs or other risk factors fall under the category of *interventions*. Sufficient saturation was considered as no new codes emerged. The identified main categories with corresponding subcategories were organized in hierarchical order. The category system provides a framework for systematically organizing the content, allowing for conclusions to be drawn or comparisons to be made (Kuckartz and Rädiker, 2022). The material was revisited by applying the category system which resulted in minor modifications of coded units. Subsequently, two different sets of category matrices emerged for each respondent group and the focus of supports, one with *prevention-focused* support and one with focus on *interventions*. The members of the coding team were involved in thorough discussions and reflections to further refine the categories. This included a documentation of the codes and critical dialogues around the specific terminology of categories until consensus was reached.

As a final step in addressing RQ2 and RQ3, the analysis focused on identifying pedagogically relevant strategies and elements from the categories on *prevention-focused supports* and *interventions*. The coded sections in the respective categories were scanned to filter concrete actions and elements that reflect different levels of pedagogical response. The identified *key support strategies and elements* were then systematically organized within the multi-tiered framework: elements filtered from the *prevention-focused* categories were assigned to Tier 1 (universal). In the filtering of *interventions*, strategies designed to support students showing early signs of SAPs and/or SEBD were mapped as Tier 2 (targeted), while actions addressing chronic absenteeism or more severe challenges were classified under Tier 3 (intensive).

For the preparation and processing of the interview data, the computer-assisted software MAXQDA 2024 was used (VERBI Software, 2024). The study was conducted in line with the Consolidated criteria for Reporting Qualitative research (COREQ) (Tong et al., 2007; see [Supplementary Material 1](#)). The student interviews have been previously analyzed and presented independently, using a different methodological approach and research focus.

6 Findings

The findings for RQ1 are first presented separately for the group of students and professionals, distinguishing between *prevention-focused supports* and *interventions*. The extracted key support strategies and elements for RQ2 are then presented across the tiers of the MTSS framework.

For clarity, only the main categories are presented. Direct excerpts and paraphrased quotes are used to illustrate the subcategories and support the main categories. The exemplary quotations have been translated from German using a language translation tool, and the translations were reviewed by the authors for accuracy. The original excerpts, in their numerical order of appearance, can be found in [Supplementary Material 2](#).

6.1 Student perspectives

Students identified several strategies they found effective in preventing SAPs and supporting re-engagement during emotional distress or after extended absences. The categories for the respondent group of students are summarized in [Figure 2](#).

6.1.1 Prevention-focused supports

Students highlighted the importance of an engaging, flexible and structured *school and learning environment* to support their emotional wellbeing. The students talked about the role of learning content and subjects.

“The war in Ukraine or what’s going on in Gaza” (S5).

“That small subjects like art (...) that are more practical subjects (...), should be given more attention” (S4).

These preferences reflect a desire for a meaningful, varied, and joyful school experiences. At the same time, the lack of supportive structures was also mentioned as a stressor: As one student put it:

“I would say that students tend to get overlooked there and that some (...) [as a result] feel overwhelmed (...) and then you cannot really respond to their needs [as a professional]” (S3).

Communication and trust-building was seen as a foundational element for preventing SAPs. This included open and respectful dialogue, addressing problems early, and building trust-based relationships between students, teachers, and parents. One student reflected on the consequences of poor communication:

“The very first advice I would give for everyone – for students, teachers, and parents – is that communication is actually the most important thing. I realized that for myself. There was a serious lack of communication” (S3).

Another echoed the value of connection for school belonging:

“I don’t think anyone wants to go somewhere where there is no [social] cohesion or trust.” (S1).

Under the category *individualized and tailored learning opportunities*, students valued, for example, support that provided space for conversations.

“There should be one-to-one conversations with the students, (...) so you can respond to the student and see what might be going wrong at school or in the classroom” (S3).

This quote illustrates a desire for individual recognition of difficulties early on and responsive adults who identify issues early and adjust learning arrangements accordingly before they escalate.

Students perceived *parental involvement* in school life as a resource to prevent SAPs and support them holistically. As one student noted:

“Parents should be more involved. (...) It also helps because, of course, a student doesn’t always have a full overview of everything [that is going on]” (S3).

6.1.2 Interventions

With regard to interventions, students referred to *social support networks*, emphasizing the value of feeling understood and supported by people whom they trust—peers, teachers, family members, therapists. Social support within and beyond the school setting was perceived as meaningful in navigating emotionally difficult phases and reducing feelings of isolation. One student mentioned the peer group as a shared space of support:

“My group helped me a lot too (...). We were all kind of in the same boat and had relatively similar problems, and hearing each other’s perspectives really helped” (S3).

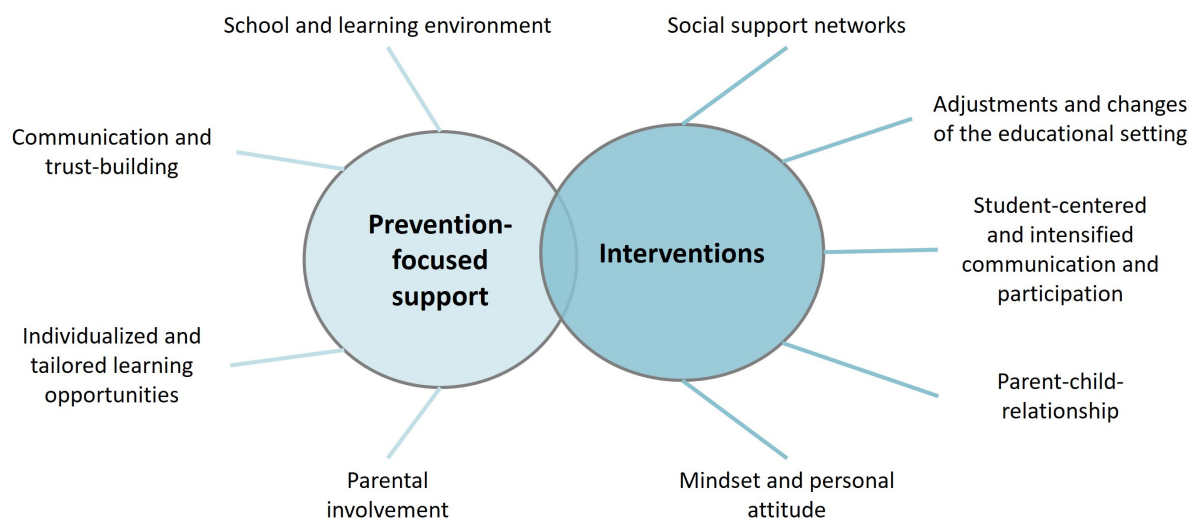


FIGURE 2

Overview of categories of prevention-focused supports and interventions for the respondent group of students.

The group context seemed to offer recognition and shared experience, which appeared to ease emotional strain and promote re-engagement. In addition to informal networks, students highlighted the value of professional psychological support that played a different and complementary role, particularly in addressing persistent emotional problems:

“I mean, talking to friends, family, and people you trust is great, and you can also get advice. But it’s still different when you talk to professionals” (S3).

In parallel, some students described the need for a reflective, responsive and gentle approach from school professionals in encouraging attendance — a balance between understanding and confrontation.

“I think I might have needed a little push when I wasn’t showing up that often at the beginning. Something a bit stricter and not just ‘Ah well, that’s okay’, because I think that brought me a bit into the cycle, thinking it was fine to just stay home.” (S1).

Students spoke about *adjustments and changes* in their schooling that made it easier for them to return or stay engaged. These included shifting to smaller learning groups, lower academic expectations and/or pressure, or entering programs like PL. The altered setting often brought relief from pressure and led to more positive learning experiences. Several students referenced the importance of practice-based learning formats and informal connections with staff, suggesting that the learning environment felt different from their prior experiences.

“Here, we do things in a practical format, and I like that better. (...) I like learning in a playful way – doing things differently, instead of just listening and writing” (S4).

“When I had a good day [at my internship], it boosted my self-confidence a little, and that made it easier for me to go [to school] (...). Yes, it just gave me a little energy boost” (S4).

Some students also mentioned clinic schools or reintegration programs that supported their return:

“We had breakfast together (...), and it felt more like (...) being part of a second family, which definitely made it easier to go there regularly” (S6).

These programs appeared to create emotionally safe, low-pressure environments where students could re-establish routines and rebuild confidence.

Students pointed to *student-centered and intensified communication and participation* as something that shaped their ability to reconnect with school, especially when it included direct conversations between them, staff, and family. While communication was sometimes described as lacking, moments of contact were remembered and described in detail. This highlights how even small, consistent interactions can have a meaningful emotional impact. One student stated:

“Well, I did have some hope when my teacher talked to me” (S2).

Another student reflected on the need for more direct involvement, rather than being spoken about:

“Definitely talk to me too (...). I missed that a bit at my last school. It’s frustrating when I have to tell [my mum] everything and then she passes it on to others – I could just join [the conversation] because it’s also about me” (S1).

Students appreciated when they were given a say in planning their re-entry and educational goals:

“They actually asked me, well, ‘how do you imagine it?’ and really talked with me about my goals, how they could plan it out, and how they could help me achieve them. I think that helped a lot.” (S1).

These comments highlight how students experienced communication — both its presence and absence — as something that mattered in their return to school when struggling with SAPs and/or SEBD.

In their accounts, students also described *parent–child relationship* dynamics, particularly around how their parents responded to school-related struggles. They mentioned situations where understanding and calm dialogue made a difference, especially when students are encouraged to achieve long-term goals. One student recommends:

“Talk to the children about how they can earn their school-leaving certificate [by attending school], and [explain] that they cannot accomplish much without it. So, keep reminding them and encourage them to go to school so they can graduate” (S5).

Finally, students reflected on their own *mindset and personal attitude*. The self-awareness of one’s own efficacy and role in making choices and putting in motivational effort toward one’s goal was mentioned: one student reflected on his current situation in the PL setting:

“I’m here now and I actually want to graduate, so I’m making an effort” (S5).

Students talk about their open attitude, something that was key for changing behavior, accepting help, and reconnecting with school. One student described:

“Well, for example, if you’ve spoken to the school and they’ve made a suggestion [for an alternative pathway] That you look at what it’s like there [...] just be open and don’t say no [to the proposal right away]” (S6).

6.2 Professional perspectives

School-based professionals described a broad set of prevention-focused strategies, along with intervention strategies to support re-engagement and respond to more severe cases. The categories are illustrated in [Figure 3](#).

6.2.1 Prevention-focused supports

Trustful relationship building with students was one of the most frequently mentioned preventive elements among professionals. These relationships were described as central to creating an open atmosphere where students feel seen and supported. A special education teacher characterizes an important function of relationships as follows:

“This personal connection or warmth (...) with which you approach the children [so that students do not] develop an oppositional attitude [toward school]” (B3, FG-MIX).

Moreover, relationships were seen as a bridge to understanding what students might not express openly by addressing problematic aspects that happen outside of school (FG-MIX).

At classroom level, *classroom-based practices and teaching design* were named, for example, implementing rules, positive behavior supports, and classroom climate as elements of classroom management. In line with this, a curriculum relevant to students’ lives and links to practical or work-related experiences were considered effective (FG-SEN). Moreover, individualized learning conditions were seen as facilitator to respond to students’ emotional needs. One special education teacher explained:

“Here, we [...] have small groups. In a class with ten or at most twelve children, and sometimes even fewer – you can, of course, work with the children individually in a completely different way compared to a class with 25 or more [students]” (B3, FG-MIX).

Support of student mental health and social-emotional learning was another key area of focus. Professionals described encouraging students to engage in extra-curricular activities as a strategy to strengthen their wellbeing outside of academic settings.

“We always recommend leisure activities, such as joining a club or a sports group in a community organization.” (B3, FG-MIX).

In classroom contexts, one teacher used self-reflection activities focused on social interactions and emotional experiences. This involved asking students to “*reflect on their behavior and how they interact with each other*” (B3, FG-MIX) and “*work on building their resilience*” (B1, FG-MIX). The importance of coping strategies and resilience was underlined by other participants, particularly in relation to challenges like the COVID-19 pandemic (FG-MIX).

Considering strategies at school level, *attendance monitoring and follow-up* was described as a routine by teachers. It involved daily attendance lists and systematic outreach through communication in cases of unexplained absence. A teacher described this process as follows:

“The regular procedure is that the school office reports all excused students in the morning, and if any students are absent without an excuse, this is reported back to the office, and an attempt is made to contact the parents” (B3, FG-MIX).

In instances where families were unresponsive, school staff reported resorting to police contact (FG-SEN).

With regard to *interdisciplinary and multi-professional resources*, participants describe the value of collaboration with school psychologists, social workers, and other external partners that offer extracurricular activities (FG-SEN). A key benefit was the flexible use of support systems in daily school life, for example, the availability of multiple school-based staff that could be used

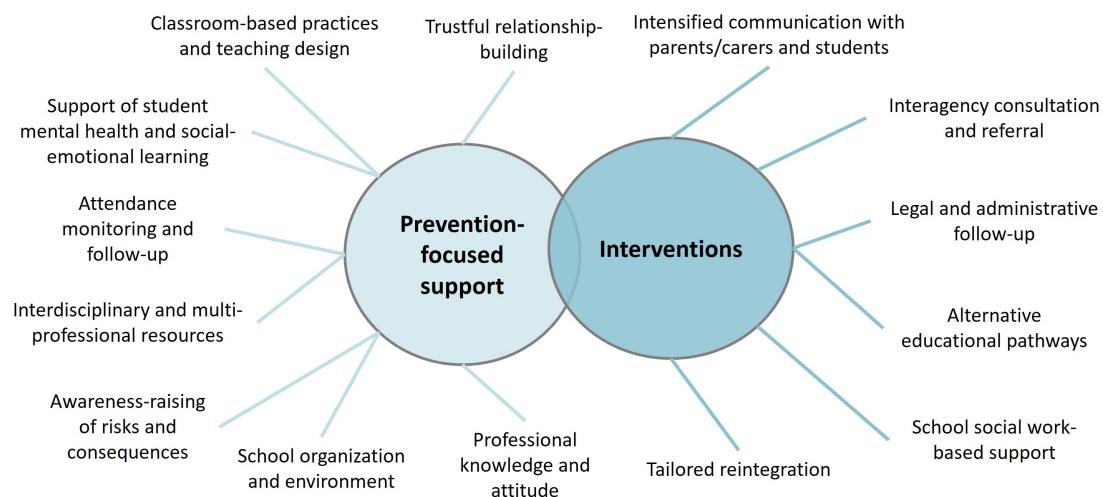


FIGURE 3

Overview of categories of prevention-focused supports and interventions for the respondent group of school-based professionals.

informally and on short-notice (FG-MIX, FG-PL). One teacher from the PL setting reflected on the importance of this flexibility as follows:

“We have other support systems that we can activate either at short notice, in a planned way or very, very flexibly, depending on the need” (B2, FG-PL).

In contrast, teachers in the special education setting criticized the lack of professional resources, which limited their ability to spontaneously access such resources:

“We are not trained to handle very serious personal problems, and it would be nice to have someone nearby in situations like that” (B1, FG-SEN).

Prevention-based school projects – focused on violence, addiction, abuse, or sexual health – were seen as important ways of *awareness-raising of risks and consequences*. One participant mentioned the overarching educational purpose of these preventive projects which is to inform students about risks, protective strategies, and the consequences of harmful behaviors (FG-SEN).

“Preventive projects are largely about raising awareness [...] about what different addictions can do to a person and the downward spiral they can cause. Or violence prevention, which again is about education, maybe, how do you protect yourself? What actions can you take?” (B1, FG-MIX).

In relation to the consequences of school absence, one special education teacher stated: *“We also explain this to the students. Also, the sums [of the fines], which are issued.”* (B3, FG-SEN). From the professionals’ perspective, this refers to a potential preventive strategy where transparent communication with students about the conditions and consequences of non-attendance in the German school system are used as a measure to encourage students to attend regularly.

With regard to structures, professionals emphasized how the *school organization and environment* could play a preventive role for SAPs, particularly for students lacking stability at home (FG-SEN).

“Designing an appealing school day (...) that conveys the idea that school is not just an obligation (...) but can also be something enjoyable” (B3, FG-MIX).

Another professional referred to the purpose of the full-day school program:

“To avoid situations where the parents or the home environment cannot provide adequate safety, to ensure that children are supported through a variety of full-day offers instead of being left on their own” (B1, FG-MIX).

The category *professional knowledge and attitude* refers to the participants’ personal stance and professional mindset that shaped their responses to SAPs:

“Sensitivity to the children’s problems” (B3, FG-SEN).

“[recognition of] a reluctance to attend school or school refusal” (B2, FG-SEN).

“The attitude you bring when working with the children” (B3, FG-MIX).

6.2.2 Interventions

As central element of intervention efforts, the professionals offered insights on successful and *intensified communication*

with parents/carers and students. One teacher described this communication as follows:

"We keep trying to reach out to students and get in touch with them" (B4, FG-PL).

The contact with caregivers was especially important in cases where information was missing or assumptions about absences differed:

"We also had a case where the parents firmly believed that their child had left home. It did leave home but never arrived at school. Clear communication is very important, and it's also helpful when the parents are available" (B1, FG-MIX).

As element of collaboration, professionals mentioned *interagency consultation and referral* in student cases that required more support than schools could provide alone. This involved both external and school-based actors. For example, the participants name school mentors that support individual children in class (FG-SEN and FG-MIX). Family and child social welfare services are contacted to bridge the contact between school and family. Staff from clinical schools is involved for consultation in procedures to provide or refer to intensive psychosocial interventions (FG-SEN and FG-MIX). One professional addressed the school's required responsibility to establish measures and projects supporting school attendance, reflecting both the school's resourcefulness and its limits when external structures are needed:

"I think schools often have to find their own ways and look for or even start projects themselves. But it's probably not really their job; it would be actually better if external organizations took care of that (...) if there were more opportunities and points of contact. But out of necessity, schools are probably just tinkering and putting projects together on their own" (B1, FG-SEN).

Several professionals described the *legal and administrative follow-up*, tied to compulsory school attendance (*Schulpflicht*). The participants comment on how they follow procedures in which they may request medical certificates for longer absences or a review by a public health officer (*Amtsarzt*). If absences are unauthorized and exceed 5 days, schools will report the case to the local authority (FG-SEN). As one teacher stated:

"If it becomes extremely frequent – then at a certain point – disciplinary measures, fines, or something similar have to be initiated" (B2, FG-SEN).

Alternative educational pathways, including special education and PL were described as supportive spaces for a certain group of students. A social worker explained:

"[These are students] who don't see themselves fitting into the school system, who are more hands-on learners,

and other approaches are used to stimulate their intrinsic motivation" (B1, FG-MIX).

The professionals in special education mentioned that they often encounter students who have earlier experienced SAPs. Alternative education projects were especially relevant for older students experiencing long-term absence. These alternatives were perceived as better suited to the needs and interests of certain learners. Professionals in the PL sector described a specific educational conception focused on core subjects like mathematics or language learning, *"so that [the students] do not feel overwhelmed at school."* (B2, FG-PL). Additionally, school-based and employment-based learning is linked by implementing interest-based internships for the students. Besides, autonomous learning of students was pointed out by professionals whereas the practical approach supports the student's self-determination:

"The [students] can suddenly participate without constantly needing retraining or repeated explanations. This builds a sense of self-esteem and self-efficacy, which then can have a positive effect on the students" (B1, FG-PL).

Furthermore, professionals understand their role more as pedagogical guides than instructors, highlighting their accompanying role in the student's learning process. One professional stated:

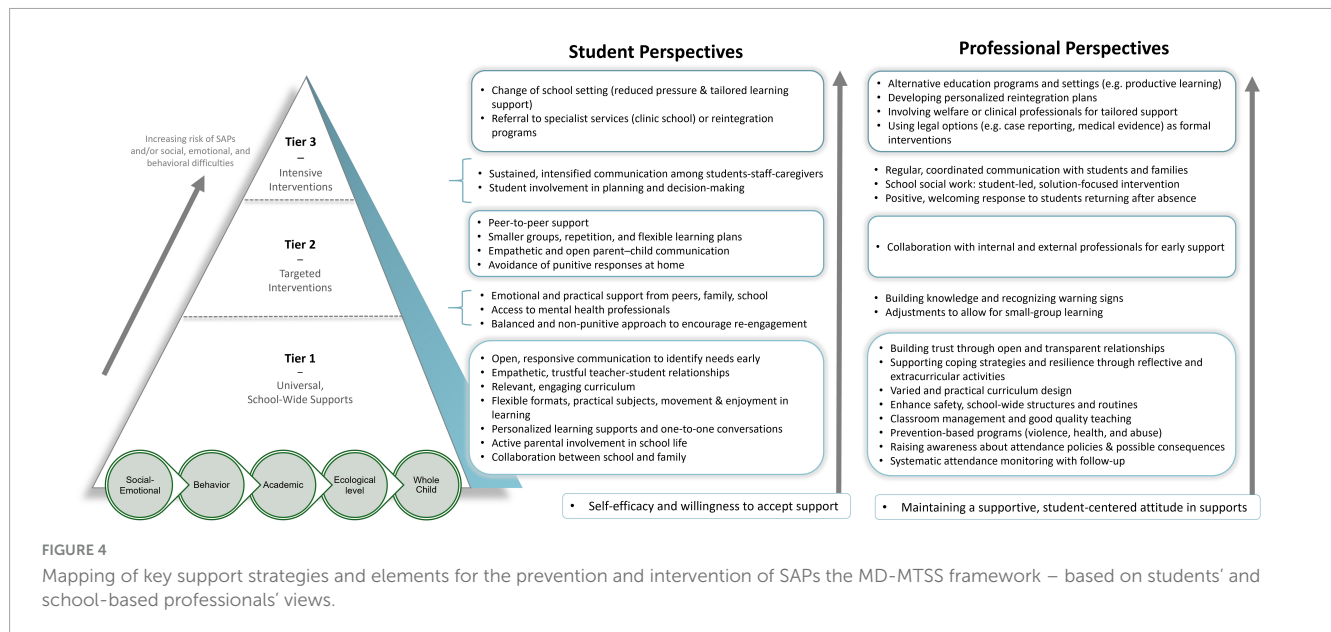
"That's why we are deliberately called pedagogues, not just teachers or teaching staff. Our role is broad and pedagogically diverse, so to speak" (B2, FG-PL).

On another account, the role of *school-based social work* is mentioned, particularly in relation to sensitive cases and risks that require legal actions with the duty to protect against the endangerment of child's welfare (paragraph § 8a). The need for joint solution-oriented approaches between social workers and youth is named. One social worker, for example, recalled:

"If they [students] say 'it would help me if you sat by my side for half an hour. We drink a cup of tea, and then I'll try to go into the classroom' (...). Then I believe, depending on what the students say would help them, I think that's what actually works." (B1, FG-MIX).

Finally, professionals describe *tailored reintegration* measures for students returning after extended absences. School professionals pay attention to needs-based and graduated procedures, including adjusted timetables or the involvement of clinical staff to support the transition (FG-SEN). In addition, attention to the welcoming and warm culture upon the students' return to school attendance is pointed out by one professional:

"And to say 'yes, you were missed here too'. The [students] are happy when they return, (...) and also the classmates make it clear. 'Nice to have you back.'" (B3, FG-PL).



6.3 Mapping – model of multi-tiered system of supports for attendance

Building on the categories presented, *key support strategies and elements* were filtered from the categories on *prevention-focused supports and interventions*, and systematically mapped onto the levels of support defined within the MD-MTSS framework for school attendance. The full list of strategies and elements can be found in [Supplementary Material 3](#). They are visually displayed in [Figure 4](#) (shortened version). In accordance with the principles of MTSS, the universal strategies and elements mapped at Tier 1 can be reflected – as continuum – in Tier 2 and 3 interventions, designed to be more targeted and intensified toward specific groups of students. The following discussion addresses the commonalities and differences between the supports identified by both groups for the prevention and intervention of SAPs associated with SEBD.

7 Discussion

7.1 Integration – commonalities and differences

Both students and school-based professionals identified a broad range of support strategies and elements for preventing and addressing SAPs associated with SEBD. When mapped across the tiers of the MD-MTSS framework ([Kearney and Graczyk, 2020](#)), the results show substantial overlap at the universal level (Tier 1), as well as nuanced differences in the interpretation and implementation of targeted (Tier 2) and intensive (Tier 3) interventions.

With respect to Tier 1 supports, both groups emphasized the importance of meaningful teacher–student relationships and proactive communication. Communication was viewed not only as a relational element in social support networks but also as a channel for identifying emerging difficulties. Students emphasized

respectful, and empathetic interactions as protective, and as a means to voice and address problems before disengagement escalates. Similarly, professionals described trust-building through transparency and consistency as essential for early identification of emotional challenges. With regard to teaching, students expressed a strong need for pathways that accommodate their diverse learning and emotional needs, with access to varied structures and one-to-one guidance or learning support. Students particularly highlighted relevant, engaging teaching content that reflects their lived realities as fundamental to feeling engaged. Professionals similarly referred to good classroom management and a variety in didactic methods, instruction and pedagogy as preventive classroom-based practices that are aimed at all students.

Furthermore, both groups alike pointed to the benefit of family-school collaboration. Students described the need for active parental involvement in day-to-day school life to help them navigate school demands and emotional challenges, whereas professionals stressed clear communication with caregivers around attendance expectations and consequences.

Professionals placed stronger emphasis on school-wide structures and routines. For instance, they describe social-emotional prevention programs, placing an emphasis on coping and resilience, particularly in the wake of the pandemic, to prevent disengagement and problem behaviors. Professionals' perspectives appear grounded in an awareness of students' broader life contexts, including experiences of trauma, social-emotional difficulties, and complex family dynamics. This reflects a more systemic informed understanding of Tier 1 support, where non-attendance is seen not solely as a behavioral issue, but as a symptom of deeper psychosocial challenges. While professionals' actions may follow procedural protocols (e.g., monitoring and follow-up of absence), their discourse reveals underlying pedagogical knowledge of the association between mental health and school attendance, as widely established in literature (e.g., [Finning et al., 2019](#); [Lereya et al., 2019](#)). Students, in contrast, are more likely to center their experiences of support around relational and motivational

elements that are conveyed through teaching practices, positive adult and peer behaviors, and trustful conversations.

At the person level, students reflect on the importance of their mindsets, particularly their beliefs in one's capacity to overcome attendance difficulties – a sign of self-efficacy as important motivational construct and property of agency that affects effort, persistence, and choices (Bandura, (1997); Schunk and DiBenedetto, 2021). These beliefs may enable youth to achieve their goals and reconnect, further playing a role in their willingness and readiness to accept guidance and engage with provided support resources. This, in turn, makes these beliefs a mediating mechanism across all tiers of support. Professionals' student-centered and positive attitude can be considered as an enabling mechanism that guides the implementation of support strategies at all levels of support. For instance, this is partly reflected in a teacher's welcoming and non-judgmental response to students returning after periods of absence as an approach that can rebuild trust and facilitate reintegration into the school environment (Mills et al., 2019).

At Tier 2, characterized as targeted intervention (Kearney and Graczyk, 2020), both groups highlighted the need for personalized supports, especially in situations when students begin to show early signs of disengagement. The suggested key strategies include smaller groups, flexible scheduling and individual learning support plans. These elements are characteristic of teaching practices in special education and PL as well as inclusive pedagogy (Spratt and Florian, 2015). Both groups acknowledge the value of peer support. While students emphasized emotional connection and understanding from peers, professionals leaned toward structured peer activities in class – a subtle divergence. Social workers, in particular, described their special role in intervention, working closely with students through informal yet purposeful routines. A noteworthy observation is that students differentiate between the significance and the purpose of connections with support-providing adults. In addition to support from school, peers, and family, students mention the need for access to neutral professionals, such as mental health staff or school psychologists, who are not part of daily school life and can provide both universal and targeted support. This element is corroborated by the views of professionals, who refer to the essential function of collaborating with professionals or experts from other disciplines. The emphasis is placed on support systems that involve external actors (e.g., mental health professionals) in the context of targeted interventions to promptly address emerging issues.

In the context of targeted and intensified interventions, communication emerged again as a central topic. In these contexts, the emphasis shifted from general relationship-building to the coordination of support across school, family, and student systems, especially during periods of reintegration after extended absence. Professionals highlighted the importance of maintaining structured lines of communication with parents and external services. Students expressed a wish for encouraging messages at home that convey emotional understanding and gently remind about consequences, as opposed to the use of pressure or punishment. Interestingly, both groups convey that families should be treated as partners, not problems, in the planning of supports which aligns with

Boaler and Bond's (2023) findings on regular and coordinated communication between school staff, students, and caregivers in school-based interventions.

Tier 3 interventions revealed the clearest divergence in perspectives. Students emphasized the need for student-centered support, and alternative school settings such as PL. Professionals echoed this with descriptions of clinical referrals, tailored reintegration plans, and interdisciplinary support teams, suggesting a broader awareness of formal structures and regulatory mechanisms available to address chronic or complex SAPs. Students stressed the value and interest of being actively involved in the conversations surrounding the design of interventions. However, the explicit positioning of students as co-designers in intervention and reintegration was largely absent from the professional narratives, pointing to a gap between student expectations and institutional practices. On the contrary, professionals describe a reliance on formal, procedural tools when SAPs escalate. Legal measures, including the request of medical evidence, case reporting systems, and fines, were mentioned as standard tools. Yet, they were not questioned for their effectiveness in addressing root causes of SAPs (Heyne et al., 2024). Similarly, professionals in the special education setting posit that conversations surrounding fines are primarily used to educate students about the consequences of non-attendance. In this regard, absenteeism is framed as unfavorable, even oppositional behavior that should be averted. However, for some students this may be perceived as a threat, reinforcing a sense of punishment rather than support. This points to a system that remains oriented toward compliance with punitive, reactive procedures among professionals, particularly guided by legal interventions in compliance with German policy documents on school absenteeism (Enderle et al., 2023). In contrast, the participating students in this study made no reference to these legal measures. Instead, the students call for a responsive and adaptive environment with a focus on adjusting and reducing academic demands, as well as emotional support to meet their needs, all of which were provided in alternative settings. While the value of alternative settings (Halligan and Cryer, 2022; Sundelin et al., 2023), flexible structures as well as engaging curricula is echoed in previous studies on students' perspectives (Gase et al., 2016; Richards and Clark-Howard, 2023), this study also illustrates the overlap with teaching professionals' understanding of interest-based curricula, alternative provisions, and adapted teaching practices that match individual needs.

7.2 Summary of the integration and mapping

Overall, the mapping reveals a strong alignment between student and professional perspectives at the universal (Tier 1) level, with increasing divergence at targeted and intensive levels. The findings corroborate existing literature on student and professional views that emphasizes the centrality of belonging and relationships in promoting school attendance (Corcoran and Kelly, 2023; Enderle et al., 2024; Hejl et al., 2024), particularly for students experiencing emotional difficulties (Chian et al.,

2024; Halligan and Cryer, 2022). Subtle differences in how support is conceptualized and enacted likely stem from variations in roles, resources, and lived experiences within the school context. Notably, the two groups use distinct forms of language: students tend to describe supports in less explicit, experience-based terms, while professionals rely on more conceptual language informed by training, professional knowledge, and theoretical frameworks. Special educators and social workers refer to customized interventions and high-quality teaching paired with emotional support, reflecting their commitment to vulnerable student populations. Both groups nonetheless show signs of perspective-taking: students reflect on systemic limitations or gaps. Teacher professionals view themselves not merely as instructors but as supportive partners in students' learning process and lives. This focus can be interpreted as a reflection of compassion and relational awareness that are critical preconditions for creating emotional safety and trust-based relationships in school settings (O'Toole and Aëriæ, 2024).

The findings extend previous research by showing that professionals and students in this study conceptualize SAPs, particularly non-attendance related to SEBD, as complex challenges that require supportive and adaptive responses rather than corrective practices. This perspective reinforces the relevance of the MTSS framework as holistic, flexible structure, in which strengths-based, relational practices can be embedded to accommodate diverse student needs, while promoting wellbeing, engagement, and enjoyable learning experiences across all tiers. Despite some differences in perspective, both groups underscore the importance of shared responsibility and strengthened collaboration across systems. This perspective reinforces the need for a coordinated school-based care model, in which responsibility is not outsourced to external agencies but embedded within the school through readily accessible ("easy-to-reach"), multi-professional support structures. Such an approach aligns with research highlighting the critical role of interagency collaboration, team-oriented strategies, and resource allocation within a whole-school framework (Dennis, 2020; Finning et al., 2018; Hejl et al., 2024; Melander et al., 2022; Nuttall and Woods, 2013; O'Toole and Aëriæ, 2024).

Unlike previous studies, this study draws explicit connections between the practices described by school-based stakeholders and the MD-MTSS framework, using it as a guiding structure to organize and interpret findings. A key contribution of this study is the equal positioning of students and school-based professionals as informants and agents of change (Gillett-Swan and Baroutsis, 2024). Rather than treating professional and student perspectives in isolation, the study integrates these viewpoints to highlight areas of overlap and divergence. On the one hand, the equal consideration of multiple viewpoints holds the potential to inform more collaborative and balanced actions toward effective, holistic multi-tiered approaches to school attendance. On the other hand, contrasting perspectives help uncover potential disconnects that may explain ineffective practices (Eklund et al., 2022). Bridging these insights provides a pathway to re-evaluate dominant approaches to school attendance and validate the effectiveness of school-based interventions (Boaler and Bond, 2023) informed by students' lived experiences, professional views, and the realities of implemented practices.

7.3 Implications for practice and policy

A recurring challenge in educational research and implementation is determining how integrated frameworks such as the MD-MTSS can be effectively incorporated into everyday school practice (Kearney and Graczyk, 2020). The current study offers practical insights into how school- and classroom-based support can look like within the MTSS structure when informed by the lived experiences of students and the school-based professionals working with them. Rather than proposing one-size-fits-all solutions, the findings encourage reflection on positive conditions for school attendance and adaptable practice elements that align with evidence-based strategies or programs (Farmer et al., 2021).

The overlap between professionals' attitude and students' emphasis on school-based universal practices underscores the value of models that center positive, meaningful relationships as a foundation for "attendance, engagement and wellbeing at all levels of intervention" (Boaler and Bond, 2023, p. 450). Some of the identified support strategies and elements within the MTSS structure can be delivered in evidence-based systemic approaches, for example, Positive Behavior Supports, school climate and bullying prevention programs, or trauma-informed practices (Johnson et al., 2025; Stratford et al., 2020). At the universal level, high-quality instruction and classroom management are required to strengthen positive conditions for engagement (e.g., Angus and Nelson, 2021; Leidig and Hennemann, 2023; Ricking, 2023; Simonsen et al., 2008) in addition to flexible arrangements, choice making opportunities or differentiated instruction (e.g., Lane et al., 2015; McLeskey et al., 2019; Melvin et al., 2025). An impactful form of peer-to-peer support can be found in mentoring programs, such as Check and Connect (Guryan et al., 2021; Heppen et al., 2018). Practices described by professionals, such as reflection activities, may help cultivate students' sense of self-efficacy and self-awareness, both of which are essential skills for wellbeing (Schnell et al., 2025). Strategies at targeted and intensive levels support the potential effectiveness of school-based support teams [e.g., school counseling and social work (Boaler and Bond, 2023)], multi-disciplinary, individualized psychosocial interventions [e.g., CBT and mental health services (Johnsen et al., 2021; Pérez-Marco et al., 2025; Pina et al., 2009)], and family-school partnerships (e.g., Lindstrom Johnson et al., 2024; Smith et al., 2020). Likewise, elements from the PL format and alternative education programs, linked to personalized re-entry plans (Brouwer-Borghuis et al., 2019) and work-based or occupational learning, can increase students' autonomy and support their self-efficacy upon return. These practices could be meaningfully adapted within mainstream settings to benefit all students at the universal level.

Importantly, students voiced a strong desire to be involved in decision-making processes affecting their education. This reflects a profound sense of agency and willingness to make choices that calls for the development of more participatory, rights-based intervention models as central component of democratic processes in school (Kenner and Lange, 2019) where students are not merely passive recipients and feedback providers but active contributors to the design and evaluation of attendance-related supports. Given that professionals in this study did not explicitly reference student participation, this presents a clear opportunity for system-level improvement.

The professionals' attitudes in recognizing risks early and maintaining a student-centered lens represents a strengths-based mindset that should be improved. It likely influences the classroom atmosphere and a positive, relational approach where professionals respond authentically to students' needs for recognition (Jennings and Greenberg, 2009). This relational approach is mirrored by how students in this study valued balanced adult responses that encourage their re-engagement without pressure, while also signaling that their presence matters and that they are not being left to withdraw entirely (Hejl et al., 2024). This type of curious, committed encounter can, for example, be complemented with positive greetings at the door (e.g., Cook et al., 2018). While teacher professionals' views often seem to center on instruction delivery (Dennis, 2020; Hejl et al., 2024), the findings reinforce the need to embed relational and social-emotional learning practices as part of universal teaching, not just within targeted interventions. Conceptually, this can be done through a school-wide approach to social and emotional learning (SEL) as foundation for mental health, academic achievement, and attendance. The mapped *support strategies and elements* represent indicators and opportunities for improvement, such as SEL integrated with instruction and curriculum, a caring classroom environment, authentic family partnerships, enhancing social-emotional competence of adults, youth voice, systems for continuous improvement, etc. (e.g., Bear et al., 2015; Jennings and Greenberg, 2009; Leidig and Hennemann, 2023; Mahoney et al., 2021).

Moreover, the student and professional group in this study point to the importance of early identification and follow-up procedures. In the German context, this aligns with calls for comprehensive monitoring systems to address SAPs (Sälzer et al., 2024). Such systems can be improved to function as holistic – multi-dimensional and context-sensitive – early warning tools by incorporating emotional, academic, and behavioral indicators alongside attendance data. Integrating this kind of nuanced data allows for timely and suitable responses while aligning well with the MD-MTSS framework (Graczyk and Kearney, 2023) and the multifaceted types and manifestations of SAPs (see Figure 1).

Finally, the present study highlights the importance of (re)designing school-based interventions that address diverse domains of students needs by integrating mental health/SEL, academic, and behavioral supports, and flexible structural adjustments into everyday school practice. To further individualize interventions that support diverse learners experiencing SEBD, a shift toward adaptive intervention delivery may be useful, where supports are responsive to cultural, developmental, and ecological factors as outlined in Tiered Systems of Adaptive Supports (Farmer, 2020; Farmer et al., 2021). From a policy perspective, this calls for moving away from isolated, legal or reactive measures (Heyne, 2025) toward integrated, strength-based, proactive school-wide support systems that create the conditions necessary for improving students' learning, wellbeing, and ability to attend. The MD-MTSS framework represents a key lever in such an approach by matching preventive measures and interventions with both students' context-specific needs and the capacities of professionals, schools and their surrounding support networks. The current study exemplifies how schools can develop such context-specific frameworks

7.4 Limitations and implications for future research

Several limitations must be acknowledged when interpreting the findings of this study. First, the interviews were conducted by researchers with a background in special education, which may have introduced bias both in data collection and analysis. Researchers may have been more attuned to identifying student difficulties or drawn toward confirming pre-existing expectations. Similarly, the professional background of the interviewers may have influenced adult participants, who might have been inclined to present their programs and school environments in a particularly positive light.

The sample size was limited, with a relatively small number of student participants and focus groups conducted within specific school contexts, which restricts the generalizability of the findings. Moreover, there was a homogeneity within the focus groups – primarily teaching professionals, with few representatives from social work – potentially narrowing the range of perspectives represented. Students from the special education center have not participated, resulting in a more one-sided view. Furthermore, a gender imbalance was also present, with a higher proportion of male students and female professionals, which may have influenced the dynamics and insights gathered.

Contextual factors should also be considered: while the study included both rural and urban schools, differences in local structures and financial resources may have influenced the support options available and been reflected in the reported practices. Despite these limitations, the findings offer valuable insights into school-based practices that warrant further exploration. Future research should aim for broader representation, including younger students, and potentially parents' perspectives. Expanding the scope to incorporate data on academic outcomes and systematically compare school contexts could also deepen the understanding of effective support strategies. In case studies or implementation research, stakeholder views can be further translated into actionable leverage points across tiers in different contexts (Peeters et al., 2025).

Finally, the findings must be viewed in the context of the Saxon education system, which is characterized by a strong focus on differentiation and structured educational pathways. The relevance attributed to certain strategies (e.g., specialized and smaller settings) may reflect the professionals' and students' experiences with a segregated school structure. In systems that are more inclusive, perceptions and support needs might vary, calling for further comparative research on the role of the education system (Keppens and Spruyt, 2018).

8 Conclusion

The aim of the study was to investigate what students experiencing school attendance problems (SAPs) and school-based professionals perceive as effective supports for the prevention and intervention of SAPs related to social, emotional, and behavioral difficulties (SEBD). The study focused on mapping commonalities and differences in the identified support strategies and elements across the levels of the MD-MTSS

framework. The findings show that trust-based relationships, coordinated school-based care, flexible learning pathways, and clear communication were central support strategies identified by both groups. Notable differences emerged at the level of intensive interventions: while professionals reported legal measures to address severe SAPs, students called for more responsive learning environments with reduced academic pressure, emotional support, and active involvement in designing their own integration. This is meaningfully illustrated by one student's reflection: *"I never felt like doing anything in class, but my teacher just saw that I had potential."* These relationships are not just supportive: they are enabling; often starting with adults who notice, value, and invest in students' hidden strengths to help them (re-)connect with education.

By applying a multi-perspective approach, the study highlights the richness gained when students' lived experiences and professionals' insights are brought together. The active participation of students in research affirms their expertise and enables them to proactively engage with the subject of school attendance and meaningfully contribute to practice and policy design. Recognizing students' voices as equally important to those of adults challenges traditional hierarchies and reinforces the need for inclusive, collaborative approaches in systematic attendance support. In consequence of this, the findings underline the value of combining aspects of interventions across academic, behavioral, social-emotional domains, as well as systems-of-care into adaptive, multi-tiered approaches for school attendance (Farmer et al., 2021) to not only address SEBD, but also the diverse forms, types, and underlying ecological factors of SAPs.

The study demonstrates that integrating professional and student perspectives can uncover shared drivers of attendance, illuminate areas of divergence, and offer pathways for developing more inclusive and effective support structures – a crucial step toward enabling schools "weave a rich tapestry of support" (Heyne, 2024, p. 9).

Data availability statement

The datasets presented in this article are not readily available due to the inclusion of highly personal statements about schools and individuals, which could allow for the identification of the respondents. Requests to access the datasets should be directed to chiara.enderle@uni-leipzig.de.

Ethics statement

The studies involving humans were approved by Swedish Ethical Review Authority (Dnr 2020-05441) and the Saxony State Office for School and Education (Landesamt für Schule und Bildung, LaSuB) on 17 October 2023 (R15-6490t6t220-20231135214). The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin. Written informed consent was obtained from the individual(s), and minor(s)' legal

guardian/next of kin, for the publication of any potentially identifiable images or data included in this article.

Author contributions

CE: Conceptualization, Data curation, Formal Analysis, Investigation, Methodology, Visualization, Writing – original draft, Writing – review & editing. LK: Conceptualization, Data curation, Formal Analysis, Investigation, Software, Visualization, Writing – review & editing. HR: Project administration, Resources, Supervision, Writing – review & editing. SK-S: Conceptualization, Funding acquisition, Resources, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The author(s) declare that Generative AI was used in the creation of this manuscript. During the preparation of this work, the authors used ChatGPT (Version 4o, Write for Me: <https://chatgpt.com/g/g-B3hgivKK9-write-for-me>) and DeepL Write to improve readability, grammar, and language quality. The authors reviewed and edited the content after using these tools and take full responsibility for the final content of the publication.

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2025.1627098/full#supplementary-material>

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EDITED BY

Trude Havik,
University of Stavanger, Norway

REVIEWED BY

Barbara Remberk,
Institute of Psychiatry and Neurology (IPiN),
Poland
Sümeyye Ulaş,
Erzurum Technical University, Türkiye

*CORRESPONDENCE

Amanda Krause
✉ akrau101@uottawa.ca

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A longitudinal investigation of school absenteeism and mental health challenges among Canadian children and youth in the COVID-19 context

Amanda Krause^{1*}, Maria Rogers², Yuanyuan Jiang³,
Emma A. Climie⁴, Penny Corkum⁵, Janet W. T. Mah⁶,
Natasha McBrearty⁷, J. David Smith⁷ and Jess Whitley⁷

¹School of Psychology, Faculty of Social Sciences, University of Ottawa, Ottawa, ON, Canada,

²Psychology Department, Faculty of Social Sciences, Carleton University, Ottawa, ON, Canada, ³School of Counselling, Psychotherapy, and Spirituality, Saint Paul University, Ottawa, ON, Canada, ⁴School and Applied Child Psychology, Werklund School of Education, University of Calgary, Calgary, AB, Canada,

⁵Department of Psychology and Neuroscience, Faculty of Science, Dalhousie University, Halifax, NS, Canada, ⁶Department of Psychiatry, Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada, ⁷Faculty of Education, University of Ottawa, Ottawa, ON, Canada

School absenteeism across the globe has risen dramatically since the COVID-19 pandemic. Literature indicates that children and youth of all ages are struggling to attend school regularly, leading to problematic outcomes both concurrently and across time. As well, research demonstrates that children and youth who experience mental health challenges are at greater risk of increased school absenteeism rates. The present study investigated the school attendance patterns of Canadian children and youth and the longitudinal and bidirectional links with mental health challenges within the COVID-19 pandemic context. The study sample consisted of 72 children and youth, using parent reports. Parents were asked to complete an online questionnaire which included questions about the demographic characteristics of themselves and their child, their child's school attendance patterns, and their child's mental health challenges. Preliminary descriptive statistics were run in relation to school absenteeism. Two separate path analyses were conducted to determine the longitudinal links between school absenteeism and mental health (split into externalizing and internalizing behaviours) across two timepoints (Time 1 [T1]: Fall 2022, Time 2 [T2]: Spring 2023). These analyses indicated concurrent links between mental health difficulties and school absenteeism. Importantly, path analyses also showed that absenteeism at T1 predicted poorer mental health at T2, indicating that school absenteeism may be one of the driving factors in the causal relationship. A bidirectional effect was found between externalizing behaviours at T1 and absenteeism rates at T2. The reasons for school absenteeism were examined across each time point and for both the externalizing and internalizing groups separately. The present study highlights the complex interplay between mental health and school absenteeism in the context of the COVID-19 pandemic. It provides avenues for effective intervention to better support children and youth struggling with mental health and school absenteeism.

KEYWORDS

school absenteeism, externalizing mental health problems, internalizing mental health problems, child and adolescent, longitudinal

Introduction

School absenteeism data since the COVID-19 pandemic is telling a compelling and concerning story—school absences, for students of all ages, have increased and have not returned to pre-pandemic levels (1–3). Some experts on the topic have warned against the normalization of school absenteeism since the pandemic (4, 5), describing a possible shift in cultural values around school attendance and education. This shift is concerning given the many known and well-documented links between school absenteeism and concurrent and longitudinal negative outcomes (6, 7). Concern about school absenteeism is a trend that has been observed globally. Indeed, high-quality data has been published from the United States (8) and the United Kingdom (3) regarding this pattern. Such data substantiates the many stories voiced by children, parents, and school staff: that more children are missing school more often than before the onset of the pandemic. A growing body of literature has identified mental health as a key factor within the school absenteeism discussion. These studies indicate that mental health challenges, generally, increase the likelihood of greater school absences for a child [e.g., (9)]. Additionally, there is now strong research evidence that demonstrates a clear link between the COVID-19 pandemic and deteriorating mental health for children and youth (10). While there is strong evidence that links mental health challenges with poorer school attendance concurrently, there is still little known about the association over time.

To address this gap in the literature, the present study provides clarity regarding the link between school absenteeism and mental health of students from kindergarten to Grade 12. In line with the transdiagnostic model of mental disorders (11), mental health will be categorized into externalizing and internalizing problems to reflect broader categories of challenges. The present study uses data from two separate timepoints to determine the longitudinal associations between mental health and school attendance patterns across a single school year in a sample of Canadian children and youth. T1 took place in Fall 2022, when students had returned to regular in-person schooling and T2 was in Spring 2023, when the COVID-19 pandemic was ending globally.

Problematic absenteeism

Despite decades of literature investigating the frequency and types of school absenteeism experienced by students, there remains little to no consensus on what exactly constitutes problematic absenteeism. Problematic school absenteeism has proven difficult to define given the complexity and heterogeneity of its risk factors and presentation (12). Heyne et al. (13) summarise the literature on school attendance problems, describing the various ways it has historically been defined, including dichotomies, such as legitimate vs. illegitimate, and excused vs. unexcused absences. Such conceptualizations have been criticized and described as unrepresentative of students' experiences of school absenteeism (12, 14), failing to capture the

nuance of why a student may not be present at school. Indeed, many instances of absenteeism are not so simple to dichotomize into one of the two groups. Consider a child who is sick with a flu, but their parent does not have the capacity (e.g., working full-time) to acquire a doctor's note or call the school to excuse their absence. That child's absence will now be marked as unexcused by the school when in reality, it may be better conceptualized as an excused absence. This example illustrates the complexity of the problematic absenteeism issue and the need to acknowledge social and cultural systems surrounding the child. As well, despite a lack of quality evidence indicating a clear threshold of what constitutes problematic absenteeism, most countries and educational systems are adopting the benchmark of 10% of days missed or 18–19 days missed in the entire school year as constituting problematic (chronic or habitual) absenteeism [(15, 16); Ontario Educational Ministry]; the present study will also adopt this benchmark.

Beyond frequency of school days missed, reasons for days missed from school are also considered within a problematic absenteeism definition. One method of conceptualizing problematic school absenteeism is categorical. Heyne et al. (13) suggest problematic absenteeism can be categorized as *school refusal* (i.e., student refuses school and/or experiences distress while at school, parents are aware of absence and make attempts to bring their child to school), *truancy* (i.e., student absent from school without permission or parent knowledge), *school withdrawal* (i.e., student absent from school with parent knowledge and efforts to keep them home), and *school exclusion* (i.e., the school has unintentionally or intentionally reinforced or prompted absence from school). If an absence falls within one of these four categories, it is considered problematic. Unproblematic school absences are defined as being authorized/permissible [e.g., due to an appointment, being sick, weather-related (17)]. There is research that supports the categorization of problematic absenteeism in this way (13, 18, 19). However, it is worth noting that recent research has shown that any absence, whether labeled as problematic or not, can lead to poor outcomes later on in several domains [e.g., academic, cognitive, socioemotional (20)], including future absences (21, 22). As a result, the total amount of school absenteeism, regardless of its justification, is an important variable when considering student outcomes in various domains.

Mental health and absenteeism

While absenteeism is a concern for all students, there is a particular worry for students who experience mental health challenges. A growing body of literature indicates that students who experience mental health and/or neurodevelopmental challenges (e.g., depression, anxiety, Attention-Deficit/Hyperactivity Disorder; ADHD) are at greater risk of missing school more frequently [e.g., (9, 23, 24)]. In a large-scale meta-analysis that included a total of 42 studies ($N=243\ 296$ students) examining the link between school absenteeism and its risks, researchers found several mental health factors that were significantly associated with absenteeism

rates [e.g., internalizing problems, psychiatric symptoms/disorders, depression, anxiety, and risky behaviour (25)].

Many diagnostic and conceptual labels can be given to a child or youth experiencing mental health concerns (e.g., anxious, depressed, conduct problems). As a way to simplify conceptualizations of mental health concerns, researchers and clinicians alike have proposed a transdiagnostic model of mental health that categorizes mental health concerns/symptoms into two broader clusters; that of externalizing concerns and of internalizing concerns (26). The model posits that categorical Diagnostic Statistical Manual – 5th Edition (DSM-5) diagnoses share common core elements that are often stable across time and promote a more comprehensive understanding of an individual's mental health profile (26). For example, both depressive and anxiety disorders share common symptoms: social withdrawal, nervousness, somatization, self-criticism. In this way, the transdiagnostic model considers mental health challenges more broadly and is not limited to labels that only capture some of the presenting symptoms. There is evidence to support that such a conceptualization of mental health can offer utility in understanding child and youth functioning and later outcomes (27, 28).

Recent attendance literature has adopted this transdiagnostic model of mental health in their analysis of school absenteeism. Rogers et al. (29) analyzed school absenteeism in relation to both internalizing and externalizing symptoms and found significant but differential associations with each—highlighting the importance of individually analyzing absenteeism across these two continuums. Specifically, Rogers et al. (29) found that the association between internalizing behaviours and absenteeism was strengthened as children aged and as internalizing symptoms grew in intensity, while externalizing behaviours were found to be most strongly associated with school absenteeism for younger children with low to moderate levels of externalizing behaviours. Other studies in educational psychology have adopted this transdiagnostic conceptualization of mental health challenges. Abry et al. (30) analyzed the association between mental health concerns (e.g., categorized as internalizing or externalizing) and classroom level adversity (including absence rates) and found substantial and differential effects between these two groups of students. Specifically, classroom level adversity was significantly related to externalizing behaviour for all students, whereas classroom level adversity was related to internalizing behaviours only for girls. Given its descriptive utility, the present study also describes mental health concerns using the transdiagnostic model. Importantly, there is minimal longitudinal research on child mental health and school absenteeism. The present study seeks to fill this gap by examining the intersection of these two variables across time to determine their bidirectional or causal ordering.

COVID-19 and child mental health

It is essential to situate the conversation of school attendance and especially child and youth mental health within the COVID-19 pandemic context. A recent large scale systematic review summarizing literature across five continents, indicated

increased reports of anxiety, depression, and other mental health related challenges as a result of the COVID-19 lockdowns (31). Children and youth with pre-existing mental health challenges were more likely to experience an exacerbation of these challenges. As well, children and youth with previous mental health difficulties were more likely to experience a reoccurrence of their challenges.

New data published in Canada outlines the negative impacts of the COVID-19 pandemic for Canadian children and youth's mental health. For example, one study investigated outpatient mental health visits of children and youth in the 18 months following the onset of the pandemic. The study results indicated a 22% increase in new mental health visits, and a 10% increase in mental health visits of those already seeking care (32). Additionally, the Canadian Institute for Health Information (CIHI) reported that surveys amongst Canadian children and youth indicated a 20% decline in reports of good mental health and that Kids Help Phone reported double the number of interactions during the pandemic in 2020, compared to pre-pandemic in 2019 (33). Recent Statistics Canada data further bolsters concerns regarding Canadian children and youth's mental health with data showing that approximately 1 in 5 children and youth who reported good mental health prior to the pandemic no longer felt their mental health was good in 2023 (34). Taking both Canadian and international studies together, there are strong indications that child and youth mental health has declined since the onset of the COVID-19 pandemic. Such studies further highlight the need to longitudinally examine school absenteeism patterns for children struggling with mental health challenges given what is known about the concurrent links between mental health and school attendance problems and the widespread negative impacts of the pandemic on child and youth wellbeing.

Current study

While other countries have mechanisms in place to systematically collect school attendance data (e.g., United States, UK), such data does not exist on a national level in Canada. Educational decisions are made provincially/territorially in Canada, which further complicates efforts for a unified approach to data collection. Pockets of Canadian school absenteeism data can be located but it is fractured. A recent CBC investigative article compiled attendance and absenteeism data from 41 Canadian school districts (1). Complete data was received from eight districts, two provinces, and two territories (the last through publicly available data). Twenty school districts were unable to provide data. Of the available data, estimates indicated significant increases in chronic absenteeism during and post pandemic. In some districts, approximately 50% of the students were considered chronically absent. The present study investigates school absenteeism among Canadian children and youth by assessing longitudinal data. Specifically, the current study examines school absenteeism across time, and how mental health challenges intersect with student absenteeism from Fall

2022 (as students returned to regular in-person schooling) to Spring 2023 (as COVID-19 pandemic was ending, globally). The research questions are:

1. Overall, how much school are children and youth missing? What are the most common reasons for absenteeism?
2. What is the magnitude and direction of the longitudinal links between mental health challenges (i.e., dichotomized as externalizing and internalizing) and problematic absenteeism?
3. What are the differences and similarities regarding the reasons for school absenteeism between students with externalizing mental health challenges and internalizing mental health challenges?

Given the lack of Canadian data available regarding the frequency and reasons for school absenteeism, the first research question is explorative in nature. Longitudinally, we expect that the links between mental health challenges, both externalizing and internalizing, and school absenteeism will be positive and bidirectional (i.e., a reciprocal loop between mental health difficulties and problematic absenteeism). Medium effect sizes are anticipated given that literature has documented effects ranging from small to large (23, 24). It is expected that the patterns linked to specific mental health concerns and type of absenteeism (e.g., students with elevated internalizing symptoms report greater frequency of school refusal as reason for school absence) will emerge.

Methods

Participants

The sample included a total of 72 children and youth (mean age = 12.28, $SD = 3.1$) for both timepoints of data. Age data was missing for 3 participants. Gender was evenly split between boys and girls. The youngest child represented in the data was just over 5 years at the time of parent reporting, while the oldest adolescent was 17 years. All grade levels were represented in the sample from kindergarten to Grade 12, with the greatest number of students in Grade 7. See Table 1 for a breakdown of all demographic information of the study sample.

Procedure

Ethics approval was received at the universities of the principal investigators (M.R. & Y.J.). The study data is taken from a larger research initiative querying the experiences of parents during and in the aftermath of the COVID-19 pandemic. Recruitment occurred through online recruitment tools and included online advertising through a variety of professional platforms including the Canadian ADHD Resource Alliance (CADDRA), and the Centre for ADHD Awareness (CADDAC). The psychology labs of the collaborating co-investigators also advertised amongst their child and family participant lists. The data for this study spans one academic year across two separate timepoints: Fall 2022 and Spring 2023. Parents who expressed interest in their continued

participation from an initial timepoint were included in the present study.

Parents provided information about their child. Parents of children and youth were included if their child was reported to be in grades K-12, resided in Canada, and parent/guardian(s) were proficient in English and able to complete the survey in English. Parents were asked to report on the same child for each timepoint.

The survey was administered to parents via the Qualtrics online platform. Interested parents were asked to provide consent before proceeding to the survey, and were asked at the end of the survey to provide their consent for compensation. They were also asked if they wished to be contacted again for future timepoints/studies. Relevant to the present study, parents were asked to complete questionnaires that gathered demographic information, as well as details about their child's school attendance and mental health. The survey took approximately 30–45 min. Parents were asked to complete several other measures as part of the larger questionnaire, but these are outside the scope of the current work.

Measures

Demographics

Parents were asked to answer several questions about their own demographic characteristics, as well as those of their child who they were reporting on. Included in the present study analysis are: child age, school grade of the child, gender identity of the child, race/ethnicity of the child, geographic region of the family, annual household income, highest level of education in the household, and the number of hours per week worked of the reporting parent.

Frequency and type of absenteeism

To determine the frequency of school days missed and the reasons for school absenteeism, parents completed a modified version of the School Non-Attendance CheckList [SNACK (13)]. Relevant to the present study, the questionnaire was modified to reduce the timeframe in which parents were asked to estimate their child's number of absences (from 4-weeks to 2-weeks) to improve reliability of parental responses. As well, additional reasons for school absenteeism were added in order to better capture the heterogeneous reasons that explain a child's absence from school. Additional reasons included: "My child attends school on a part-time or modified basis", "I let my child stay home because I like having them around", "I decided to keep my child home because I feel as though the school is not meeting my child's needs", "I kept my child at home because I no longer have the energy to get them to school", "My child stayed home for COVID-related reasons", "My child attends appointments to support their mental health", "My child did not feel welcome at school due to racial and/or identity discrimination", "My child stayed home for menstruation related reasons", and "My child missed school because of sleep related challenges". These changes were made with permission from the original author of the

TABLE 1 Demographic characteristics and mean absenteeism rates at T1 and T2.

Demographic grouping	Proportion at T1 (%)	Mean absenteeism rate in days (T1)	Mean absenteeism rate in days (T2)
Gender			
Boy	51.4	2.3	1.7
Girl	48.6	2.6	2.2
Race/Ethnicity			
White/Caucasian	86.1	2.4	2.0
Black	1.4	0.0	.5
Indigenous	12.5	2.6	2.1
Geographic Region			
British Columbia	25.0	2.5	2.3
Alberta	15.3	2.1	1.5
Saskatchewan	1.4	0.0	0.5
Manitoba	6.9	3.4	2.0
Ontario	36.1	2.5	1.9
Quebec	5.6	1.8	1.5
New Brunswick	1.4	4.0	0.0
Nova Scotia	2.8	1.5	2.0
Newfoundland and Labrador	1.4	3.0	2.0
Northwest Territories	2.8	3.0	2.5
Nunavut	1.4	2.0	4.0
Annual Household Income			
\$6,999 or less - \$32,999	5.6	2.8	2.8
\$33,000 - \$52,999	19.4	2.5	2.5
\$53,000 - \$105,999	59.7	2.6	2.1
\$106,000 - \$264,999	6.9	0.6	0.1
\$265,000 or more	6.9	2.6	0.6
Highest Education Level			
High school or GED	–	–	–
Some college	8.3	1.8	2.2
College diploma	20.8	2.5	1.9
Bachelor's degree	48.6	2.9	2.0
Some graduate work	4.2	2.2	2.0
Master's degree	15.3	1.8	2.0
Doctoral degree	1.4	0.0	0.0
Number of Hours Worked			
0–5 h	–	–	–
6–20 h	1.4	1.0	2.0
21–39 h	70.8	2.6	2.2
40 h or more	27.8	2.1	1.4

The mean absenteeism rate in days at each timepoint reflects the 2-week time periods in which the parents reported on.

measure and through consultation with experts in the field of child and youth mental health and wellbeing.

Parents were asked to report any absences that had occurred in the past two weeks and to identify the reasons why their child was absent from school on those days. Parents could select as many reasons from a list that apply to explain their child's school absence(s), since one absence may be explained by multiple reasons (e.g., child was reluctant and parent no longer had the energy to get them to school). Parents could also write their own reason if the reason for their child's absence was not represented in the provided list. In this way, the modified SNACK allows for systematic categorization of each absence into one of five categories: school refusal, truancy, school withdrawal, school exclusion, or non-problematic (e.g., absences that are excused, such as extreme weather conditions). The SNACK was chosen since it is one of the only absenteeism measures that assesses for

the four different kinds of problematic absenteeism as well as non-problematic absenteeism, and inquires about the specific number of full and half days missed in the recent past. It is also a brief measure that takes little time to complete, which is important in consideration of the potential lack of time available from parents in the context of the pandemic. Given that the SNACK is count data, there is no psychometric data available in the relevant literature and traditional reliability and validity methods are not possible.

It is worth highlighting that there were minor modifications made to the attendance measure between the two timepoints. Most relevant to the current study is the item from T1 "My child did not feel welcome at school due to racial and/or identity discrimination" was changed to "My child did not feel welcome at school due to discrimination" in T2 to enlarge the definition of discrimination and allow for capturing other types of

discrimination. As well, an additional reason for absenteeism was added in at T2, “My child stayed home due to bullying-related reasons” given interest in understanding absenteeism specific to bullying. These changes were made to reflect feedback from parents and mental health professionals working closely with children, youth, and families.

Child and adolescent symptom inventory (CASI-PM)

The Child and Adolescent Symptom Inventory [CASI-PM (35)] is a 29-item scale that assesses various mental health symptomatology of children and youth aged 3–17 years of age. The scale assesses symptoms related to ADHD, oppositional defiant disorder, conduct disorder, generalized anxiety disorder, social anxiety disorder, separation anxiety, and major depressive disorder. Parents were asked to report the frequency with which their child had engaged in the behaviour described in each item using a 4-point Likert scale; from (0) *never*, (1) *sometimes*, (2) *often*, to (3) *very often*. The internal consistency of the CASI-PM has been found to be very good with a Cronbach's alpha of .92 (35). Additionally, the CASI-PM shows good criterion validity when compared against other similar measures such as the longform of the Child Symptom Inventory (CSI) (35).

For the purposes of this study, the various mental health symptoms assessed via the CASI-PM were divided into two overarching categories of internalizing symptoms and externalizing symptoms, based on the transdiagnostic theory of mental disorders (11, 26, 35, 36). The ADHD (inattention and hyperactivity), oppositional defiant disorder, and conduct disorder subscales (four in total) were summed to create a total externalizing score for each child and youth. In this way, a higher score on the externalizing subscale indicated greater number and severity of externalizing symptoms. The Cronbach's alpha at T1 for the externalizing subscale was good ($\alpha = .84$), indicating strong internal reliability. At T2, the reliability for the externalizing subscale was lower, Cronbach's $\alpha = .68$. Similarly, the generalized anxiety disorder, social anxiety disorder, separation anxiety disorder, and major depressive disorder subscales were summed to create an internalizing score for each child and youth (i.e., higher score indicated greater number and severity of internalizing symptoms). At T1, the internal reliability of this subscale was good, Cronbach's $\alpha = .83$. However, at T2, the internal reliability was lower, Cronbach's $\alpha = .66$.

To assess the school absenteeism reasons for children with elevated internalizing and externalizing behaviours separately, the CASI data was categorized to create two separate groups of children and youth. Using the T1 data, the mean of the externalizing data and the mean of the internalizing data was computed. Children and youth were categorized into the externalizing group if they had an externalizing score above the sample mean in the current study ($n = 38$). Likewise, children and youth were categorized into the internalizing group if they had an internalizing score above the sample mean ($n = 37$). Given this method, there was some overlap amongst children and youth regarding which symptom group they were placed

into in that some children and youth were represented in both the externalizing and internalizing group ($n = 30$).

Data preparation

The study data underwent two rounds of data cleaning to ensure data validity and to remove any bot data. All participant data went through round one filtering when initially recruited. At each subsequent timepoint, participant data was subject to a second round of data cleaning.

In round one data cleaning, data were removed if parents (1) took less than 10 min to complete the survey, (2) were located outside of Canada according to their IP address, and (3) indicated that their child was outside 3–18 years and 11 months old. For round two data cleaning, data were removed if parents violated two or more of the following criteria, (1) duplicate IP address, (2) duplicate email address, (3) having more than a 5-year (± 2) difference between the age and grade of the child being reported on. Additionally, there were a few participants with substantially non-matching dates of birth (>1 year difference). These participant data were checked further and only kept if school grade only differed by $\pm$ one year between timepoints.

Other measures were taken to ensure data validity and to identify bot data such as the collection of IP addresses, a captcha bot screening question, and a question asking parents to select the largest number out of a selection of options.

Data analysis strategy

Analyses were completed using SPSS (v.29) and R (37). Descriptive and frequency analyses were conducted to determine how school attendance behaviour related to various demographic information (e.g., race/ethnicity, gender, age, annual family income). Frequency analyses were also conducted to determine the most common reasons for absenteeism in the study sample. A series of cross-lagged panel analyses were conducted to determine the size and direction of effects between study variables, including the exploration of bidirectional effects. Age and gender were entered into the cross-lagged panel analyses as covariates to control for their effects. Frequency analyses were also run to determine if systematic differences emerged between reasons for absenteeism amongst different sample groups (i.e., externalizing and internalizing behaviours).

Results

Frequency and reasons for absenteeism

Parents in T1 (Fall 2022) reported their children and youth missing a mean of 2.42 days of school ($SD = 1.16$) over the preceding two-week period. In T2 (Spring 2023), the mean number of school days missed was 1.95 ($SD = 1.16$), in the

preceding two-week period. This result indicates that children and youth were missing roughly one day of school per week at each timepoint. Age was correlated with absenteeism rates at T1 ($r = .25, p = .04$) indicating that absenteeism rates increased as student age increased. This association was not found at T2. There was no significant effect of gender. See Table 1 for attendance data in relation to demographic information.

The most common reasons for school absenteeism across the whole sample were assessed. Frequency analyses were conducted for both timepoints separately to determine the reasons for why the sample missed school most often. See Table 2 for the top reasons for each time point.

Path analyses on mental health and school absenteeism rates

Cross-lagged panel analyses were conducted to determine the direction and magnitude of longitudinal links between mental health challenges (dichotomized as externalizing and internalizing behaviours) and rate of absenteeism. Two separate cross-lagged panel analyses were run to assess the individual links for externalizing and internalizing behaviours. To maximize power, all available data was considered in the path analyses and no data was deleted listwise or casewise.

Externalizing challenges and school absenteeism

Externalizing behaviours (two timepoints), and rate of absenteeism (two timepoints) were added into the model. See Figure 1 for model and coefficients. Age and gender were included in the model as covariates and were held at zero. The Comparative Fit Index (CFI) was .88. The Root Mean Square Error of Approximation (RMSEA) was .08 [90% CI: (.00, .17)]. The overall model fit was also evaluated using the Chi-square statistic $\chi^2(9, N = 72) = 13.00, p = .16$. The Standardized Root Mean Square Residual (SRMR) was .08. These fit indices suggest a borderline acceptable fit with values sitting at or just below the acceptable range. The model showed that externalizing behaviours at T1 predicted externalizing behaviours at T2 ($\beta = .28, p = .004$), indicating that higher levels of externalizing behaviours at T1 were linked to higher levels of externalizing

behaviours at T2. Additionally, absenteeism at T1 predicted absenteeism rates at T2 ($\beta = .27, p = .02$). Absenteeism at T1 significantly predicted higher levels of externalizing behaviours at T2 ($\beta = 1.38, p = .02$). The effect size was small to moderate. A bidirectional pathway was identified. Externalizing behaviours at T1 predicted increased rates of absenteeism at T2 ($\beta = .04, p = .03$). This effect size was also small to moderate. Additionally, the model indicated that externalizing behaviours and absenteeism rates at T1 significantly covaried with an estimate of 2.04, $p = .03$, suggesting that absenteeism rates and externalizing behaviours are significantly associated within the same timepoint. Specifically, elevated externalizing behaviours in Fall 2022 were linked to elevated school absences in the same timepoint. This relationship was not found at T2.

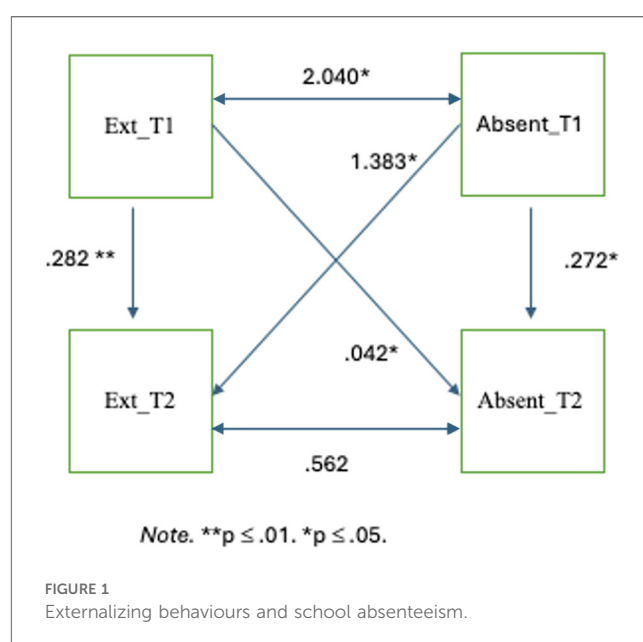
Internalizing challenges and school absenteeism

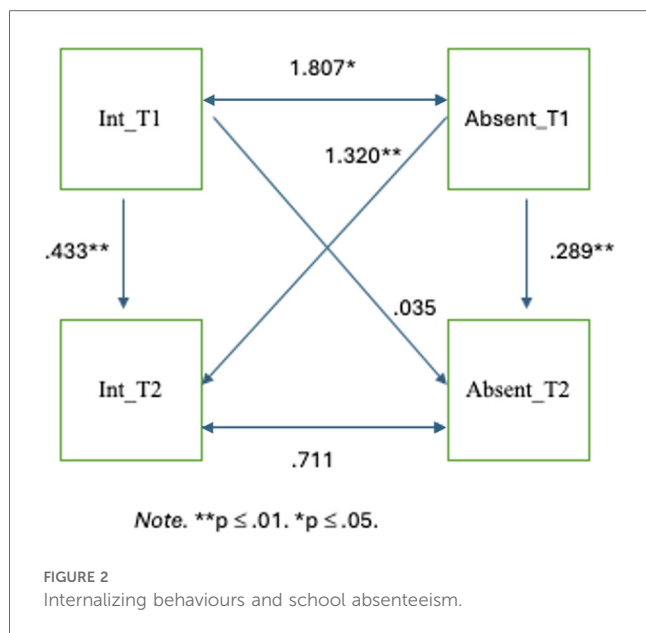
Internalizing behaviours (two timepoints) and rate of absenteeism (two timepoints) were added into the model. See Figure 2 for model and coefficients. As with the externalizing model, age and gender of the child were included as covariates and held at zero. The Comparative Fit Index (CFI) was .88. The Root Mean Square Error of Approximation (RMSEA) was .098 [90% CI: (.00, .18)]. The overall model fit was also evaluated using the Chi-square statistic, $\chi^2(9, N = 72) = 15.20, p = .09$. The SRMR was .097. These model indices indicate a borderline acceptable fit with values sitting just within or outside the acceptable/marginal cutoffs. The model showed that internalizing behaviours at T1 predicted internalizing behaviours at T2 ($\beta = .43, p = .001$). That is, higher levels of internalizing behaviours at T1 were predictive of higher levels of internalizing behaviours at T2. The model also showed that absenteeism rates at T1 were significantly predictive of absenteeism rates at T2 ($\beta = .29, p = .01$). Additionally, the model indicated that absenteeism rates at T1 significantly predicted internalizing behaviours at T2 ($\beta = 1.32, p = .003$) indicating that

TABLE 2 Most common absenteeism reasons across timepoints.

Reasons for absenteeism	N	Percentage of sample (%)
T1		
COVID-related reasons	45	62.5
Skipped/truanted	43	59.7
Reluctant/avoided	37	51.4
Parent no longer has the energy	34	47.2
T2		
Reluctant/avoided	44	61.1
Skipped/truanted	28	38.9
Non-COVID related illness	26	36.1
Parent gave child the day off	22	30.6

N = 72 for both timepoints.





higher levels of school absenteeism in Fall 2022 predicted greater internalizing challenges in Spring 2023. This effect was small to moderate. No significant pathway was found between internalizing behaviours at T1 and absenteeism rates at T2. It is worth noting that absenteeism rates and internalizing behaviours at T1 covaried significantly with a covariance of 1.81, $p = .02$, indicating that absenteeism rates and internalizing behaviours are significantly associated within the same timepoint. This relationship was not found at T2.

Most common absenteeism reasons for children with externalizing and internalizing problems

Frequency analyses were conducted to determine the most common reasons for missing school for students with elevated externalizing and internalizing problems at T1. See Table 3 for a summary of the four most common reasons for each mental health group.

Discussion

The present study sought to provide a better understanding of the link between school absenteeism and mental health challenges within a sample of Canadian children and youth. This is the only study, to our knowledge, that examines the links between mental health and school absenteeism from a longitudinal, bidirectional lens using a Canadian sample. This study uses data collected within the COVID-19 pandemic context. The results provide important information regarding the links between mental health and school absenteeism that can inform interventions.

Students in our sample missed approximately one day of school per week over the two-week time periods. This estimate represents

TABLE 3 Most common absenteeism reasons for children exhibiting externalizing and internalizing behaviours at T1.

Reasons for absenteeism	N	Percentage of sub-sample (%)
Externalizing		
For COVID-related reasons	27	71.1%
Skipped/truanted	26	68.4%
Parent no longer has the energy	18	47.4%
Reluctant or avoided	18	47.4%
Internalizing		
Skipped/truanted	23	62.2%
For COVID-related reasons	22	59.5%
Reluctant or avoided	15	40.5%
Parent no longer has the energy	15	40.5%

There were 38 children in the externalizing group analysis and 37 children in the internalizing analysis.

just one point in time and it is unknown what attendance patterns existed throughout the school year between T1 (Fall 2022) and T2 (Spring 2023). However, if we extrapolate these four weeks of attendance data to the entirety of the school year, then on average, the children within our sample would have missed a total of 37 days, which would fall well above the problematic absenteeism cutoff of 18–19 days [(15, 16); Ontario Educational Ministry]. While speculative, this frequency of school absenteeism demonstrates how quickly school absences can add up and that reaching the 18–19 day benchmark that is considered “problematic absenteeism” is not difficult. This finding may also speak to the impact of the COVID-19 pandemic in elevating absenteeism rates for students relative to pre-pandemic estimates, which aligns with previous literature examining the link between COVID-19 and school absenteeism (2). Of note, the most common reason for absences at the first timepoint, when children returned to regular in-person schooling, was for COVID-related reasons. Importantly, from a Canadian schooling perspective, the two timepoints were chosen to reflect general education time periods for students of all ages. Data collection began after one to two months of school to allow for a transitional period of starting a new school year. Data collection at the end of the school year was completed before the last month of school, which is typically more flexible and less structured than previous months (e.g., field trips, school wide activities). Additionally, these time periods are not impacted by exam periods for secondary school students, which occur in January and June country wide. As such, data collection time periods were chosen to capture, as much as possible, the typical school year for students of all ages, without the possible confounding impacts of more or less demanding periods of time that could impact students’ attendance patterns or mental health challenges.

Results also showed mixed findings regarding the links between absenteeism rates and age and gender. Age was significantly and positively correlated with absenteeism rates at T1 but this association was not found in T2. There was no significant effect of gender. Literature on the association between gender and school absenteeism is mixed with some research indicating gender differences exist [i.e., boys more likely to attend school regularly

(38)], and others indicating no gender differences (39). As with gender, the literature on age and absenteeism is also mixed. Meta-analytic findings have suggested that rates of absenteeism increase as students age (25). However, other research supports the notion that absenteeism rates are stable throughout the schooling years (21), suggesting that early rates of absenteeism can predict future rates of absenteeism. Our study findings reflect the variability of these associations found in the absenteeism literature.

Externalizing and internalizing symptoms and school absenteeism

We examined the direction and magnitude of the longitudinal links between mental health challenges (i.e., externalizing and internalizing behaviours separately) and absenteeism rates at two separate time points. Both models had a borderline acceptable fit with the study data, with fit indices falling within or just outside of the acceptable/marginal cutoffs. As such, interpretation of the model pathways was made with caution and in the context of theoretical considerations.

First, both externalizing and internalizing behaviours were stable across timepoints, with positive and medium effect sizes (.28 and .43 respectively). That is, children who exhibited either or both externalizing and internalizing behaviours at the start of the school year were likely to continue to experience these challenges at the end of the school year. This consistency is expected given the short duration of time between the two timepoints, indicating symptom stability within this timeframe. Previous studies that have assessed the trajectory of externalizing and internalizing behaviours across childhood and adolescence have found that symptomology often changes across time (40); however, such studies have timepoints that are multiple years apart, rather than months.

Second, externalizing and internalizing behaviours shared a small to moderate association with school absenteeism within timepoints. Only links at T1 were statistically significant for both externalizing and internalizing behaviours. These results illustrate that both externalizing and internalizing challenges are concurrently linked with higher rates of school absenteeism, corroborating a growing body of literature that there are meaningful associations between ongoing mental health concerns and school attendance (9, 29). It appears that regardless of the mental health challenge (e.g., anxiety, depression, conduct, impulsivity-related difficulties), these problems are strongly linked to simultaneous poor school attendance. This evidence indicates the importance of generally addressing school attendance problems in students who are experiencing mental health challenges. Identification of such students may be an important avenue for earlier prevention of school attendance problems later on.

Longitudinal findings

Perhaps the most notable findings of the present study are the longitudinal associations. In both models, absenteeism rates at T1 were predictive of externalizing and internalizing behaviours at

T2. One significant bidirectional association was found whereby a significant causal link was identified between externalizing behaviours at T1 and absenteeism rates at T2, suggesting a positive reciprocal loop between externalizing behaviours and absenteeism rates, as hypothesized. However, no significant bidirectional pathway was found in the internalizing model, suggesting that absences may play a particularly important role in driving the link between internalizing mental health challenges and later school absenteeism.

Few studies have examined the bidirectional association between mental health challenges and school absenteeism. In fact, there is sparse literature examining school attendance at all from a longitudinal perspective. Two studies in particular have examined the bidirectional effects of mental health concerns and school absenteeism; these studies are over a decade apart and have disparate findings (41, 42). Contrary to what would be expected, Panayiotou et al. (41) found that increased emotional difficulties at one timepoint were linked to reduced absences at a later timepoint. They did not find any longitudinal associations indicating that increased absences led to increased emotional challenges. Conversely, Wood et al. (42) found evidence for bidirectional pathways, but somewhat greater support for mental health difficulties impacting absenteeism rates. The bidirectional results from the externalizing model of the present study provide support for Wood et al. (42) findings regarding the link between absenteeism and conduct problems specifically. That is, children and youth in our sample who presented with greater externalizing behaviours were more likely to experience higher rates of subsequent school absenteeism, and more frequent absences from school predicted later externalizing challenges. However, the results of the present study also differ in important ways from both of these studies and suggest different patterns of association for externalizing and internalizing mental health challenges as well the possible critical role of absenteeism rate in future internalizing mental health challenges for the study sample.

The concerning finding that absenteeism appears to be a risk factor for future poorer mental health highlights the importance of school attendance for reasons far beyond academic functioning and achievement. Our results suggest that when a student does not attend school regularly, they are more likely to experience deteriorating mental health. One possible reason for this finding is that school absenteeism may exacerbate already underlying factors that may not be fully present in the child or youth's life, particularly in regard to internalizing mental health challenges. For example, consider a child who feels anxious much of the time but is still able to attend school, spend time with friends, and meet daily expectations. However, they become sick, perhaps with COVID-19, and miss an entire week of school recovering. Perhaps the thought of going back after having missed so much school elevates their anxiety and worry about what others might think.

Reasons for absences

Descriptive analyses were conducted to examine the various reasons for school absenteeism amongst the total sample of

children, and for those experiencing elevated externalizing and internalizing challenges separately. It is worth remembering that T1 data collection occurred during Fall 2022 (when students were attending regular in-person education again) and T2 was in Spring 2023 (just before the WHO officially declared that the COVID-19 pandemic was no longer considered a global health emergency). Additionally, given the lack of research on the reasons for school absences, this analysis and discussion are purely exploratory and therefore meant to paint a more descriptive picture of why the present sample of children were not in school.

In both timepoints, children in the total sample were most likely to be absent from school because they were sick (either from COVID-19 in T1 or another illness in T2), because they skipped or truanted, or because they refused school. Such findings demonstrate a stability in absenteeism reasons across the school year for the whole sample. These findings also speak to a wide range of factors influencing school absenteeism and can be mapped onto most of Heyne et al. (13) absenteeism categories. For many of the students in our sample, their absences would have been considered “non-problematic” given that they missed for illness-related reasons. In previous absenteeism literature, this would be classified as an excusable absence (43). Many other parents identified school refusal and skipping school as primary reasons for school absenteeism. These two reasons speak to two very different motivations and drivers of school absenteeism. Children and youth who refuse school tend to do so for anxiety-related reasons and with parent knowledge; however, children and youth who are truant are considered to do so without parental knowledge (e.g., arrive at school and then leave the premises). Interestingly, parent reports of “I no longer have the energy” was of the top reasons given for absenteeism in T1, while “I gave my child the day off” was a primary reason for T2. These two reasons, although different, perhaps speak to a common underlying thread. That is, in both instances parents know that their child is not attending school and may be capitulating to or supporting the child’s or their own desires to not attend. Of course, these reasons also differ in important ways. Primarily, “I no longer have the energy” suggests a parent who desperately wants their child to attend school, has likely tried to have their child attend school many times over, but has given up. “I gave my child the day off” speaks more to a parent who may not value school attendance over other priorities, such as a mental health day, or family activities. This parent may also let their child stay home so that both the parent and child can have a rest. Importantly, these two reasons highlight the integral role of the parent in a child’s school attendance.

When looking to the reasons for school absenteeism for students presenting with elevated externalizing and internalizing behaviours, the top four reasons are the same. Overall, the overlap of reasons may speak to a shared experience for parent and child, despite different presenting mental health problems. Although speculative, mental health concerns seem to exhaust parental support, and may exacerbate the amount of school children miss. Aligning with previous literature, findings indicated that children and youth with elevated externalizing

challenges were more likely to be truant (44), compared to the children and youth in the internalizing challenges group. Research has shown that children with higher levels of conduct problems (subsumed under the externalizing category) are also more likely to experience school exclusion (e.g., asked to leave early, suspended) (45). However, this did not reveal itself to be a primary reason for school absenteeism for our study sample.

It is also notable that for both the externalizing and internalizing group, the most common reason for school absenteeism at T1 was a COVID-19 related reason, suggesting that it was perhaps the unique impacts of COVID-19 that were driving the link with poorer mental health at T2. For example, a child contracts COVID-19 and now must not only miss school for several days, they must also isolate from all other activities and wear a mask when going out in public. This child may indeed wish to attend school and cannot—missing out on academic activities, social interactions, and important events occurring at school. This child may begin to experience feelings of anxiety (e.g., “It has been so long, what will it be like to come back?”), depression (e.g., “I feel so lonely”) and perhaps other externalizing challenges (e.g., acting out because they are irritable or bored). This finding helps to explain the complex interplay of school attendance and mental health challenges within the specific context of the COVID-19 pandemic, which may be the lynchpin to understanding the present study results regarding the link between mental health and school absenteeism because of its unique and negative impacts on children’s schooling and wellbeing. It also provides support for the notion that any reason for missing school is problematic and can lead to adverse negative consequences. In the specific case of COVID-19, many children stayed home from school for excusable and valid reasons, and yet, these same children were also more likely to experience poorer mental health in subsequent months.

As with the absenteeism reasons for the whole sample, the reasons for each of the externalizing and internalizing groups indicate a wide range of reasons for missing school that can be divided into Heyne’s (13) categories for school absenteeism: school refusal, truancy, school withdrawal, and non-problematic absenteeism, if any absenteeism can be considered non-problematic. These results provide further support for Heyne’s model of organizing school absences in this way and highlight the need to inquire about reasons for absenteeism as this will determine different intervention approaches. This data around reasons for absenteeism is helpful in providing a more comprehensive picture of the absenteeism patterns of students. The reasons behind why students miss school is largely missing from the literature, and inevitably inhibits our ability to effectively intervene and support students towards regular school attendance.

Limitations and areas for future research

While the present study makes an important contribution to the field of school attendance research, this study is not without its limitations. First, this project relied on convenience sampling

for participant recruitment. This recruitment strategy no doubt has important consequences regarding who might be captured in our sample and must be considered when interpreting the results. School absenteeism is a sensitive topic that is often linked to feelings of shame and guilt for parents. Despite efforts to reduce shame and stigma around school absenteeism in the questionnaire items, it is possible that some families opted to not participate given their emotional experience around school absenteeism. As well, families who chose to participate in the study had the time and energy in their day to complete a relatively large questionnaire (and across multiple timepoints). Families with parents/caregivers who work multiple jobs, for example, may not have had time or resources to complete the study questionnaire. It will be important for future research to collect data from Canadian families that is more reflective of the diversity of the population in all demographic regards. Doing so will provide even more comprehensive of an understanding of school attendance for Canadian children and youth generally.

Additionally, in relation to convenience sampling and anonymous, virtual data collection, there is the possibility for error within the data. As discussed, considerable efforts were made to minimize any data errors and remove any possible bot data. However, it is possible that given the method of data collection, error within the data remains. Interpretations of the study findings must be made with this consideration in mind and future research on the topic should strive to collect data through other methodologies that further minimize error in reporting.

Second, the sample size of the current study was relatively small and therefore limited statistical power, which may be a key reason for the poorer model fit (46, 47). This also limited our ability to make confident interpretations of the data and restricts our ability to generalize study findings beyond the current study sample. Larger sample sizes that increase power will allow for even more complex longitudinal designs that control for important confounding variables and may offer greater ability to generalize to wider populations. For example, larger samples would allow for analyses that consider developmental and age-related factors, such as shifting school experiences and responsibilities, which we were not able to examine within the current study. This is an important next step for future research to consider in the absenteeism literature, given that our study findings demonstrate age could be an important correlate when examining school absenteeism.

Additionally, the present study only included two timepoints for data analysis. While this still permitted the longitudinal investigation between the study variables, it does restrict our ability to determine causal ordering across time. It is possible that with an additional timepoint, differential longitudinal pathways would have emerged that would have improved the clarity of the interplay between mental health and school absenteeism across the entirety of the school year. It is recommended that researchers examining school attendance make efforts to conduct longitudinal research across multiple timepoints. It will also be important to examine the links between mental health and school absenteeism across schooling years, to better understand the size and direction of the links

across a substantial period of time, rather than just within a single school year.

Our study also raised important considerations worth investigation in future research. First, we recommend that future research examine the effect of time of year that data collection occurs, which can impact time spent in outdoor activities and daylight exposure. These factors have known impacts for mental health challenges, and in particular mood-related disorders (48), whereby more outdoor activity and exposure to daylight has been found to have positive impacts for child and youth mental health through interactions with sleep duration. Although this was outside of the scope of the current study, we posit that these factors are worth consideration, particularly from a Canadian context, given that Canadian winters typically span several months with high snowfall, cold temperatures, and short periods of daylight, inhibiting opportunities for both outdoor activities and sunlight exposure. Research regarding these factors in relation to school attendance may provide useful insights into how and when to support children in attending school regularly.

Lastly, it is possible that somatic symptoms associated with mental health challenges of the children and youth within our sample were conflated for illness-related absences. It is well documented that mental health challenges such as anxiety and depression are linked to uncomfortable and distressing bodily sensations [e.g., headaches, stomach aches, low energy (49)]. This is a limitation of the present study and it is recommended that future researchers attempt to parse out the impacts of somatic symptoms related to mental health challenges when assessing school attendance as this has important intervention implications for children and youth.

Implications and applications for intervention

The present study adds to the small body of literature that investigates school absenteeism and mental health across time. The results bolster Heyne's (13) conceptualization of the categorization of school absenteeism reasons and substantiate previous literature findings demonstrating a link between mental health challenges and school absenteeism. To our knowledge, there appears to only be two previous studies that have examined mental health and school absenteeism bidirectionally (41, 42). The present study's results do not align with previous literature in important ways, thus highlighting the complexity of links between school attendance and mental health, as well as the fundamental need for more research on the topic.

Importantly, there is very little Canadian data regarding school absenteeism (50). This lack of research appears to be a systemic problem, in that there are virtually no educational researchers in Canadian university institutions that primarily study school absenteeism (51). The present study seeks to contribute to the Canadian knowledge landscape of school absenteeism, and the intersections with mental health. This study also provides essential information for those working with children, youth, and their families around school attendance issues. The results speak

to an urgent need to address school attendance problems, to intervene against possible subsequent mental health challenges. Given the bidirectional associations between externalizing behaviours and absenteeism, children exhibiting externalizing behaviours should be identified and monitored in order to intervene in a timely manner so as to avoid future school absences. The results also highlight that any absence, even those that are “excusable”, may remain detrimental to a child’s wellbeing and future functioning. It is recommended that individuals who work closely with children and youth monitor the frequency of school absences, no matter the reasons provided. In this way, there can be more timely intervention to reduce the total number of absences and decrease the likelihood of later mental health challenges.

The results affirm interventions such as the Multi-Tiered Systems of Support Approach [MTSS (52);] which organizes various interventions to remediate school attendance problems into three tiers of increasing severity. This approach encourages an individualized approach to supporting children and youth in their school attendance, given that children can miss school for a variety of different reasons, as our study results indicate. This approach also necessitates partnerships between home, school, and community organizations to collaborate around the issue and find the best-fitting supports to address the obstacles to a child’s attendance at school.

Conclusion

Together, the present study longitudinally examined the links between mental health and school absenteeism rates within a Canadian and COVID-19 pandemic context. Results indicated strong within timepoint associations between mental health and school absenteeism. The results also revealed that school absenteeism early in one school year was linked to increased internalizing and externalizing symptoms at the end of that school year. One bidirectional association was found whereby externalizing behaviours predicted later absenteeism. The present study adds to the growing body of literature investigating school absenteeism and mental health across time and bidirectionally, and is among the only research studies to examine school absenteeism in a Canadian context. It is hoped that this study encourages other researchers to focus efforts and resources on further expanding our understanding of school absenteeism among children and youth, as well as its correlates.

Data availability statement

The datasets presented in this article are not readily available because this data is not available publicly. Requests to access the datasets should be directed to Amanda Krause, akrau101@uottawa.ca.

Ethics statement

The studies involving humans were approved by the ethics committee’s of Carleton University and Saint Paul University. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

AK: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. MR: Conceptualization, Data curation, Supervision, Writing – review & editing, Funding acquisition, Project administration. YJ: Data curation, Funding acquisition, Project administration, Writing – review & editing. EC: Data curation, Writing – review & editing. PC: Data curation, Writing – review & editing. JM: Data curation, Writing – review & editing. NM: Writing – review & editing. JS: Writing – review & editing. JW: Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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EDITED BY

Carolyn Gentle-Genitty,
Butler University, United States

REVIEWED BY

Carol Nash,
University of Toronto, Canada
Isaac Karikari,
University of North Dakota, United States

*CORRESPONDENCE

Elisabeth Valmyr Bania
✉ elisabeth.bania@ntnu.no

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Teachers' experiences with the Back2School intervention—a pilot study addressing problematic school absenteeism

Elisabeth Valmyr Bania^{1*}, Toril Sørheim Nilsen²,
Mikael Thastum³, Jo Magne Ingul¹ and Trude Havik⁴

¹The Regional Centre for Child and Youth Mental Health and Child Welfare – Central Norway, RKBU Midt-Norge, Norwegian University of Science and Technology (NTNU), Trondheim, Norway, ²Institute of Psychology, The Arctic University of Norway, Tromsø, Norway, ³Department of Psychology and Behavioral Sciences, Aarhus University, Aarhus, Denmark, ⁴Norwegian Centre for Learning Environment and Behavioural Research, University of Stavanger, Stavanger, Norway

Introduction: School absenteeism represents a concern for students, educators, and parents alike. Teachers' involvement is vital to students' school life. Consequently, integrating schools and teachers effectively in absenteeism interventions is of great importance. However, few studies have investigated teachers' perspectives on participating in manual-based, indicated interventions to promote school attendance. This study aimed to explore teachers' experiences with the manual-based Back2School (B2S) intervention, which is based on cognitive behavioural therapy (CBT).

Methods: Seven primary and lower secondary school teachers agreed to participate in individual interviews following their involvement in the intervention. These teachers engaged in various aspects of the intervention, including data collection, school sessions, and school meetings involving students, parents, and B2S group leaders.

Results: The results indicate that some of the informants experienced increased competence and self-efficacy regarding school absenteeism following the intervention, while other informants did not have this experience.

Discussion: There is a need for more clarity and enhanced teacher involvement in future B2S interventions.

KEYWORDS

school absenteeism, CBT intervention, Back2School, teacher involvement, teacher experiences

Introduction

Regular school attendance is a critical measure of educational success for young people (Gottfried et al., 2024). Despite this, school absenteeism constitutes a vexing problem in many countries (Chu et al., 2019; Fredriksson et al., 2023). Norway lacks a comprehensive national statistic on school absenteeism. However, the Directorate for Education has provided an overview indicating that 15 percent of Norwegian 10th graders (age 16) accumulated 10 percent or more days of absence during their last school year (UDir, 2023).

The field of school absenteeism is characterized by its complexity, featuring diverse terms, definitions of key concepts, functional conceptualizations, different cut-off values for when absenteeism is considered a problem requiring intervention, and a myriad of interpretive perspectives on understanding this topic (Havik and Ingul, 2021). Nevertheless, a consensus exists within the field regarding the importance of school attendance for students' academic

and social development, the multifaceted nature of the problem, and the necessity for improved interventions targeting this heterogeneous group of students (Kearney, 2021). School absenteeism also represents a public health concern (Fernandes et al., 2024), as it functions as a predictor of school dropout, later marginalization, and reduced quality of life (Archambault et al., 2022; Kearney and Graczyk, 2020).

Teachers play a pivotal role for students in all aspects of school life, including fostering a safe learning environment, influencing student engagement, learning, and well-being, and promoting school attendance (Graczyk and Kearney, 2024). However, determining appropriate actions when a student struggles with problematic school absenteeism poses significant challenges for many teachers and other school personnel (Kearney et al., 2023). Teachers often perceive addressing school absenteeism as emotionally demanding and resource-intensive, reporting that they dedicate disproportionate time to these students compared to the rest of the class (Finning et al., 2018; Kearney et al., 2022). Moreover, teachers express difficulties understanding absenteeism (Gren-Landell et al., 2015; Kearney et al., 2022), whereas parents may feel that schools lack competence and understanding regarding how to intervene and calls for a better-coordinated approach (Akkus and Çinkir, 2022; Havik et al., 2014). Other findings indicate that many teachers experience challenges regarding school absenteeism as it adds to their workload and negatively impact their morale when trying to help students catch up (Kearney et al., 2023; Malcolm et al., 2003; Wilson et al., 2008), which results in frustration and limited return on their efforts.

The present situation calls for improved involvement of schools and teachers in interventions addressing school absenteeism.

However, a meta-analytic review by Gubbels et al. (2019) identified potential risk factors for school absenteeism, where the following had large effects: negative attitude towards school, substance abuse, externalizing and internalizing problems, and low parent-school involvement. The three school factors found to have a significant effect on school absenteeism were poor pupil-teacher relationships, low quality of school/education, and a negative school/class climate, operationalized as both individual risk factors and domains of risk factors (Gubbels et al., 2019; Lomholt et al., 2022). These numerous potential risk factors indicate the importance of adopting a holistic view to understand and intervene, where all stakeholders' roles must be considered and integrated in interventions (Graczyk and Kearney, 2024; Kearney et al., 2023; Melvin et al., 2025).

Several systematic reviews and/or meta-analyses addressing interventions for school absenteeism mainly focus on CBT interventions. One systematic review included 78 interventions designed for school refusal or truancy among children and youth aged 6–18 years old (Pérez-Marco et al., 2024). They found that CBT was the most frequently used method. In general, the effects of CBT interventions were larger among the youngest children than for adolescents. Research indicates that between one-third and two-thirds of young people with absenteeism do not respond to interventions (Heyne, 2022), this could be explained by adolescent developmental challenges such as increased academic and social demands, and higher rates of social anxiety and depressive disorders reaching adolescence. This highlights the need for more attention to students' developmental sensitivity to improve interventions among adolescents (Heyne and Brouwer-Borghuis, 2022).

Weeks et al. (2017) investigated factors in the school setting as outcomes of a group CBT-based intervention in the UK. Student identification, measures of change applied, and the role of school staff

was identified as influential factors. This implies the need to support school staff in identifying students who fit the intervention and allocate sufficient time for them to develop their knowledge and understanding of the intervention's key aspects to promote students' mental health and well-being (Chu et al., 2019; Graczyk and Kearney, 2024). The importance of close integration and cooperation with the family and school staff for a successful CBT intervention was emphasized several years ago (Elliott and Place, 2019; Heyne et al., 2015). However, based on previous reviews, there is still a need for more research on integrated CBT approaches. A systematic review by Boaler and Bond (2023) concluded that systemic approaches facilitated by schools were characterized by proactive systems, a supportive school ethos, personalized intervention, and collaboration with families. Schools exhibiting these characteristics were associated with promising outcomes related to increased attendance and engagement (Boaler and Bond, 2023). Findings from a recent systematic review by Fernandes et al. (2024) highlight key elements of absenteeism interventions, such as implementing CBT in school environments and incorporating a school-based component as improving effectiveness. They recommended further exploration and development of interventions with an integral school-based component.

Heyne and Brouwer-Borghuis (2022) identified 14 signposts for effective school refusal interventions, highlighting the essential role of schools and collaboration, and advocating for an integrated approach involving the student, parents, and school personnel to ensure coherence between home and school interventions. They also emphasize the need for structured, ongoing collaboration between schools and external support services. The contextual and relational nature of absenteeism, and the importance of viewing it as a network problem, were highlighted in a qualitative study by Nielsen and Thastum (2023), along with the significance of collaboration for resolving absenteeism. For teachers, the need for more knowledge and overcoming barriers in their everyday workload was identified as necessary to provide good support and collaboration with parents (Hejl et al., 2024; Nielsen and Thastum, 2023). Teachers emphasized the need for joint, interdisciplinary collaboration with external professionals and called for more structured support and guidance in managing individual cases of absenteeism problems (Hejl et al., 2024; Nielsen and Thastum, 2023). Moreover, teachers also reported that involving a third-party mediator could improve the management of absenteeism. The importance and need for a holistic approach, involving schools are clear. However, to the best of our knowledge, no previous studies have focused on teachers' in-depth experiences when participating in a modular CBT intervention for students with problematic school absenteeism, except for the feasibility study of "Back2School" (B2S) (Lomholt et al., 2020). Students and parents were not interviewed in the present study, because an examination of this topic is the focus of a forthcoming study.

The Back2School (B2S) intervention

The Back2School intervention was developed in Denmark (Johnsen et al., 2024; Thastum et al., 2020; Thastum et al., 2019) to address problematic school absenteeism, defined as more than 10 percent absenteeism over the preceding 3 months (Kearney and Childs, 2023). This cut-off aligns with other recommendations (Balfanz and Byrnes, 2012; Chang et al., 2018; Department for Education, 2024; Kirksey, 2019). Findings from the feasibility study of B2S in Denmark indicated

that teachers were less satisfied than parents and youths, but the majority found the school meetings useful (Lomholt et al., 2020). Teachers suggested improvements such as involving the school earlier and clearer communication between the involved parties. The study highlighted the need for greater engagement and information, for teachers to improve their satisfaction and involvement in the B2S intervention (Lomholt et al., 2020). Both parents and teachers mentioned school involvement as an important part of B2S, but they wanted the school meetings scheduled earlier in the intervention (Lomholt et al., 2020). Other relevant findings from the feasibility study included the importance of involving school management, gathering more information about the student's school class and social environment, and the need for clearer communication during the program. In the effectiveness study of B2S in Denmark, the intervention was compared to "treatment as usual" (TAU). Both B2S and TAU improved students' school attendance, but B2S significantly outperformed TAU in reducing emotional, behavioral, and social problems in students, and increased school-related self-efficacy for both students and parents (Johnsen et al., 2024).

The Norwegian B2S pilot study

Based on the findings from the Danish feasibility study (Lomholt et al., 2020), which was published before the intervention in the Norwegian pilot study commenced, the manual was expanded to involve and engage the school at an earlier stage and by adding two compulsory and one optional third school session. Additionally, the school was asked to complete questionnaires about the pupil's attendance and mental health [Strengths and Difficulties Questionnaire (SDQ)] before, during, and after the intervention, as well as 2 weeks before the booster session. In total, the teachers registered students' attendance rates for 6 months. The 13-week intervention consisted of 4 school meetings (with parents) and 2–3 school sessions (without parents). The school sessions were held between the B2S team and the school (the main teacher and someone from the school management), without the parents or student present, whereas the school meetings included all parties involved in the intervention (timeline available on request). The B2S pilot intervention was conducted with 14 students across Norway in 2022–2023. A multi-professional research group supervised members of the B2S team in eight municipalities in an individual indicative preventive intervention (The B2S intervention, manual available on request) for students in grades 4–10 with school absenteeism problems. The intervention took place at home, in school, or during leisure time. The B2S team members were employed by the municipality and had pedagogical, health, and/or family-related backgrounds, where several were dedicated to school absenteeism cases and worked in school absenteeism/attendance teams within the municipality. The aim of this study is to gain in-depth insight into the process behind teachers' participation in piloting the Back2School intervention by investigating the following research question: How do teachers experience their participation in the Back2School (B2S) pilot intervention?

Materials and methods

Study design

The current study employed a qualitative design, conducted among teachers who participated in the pilot study of B2S. Based on

the research question, a semi-structured interview guide was developed (available on request). The interviews were conducted by two researchers during spring 2023. All interviews were conducted digitally and audio-recorded securely, with the transcript data material stored at SAFE (Secured Access to Research Data and e-infrastructure), University of Bergen, Norway. Transcription was outsourced to a third party.

Recruitment and sample

The starting point for recruitment was a list of the 14 teachers and Head of Department who had participated in a teacher role in the B2S pilot study. Seven of them consented to be contacted personally via phone and email with information and a request to participate in an individual qualitative interview (approximately 40 min). All seven responded positively. Six out of seven were main teachers for the participating student, and one was a Head of Department who participated in all the meetings and served as a teacher for the student. Initially, a pilot interview was conducted with an experienced psychologist from the B2S research group who was not involved in interviewing teachers. The aim was to get feedback on the time required and assess whether the questions were easy to follow and understand.

Analysis

Based on the research question and the study's exploratory-descriptive design (Bernacki et al., 2021; Hunter et al., 2019), thematic analysis was deemed a suitable method to code and analyse data (Braun and Clarke, 2006; Clarke and Braun, 2021). The analysis followed five steps: (1) data familiarization, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, and (5) defining and naming themes. Two researchers coded the material separately. The codes were then reviewed and revised by adding, removing, and merging codes, and sorting them into different themes. The two researchers discussed and reached a joint agreement throughout the coding process. In the final phase, one of the researchers reviewed all the coding again and made further revisions to the codes and themes, before creating a matrix consisting of three main thematic categories and eight subcategories (see Table 1). An abductive approach was used in the current study (Thompson, 2022), combining a theory-driven, deductive approach with a more empirical, inductive approach (Clarke and Braun, 2021).

Trustworthiness

The results of this study are considered verifiable and reliable (Cohen et al., 2002; Nazar et al., 2023). Although the study concerns a specific Norwegian context, the findings may contribute valuable insights for similar interventions in comparable settings (Malterud, 2002; Stalmeijer et al., 2024). To ensure trustworthiness, two researchers performed the analysis independently at first, and then collaboratively. The authenticity of the study refers to the overall process, where all parts are transparent, thus enhancing transferability (Nazar et al., 2023). Further, to ensure authenticity, we prioritized transparency in sharing the details of our methods and analytical process.

TABLE 1 The informants’ experiences: main themes and subthemes.

Main themes	Subthemes
School role and involvement in B2S	Entrance and recruitment
	Collaboration and inclusion of the school’s perspective
	Workload
	School sessions and school meetings
Impact of B2S participation	Teachers’ competence and self-efficacy
	Students’ attendance
Feedback on B2S	Success factors
	Barriers

Ethical considerations

The B2S study has been approved by the Regional Committees for Medical and Health Research Ethics (REK) (ref. nr. 462,879). Written consent was obtained from both parents for the children’s participation. There is also a data processing agreement, and the data material is stored in accordance with regulations at the Services for Sensitive Data (SAFE), University of Bergen. This also includes teacher data, where the teachers provided consent to be interviewed after the completion of the pilot study. As teachers refer directly to individual students or third parties, there is an ethical risk associated with the material requiring careful anonymization during analysis and reporting.

Results

The main findings are presented in Table 1 and organized into three main themes and eight subthemes. The informants are referred to as P1, P2, etc., based on the sample description in Table 2. Each subtheme is presented continuously, underpinned by informant quotes.

School role and involvement in B2S

Entrance and recruitment

Two informants (P2, P5) experienced a messy entrance into the project. Informant P2 said it was back-and-forth in the beginning, as they were told they could participate, then they were told they could not, and finally, they were given the opportunity to participate. Informant P5 expressed that the school should be involved in the selection of which student should be included. Further, the same informant believed they had established a good intervention for the student at school and good communication with the parents before the B2S intervention, but asserted that this communication deteriorated during the B2S intervention:

“The student started and participated as usual and performed well. In that meeting, we were informed that it was not necessary to implement any attendance plan again because it was working so well. And the week after, B2S was introduced to this student. So, for us, it was a very strange approach to it.” (P5).

TABLE 2 Characteristics of the informants.

Informant	Years of experience	Student’s grade level	Role
P1	8	10th Grade	Main teacher
P2	7	9th Grade	Main teacher
P3	32	9th Grade	Main teacher/ Head of School Department
P4	20	9th Grade	Main teacher
P5	18	8th Grade	Head of School Department
P6	3.5	6th Grade	Main teacher
P7	12	6th Grade	Main teacher

The other five informants did not mention difficulties with the entrance to B2S; however, they indicated many interventions had been attempted before the B2S intervention. When asked who the decision makers were for participation, two informants expressed that they were not certain or did not remember (P5, P1), illustrated by one of them:

“I do not really remember how it started, but we had been working on it for a while. There were many parties involved. I do not know who tipped them off about this student, I do not quite remember.” (P1).

Collaboration and inclusion of the school’s perspective

The importance of collaboration among all involved parties was emphasized by all the informants. They all expressed the importance of good school-home cooperation. Moreover, they valued being included with a team of external professionals (B2S team) for discussion and acknowledgment of their prior efforts. Most informants were pleased to be part of the B2S intervention, although they found it challenging to manage the required time commitment without additional resources. One quote illustrates the relief of not being solely responsible for the student’s situation:

“...helpless when dealing with such a difficult case. You can send a message to child welfare services, and it will be addressed there, but they often check the case after a few months. Then you have to send a new request if you need help from them, even if the parents were involved in the application. And then we tried to get in touch with BUP (Child and Adolescent Mental health outpatient Clinic), which is very difficult. So, getting external help means a lot. For the student and the other students, it helps to have someone with expertise in this area, but as a teacher, it was reassuring to know that you did not have to handle it alone, that you got help.” (P1).

Another informant highlighted the benefits for communication:

“Yes, it was very useful because we gained more insight into the measures being taken at home, and the parents became very confident in what we are doing at school. We also got to hear what the student says at home, and they got insight into what the student says at school. It goes back to that common understanding, clearing up communication, which has been good. And if we have

disagreed or felt stuck or uncertain, we have a third party there who can help us get started.” (P6).

The informants noted the value of consulting with professionals with competence and experience in this topic. They said it meant a lot to get external help and felt supported in how to assist the student. Achieving a “common understanding” of the student’s situation and problem emerged as a key element in the intervention, where all parties involved worked together to understand the present situation, including risk and protective factors. The tool “step-ladder,” based on SMART goals as known from CBT treatment (Josefowitz and Myran, 2021), was mentioned by several informants as a useful concept.

“At least some tools were highlighted, like the ‘step-ladder.’ There are many great and exciting ideas. Some of the tools, if not exactly the same, we have worked with quite a bit. Setting intermediate goals, as was done, was exciting. However, there are some aspects we are not 100% satisfied with, including the inclusion of the school in the goal setting for the ‘step-ladder,’ for example, which steps to take.” (P7).

Moreover, several informants highlighted that the B2S team were external partners who could help parents at home, which was different from “practice as usual,” such as helping parents with sleeping habits and interventions for the mothers. The findings suggest that this work also helped achieve a more common understanding among all parties involved.

The involvement and prioritization of the work by department heads was recognized by several informants:

“But we do have the Head of the Department in the teams (grade-level) meetings. I brought up this student in several grade-level meetings, so they were informed all the way about what we offer and what we think we need to try, and they supported the measures we tried.” (P4).

Another informant added:

“We often discussed with the principal. He was frequently involved in conversations about the student. I believe the principal has attended all the meetings we have had previously regarding the absenteeism issue.” (P6).

All the informants experienced that the B2S team was receptive to and included the school perspective, and they were good discussion partners. They also experienced that the B2S team acknowledged what the school had done before the intervention. Informants found the B2S team to be excellent in communication with parents and the school, respecting the school’s framework, contributions, and roles. The experience of including the school’s perspectives was perceived as new in B2S compared to interactions with external services before B2S, as illustrated by Informant 4:

“Yes, I think it provides more perspectives around the parents. I also believe the parents need a channel to talk about the absenteeism and what is happening at school with professionals, which I think is very useful.” (P4).

Several informants expressed that the school’s perspectives and experiences were included in the “common understanding.” However, the parents and B2S team could come to the school meetings with a plan, but the school members often felt unprepared and merely received information—they reported that they should have been prepared on themes and interventions. Two informants felt they were dictated to by B2S representatives and wished they were more involved throughout the project:

“We felt that we were not part of setting them... The goals were given to us, not something we were involved in.” (P7).

In some cases, the school and parents had different views about reasons and problems before starting in B2S, such as how much should be required and adapted for. For example, the process of information gathering, analysis, and assessment to understand the student’s situation made the attendance problems clearer. The informants emphasized the importance of a common understanding and cooperation between the involved parties. It was good for the teachers to know what interventions were occurring at home and that the parents felt safe about the school’s intervention. However, some felt that the school did too much or “stretched too far”:

“What we tried was having several conversations with the parents, holding several meetings with them. And directly towards the student, we tried to adapt the teaching. The student has missed quite a bit of instruction and had more absenteeism than... We adapted the teaching a bit, we had the opportunity to use group rooms for the student to withdraw a little. And then it kind of stalled before the B2S project. We probably had different views on it, we and the parents, regarding how much we should push. This led to poor communication. They felt that we did not listen to the supervisor, and we felt that they should have pushed more. I think the common understanding somewhat cleared up things when we started this project.” (P6).

Some informants considered it a strength having members in the B2S team, who worked in Educational and Psychological Services (EPS), because the relationships were in place before the intervention, making the student feel safer. While cooperation and communication with the B2S team was experienced as good, some informants felt that the school sessions should have included more school personnel:

“There has been very close follow-up. The home-school collaboration has been closely monitored since the start of 4th grade level. EPS was involved in relation to absenteeism issues already then, and they have been a close partner. It has been a bit up and down, with periods that have been good, but the case is not closed. It was open all the way until the student started B2S this fall. It is the same contact person we had in EPS, who is a part of the B2S intervention today. I would say that has definitely been a strength. Since B2S is so compressed in terms of time span, the relationship was established in advance. The student was also more comfortable in the conversations. I would definitely say that has been a strength and an advantage for the student.” (P7).

Workload

The informants experienced a significant workload for the schools related to planning and implementing interventions, especially as none of them had extra resources for this work. All informants said it was difficult to differentiate between the school sessions and school meetings and could not provide specific information about these meetings and sessions separately. They had varied experiences with the number of meetings, from too many to too few, but most were pleased with the number and content, even though they felt the content was often a repetition of what they already knew and did before.

“I felt that it increased our competence. There were things we had heard before, but it was very good to have them repeated. It was very good that all of us from school, together, got to hear it, that we had a common language. And again, we received recognition that we had done this and that we had experience with it, it was a very good reminder.” (P3).

As expected, nearly all informants pinpointed the dilemmas of giving so much attention to one pupil when the class consisted of up to 25 students.

“There was a very one-sided focus on this student without considering us as contact teachers in a class to relate to. It should be said that we have used an incredible number of resources on the student without additional substitute teachers or other resources being provided. We have had to take special education hours from other students, and that is not fortunate. I will not say it is bad. But it is not good.” (P7).

Another informant illustrated a similar dilemma:

“Yes. It is very challenging to schedule so many meetings. I have 25 students in a group, and when you have 4–5 students with attendance problems, it takes a lot of time to prepare for subjects and assessments.” (P4).

School sessions and school meetings

School sessions were meetings without parents, while school meetings included parents. Five of the seven informants experienced differences between school sessions and school meetings, noting they could speak more freely about school experiences without the parents present. One informant felt the meetings with parents were necessary because of a specific parent dynamic but also noted that both parents attended together with the child (suggesting separation anxiety was still being addressed). Conversely, another informant felt open discussion was possible with the parents present in the meetings. Clearly, the informants experienced this differently. Two illustrations from the informants highlight this.

“I find that it has been very good support. It has been very beneficial to have someone outside the school who is working with school absenteeism. We often sit at school with the best offerings/interventions in the world, but the students do not come to us. So having someone who has been in the home working with sleep, for example, and being able to collaborate and support the mother has been invaluable. Plus, it has been very good to receive

recognition that we are doing a good job and providing examples of things we can try. It was very good. It is good not to be alone.” (P3).

Further from another informant:

“It becomes easier to discuss the most difficult things and hear a third party’s view on it before we have the discussion together. I think it is more organized, and I think it is better for the collaboration with the parents as well. It probably applies to their part too.” (P6).

Impact of B2S participation

Teachers’ competence and self-efficacy

Most informants expressed that the content of the B2S intervention for the school was mostly a confirmation or acknowledgment of what was known before. However, some increased their competence during the intervention. One informant explained the work with school attendance problems and experienced that no cases are the same and that there are no measures that fit all:

“Even though I have experiences with this from many years earlier, I find that all cases are so unique and different, so I feel it is difficult to use previous experience on new cases. And that they are usually very complex cases. I do not feel that it is something I feel confident about, no. It’s not something where I think I have the solution or know how we should work here. It’s a bit of trial and error and groping in the dark with these types of cases. But then I find that even though we have several parallel cases that also have some similarities, the measures will be so different and have different effects. And communication is so different that it is difficult to see what you can take out or carry forward. And if I am to say something about mastery, this student has not, despite all the measures, despite such a good setup/adaptation around the student, improved school attendance.” (P4).

Concrete examples presented as useful by the informants included the use of a “step-ladder,” reward systems, clear goals, and the collaboration method. The informants said that their self-efficacy regarding their current case was primarily based on the results for the participating student; if the student attended school more, their self-efficacy was better. Several informants claimed that no cases were similar, and what helps one student does not help others, as highlighted in the previous quote from P4.

Students’ attendance

An important outcome of this intervention was to increase students’ school attendance. Based on the answers of the seven informants, three of the students attended school more after the B2S intervention, two did not attend school more, one student attended school but only with parents in immediate presence, and one student transferred at a new school.

However, the informants claimed that there were other impacts of the intervention as well. Some of these impacts included that the student and parents learned more about mastery skills and different tools for this, and that the parents received help and other perspectives

to understand and handle the situation. In the long run, this support can help the informants cope with the situation, and external partners like the B2S team provided emotional support. Moreover, some informants expressed a need for a longer intervention period than 3 months, and some students were referred to other services after the intervention. Here are some illustrations underpinning this theme:

“The parents showed up, and we never got to test the measures (interventions). It became more about how the student talks more with the parents now than before, talking with the B2S team, yes. So, it became a bit indirect. An indirect communication with the student. They told us what the student had said to them.” (P1).

“I think it comes from the student receiving help to handle other challenges, which has made some pieces fall into place... For example, getting further referrals and that has yielded results that make some pieces fall into place. I also know that the student has greatly benefited from the ‘what can happen’ mindset.” (P2).

Informants P3 and P6 reported higher attendance:

“Yes, I do feel that the student attends school more now, but Jan is not completely back. You get a good feeling when Jan attends school more. But there is still quite a bit of absenteeism.” (P3).

“Yes. I feel Janne has come a long way now. Janne is basically back to how we knew them before.” (P6).

Feedback on B2S

Success factors

When asked what they experienced as important in the B2S intervention, several informants mentioned that it was beneficial to know one of the people in the B2S team before the intervention, as some members were personnel from Educational and Psychological Services (EPS).

“There has been very close follow-up. The home-school collaboration has been closely monitored since the start of 4th grade level. EPS was involved in relation to absenteeism issues already then, and they have been a close partner. It has been a bit up and down, with periods that have been good, but the case is not closed. It has been open all the way until they started in B2S this fall. It is the same contact person we had in EPS who is a part of the B2S team now.” (P7).

Two informants mentioned the importance of teachers’ motivation and involvement from the start (during the recruitment period), as the teacher is the main contributor in implementing the interventions/measures at school. One of them emphasized:

“We think that a prerequisite for something to work at school is that we at the school get to choose who it is appropriate to collaborate with, and then I am thinking about having a contact teacher who is motivated. The contact teacher here was very clear that this was not something she was motivated to participate in, she said that clearly in the meeting with B2S... So, if she had been

involved in the process and chosen who could be a suitable candidate, we would have chosen another student.” (P5).

Three informants talked about the importance of providing information about the B2S intervention in school team meetings for all school personnel, to achieve a more holistic school approach and a more robust intervention. However, this was reportedly missing according to several informants. When asked how their fellow colleagues at school were involved in bringing information about the participating student’s situation, one answered:

“To a small extent, because I am the main teacher, I am the one who has most of the information. But if I approach other teachers in specific subjects, I do get it.” (P7).

Barriers

The informants’ experiences varied significantly when asked about what was missing or the barriers they experienced during the intervention. Time and workload to participate in the meetings/sessions and to fill out questionnaires were mentioned by most of them. Moreover, they did not have extra resources to participate in the intervention. One informant said:

“School absenteeism should give more resources.” (P7).

This informant (P7) argued that the intervention required a lot of extra work to help the student with absenteeism problems. One informant mentioned that the school did too much (“stretched too far”), which might have affected the rest of the students in class. Two informants felt they were not involved when the B2S team and parents planned the intervention, even though the school had to make adaptations for the student. Another informant said they lost control and did not have “the hand on the wheel” (P5) until the case was excluded due to a reported unsafe learning environment for the student (in line with the Education Act §12–2). In that situation, the school had to make a plan to ensure the student’s safe learning environment. One informant experienced that the included student was too complex a case, and even the B2S intervention was not helpful for the student:

“This was a very difficult case, even the B2S team could not help the student back to school even though they had competence.” (P1).

Another informant felt impatient as they wanted to move faster for the student to attend school. One informant mentioned too much focus on the student’s voice, and that this student decided too much. Two of them talked about their need to have more information about the B2S-manual and the ongoing work to be better prepared for the school meetings. One mentioned the importance of involving the school’s leadership and the need for more group rooms in school. Another informant expressed a need for the B2S team to observe the students and give feedback on success and risk factors in the classroom. One informant wanted more competence regarding mental health problems like anxiety, illustrating the difficulties and dilemmas:

“I would assume that there are a lot of psychological aspects involved and more of the psychological part so that one can understand more of the background for it. That would probably

help... I am an educator, I am neither a doctor, nurse, nor psychologist, so that part is quite difficult for a teacher to know how to solve without getting help. The support services are under pressure and the management is often under pressure. There is something about actually feeling that you get a bit of help to handle it." (P1).

Discussion

The main findings from this study indicated that some informants reported higher competence and self-efficacy in working with absenteeism following the intervention, while other teachers did not have the same experience. The informants experienced a limited overview regarding the stages of the intervention, and reported they needed more clarity regarding the role and content of the school before, during, and after the intervention. However, the competence and support from the B2S team was highly appreciated among the informants.

To answer the research question for this study, "How do teachers experience their participation in the Back2School intervention?," we start discussing the results concerning the informants' experience of higher competence and self-efficacy after participating in the B2S pilot intervention. The informants' self-efficacy was primarily based on their particular student's attendance rates, which is in line with previous research (Gale et al., 2021). When their student did not increase school attendance rates, this influenced the informants' self-efficacy, where they felt that their efforts did not help (Gale et al., 2021). Conversely, when the student attended school more, their self-efficacy increased, as they found working with students having school absenteeism problems complex and challenging (Cunningham et al., 2022). Only three of the seven informants reported higher students' school attendance after the intervention, which could be related to the need for a longer intervention period than 3 months, and that some of the students had too complex problems, requiring referral to other services after the intervention period. Duration of the intervention is one of the important factors found in the review by Boaler and Bond (2023). It is also important to bear in mind that the informants expressed the intervention might have impacted other outcomes, where the student and parents learned about mastery skills, different tools for dealing with difficulties, and parents' experience of receiving help and new perspectives, as suggested by Cunningham et al. (2022). This outcome might help the student and parents to cope better with the situation, and a qualified B2S team can help them discuss their situation and support their feelings when having a child at home struggling with attending school (Kearney and Graczyk, 2022).

Teachers' competence and self-efficacy influence the success of all interventions in school, like B2S. When teachers experience confidence in their abilities to support students, they are more likely to engage actively in B2S activities. Professional development opportunities can enhance teachers' skills and boost their confidence, leading to more effective implementation of B2S. Several informants stated that they received confirmation and acknowledgment of the work they did before the pilot by the B2S team, as well as their prior competence. As the informants expressed that participation in the pilot intervention mostly confirmed their existing knowledge, one might question why the students developed problematic absenteeism. This could be explained by all the possible risk factors for absenteeism,

the complexity of the problems (Gubbels et al., 2019; Lomholt et al., 2022), and the need for a holistic approach to understand and intervene (Heyne and Brouwer-Borghuis, 2022). Moreover, if schools are equipped to work in a holistic way such as the B2S intervention is based on (family, student, and school), there can be better opportunities to reduce absenteeism (Kearney and Graczyk, 2022).

Although the findings indicate mixed results in regard to the informants' experiences of learning something new during the intervention, some of the informants expressed that they learned some new, useful, and concrete "tools." These were related to CBT and were not typical tools for the school setting or for teachers, as this is not part of their education or mandate. Despite this, all teachers in Norway should incorporate some of these CBT skills in all lessons, since it is part of the core curriculum in the Education Act, including a section on public health and life skills. This emphasizes the importance of equipping students with knowledge and skills necessary to promote good physical and mental health, and to make responsible life choices (Avdem, 2025; UDir, 2025).

An important factor in the results was the lack of an overview of the stages in the B2S intervention among the informants. The informants stated the importance of teachers' motivation and involvement from the start (recruitment), as teachers are the main contributors in implementing the interventions at school. All informants reported a lack of understanding differentiating the school meetings and school sessions. Despite the benefits of participating in B2S, several barriers can hinder effectiveness. This may include limited resources and a lack of time for planning. Identifying and addressing these barriers is essential for maximizing the impact of B2S. The informants mentioned some of the barriers to be a lack of time and too much workload, both for completing questionnaires and participating in the school meetings and sessions. This dilemma is also emphasized in previous research (Cunningham et al., 2022; Finning et al., 2018), where time spent on one student was emotionally demanding and time-consuming and at the expense of the whole class. Bearing in mind the significant potential risk factors (Gubbels et al., 2019; Lomholt et al., 2022), where school domains such as student-teacher relationship, low quality of school/education, and a negative school/class climate had a large effect on school absenteeism, which underpins the importance of sufficient resources. Kearney et al. (2023) argues that school absenteeism is influenced by student, parent, family, peers, school, and community factors, and is caused by multiple factors where the key influential factors are interrelated.

Three of the informants expressed the importance of giving information about the B2S intervention to the rest of the school staff, as shared information provided an opportunity for a more holistic school approach and robust intervention. However, the latter was reportedly missing according to several informants. The importance of school involvement and reducing the barriers for schools to be an integrated part of the intervention is related to the importance of implementing CBT in the school environment and incorporating a school-based component (Fernandes et al., 2024). Based on their review, they recommended further exploration and development of interventions with an integral school-based component, which was done in the B2S pilot, but the findings from the current study indicate a need for better integration and a larger school-based component to better help students with absenteeism problems.

The lack of overview during the intervention is closely related to a lack of clarity regarding the school role and content. The informants

experienced the school's role and involvement with a lack of clarity regarding their participating role in the intervention. This is in line with Hejl et al. (2024), where the lack of resources and competencies within the school system, unclear roles and division of responsibilities, and lacking collaboration act as obstacles to effective management. Teachers emphasize the need for joint, interdisciplinary collaboration with external professionals and call for more structured support and guidance, and they believe that involving a third-party mediator could improve absenteeism management (Hejl et al., 2024). In the B2S pilot, the third party was the B2S team, which many of the informants appreciated.

Collaboration and involvement from a group of external professionals (B2S team) were valued among the informants, as the members of the B2S team had competence and experience with absenteeism problems, were good discussion partners, had good communication with both parents and the school, respected the school's framework and the school's contributions and roles, and provided acknowledgment for what they did for the student prior to the pilot study. Previous research indicates that school personnel find this topic complex and challenging (Cunningham et al., 2022), and it is understandable that they appreciate getting help from externally qualified professionals. Moreover, interdisciplinary collaboration with external professionals has been previously suggested in research (Hejl et al., 2024; Nielsen and Thastum, 2023).

Even though the informants appreciated being part of the pilot, they spent a lot of time participating, as they did not have extra resources to take part in the pilot intervention. Most of the informants expressed that they did not do anything different during the pilot than before. However, several informants appreciated the help in supporting the student, and the work tool "step-ladder" was most frequently mentioned as helpful. Additionally, several informants expressed that the school's perspectives and experiences were included in the "common understanding," which is an important part of the intervention. Findings from a systematic review (Fernandes et al., 2024) show that interventions need to involve school-based components to succeed. The informants in the current study were not always prepared for the school meetings, as the B2S team and parents had sometimes made plans for school interventions in advance without the school's involvement, leaving some with a sense of being told what to do and losing control. These informants did not feel included in the whole process. School involvement is important from both parents' and teachers' views (Lomholt et al., 2020; Nielsen and Thastum, 2023), but several informants in the current study felt left out.

Strengths and limitations

The sufficiency of data from a sample of 7 informants depends on the study's aim, interview quality, and the analysis strategy chosen (Bouncken et al., 2025; Malterud et al., 2016). In the current study, while the quality of the interview dialogues varied somewhat depending on how comprehensive the answers provided by the informants were, we achieved a good breadth regarding the informants' professional and experience backgrounds, which provided more perspectives on the issues. Nevertheless, only half of the teachers who took part in the B2S intervention agreed to participate in the current interview study. Therefore, we are not sure whether the

non-participating teachers would give other relevant insight to answer the research question. This limitation is of importance for this study.

Both interviewers have been working with school absenteeism over years, and both were actively involved with meta supervision of the B2S teams. The interviewers interviewed teachers who were from another district than those they supervised, to avoid bias by having extensive knowledge about the cases the teachers referred to. During the intervention the interviewers had no direct contact with the informants they interviewed in this study.

Another limitation which is important, is that we did no member check (participant validation) which could ensure the accuracy and credibility of the data.

Furthermore, the study was conducted in Norway, and the context might not be transferable to other countries, as the Nordic countries have an Education Model comprising a compulsory school system and emphasizing "A School for All" (Blossing et al., 2014; Juusola, 2023). This model emphasizes equal opportunities provided for all students regardless of cultural, social, and economic background (Juusola, 2023; Klette et al., 2018). There is evidence that countries with similar cultures and educational policies have similar educational results (Nilsen and Gustafsson, 2016). This is important to keep in mind when comparing results between different school contexts and countries within and outside the Nordic countries. Although Denmark (where the B2S intervention is developed and evaluated) is also part of the Educational Model, there are differences in these school systems as well. In Norway, education as such is obligatory, while in Denmark attending school is obligatory. Moreover, in Denmark more students attend special schools than in Norway (8,359 vs. 6,000 students in the school year 2020/21) (EASIE, 2025).

Future research directions

Building on the evidence from the current and previous studies, there is a clear need to further develop intervention content that enhances school and teachers' participation and facilitates better adaptations for students in school. Future research should prioritize the integration of individual and systemic components within school attendance interventions. At present, these components often operate in parallel, lacking the cohesion that many informants have identified as essential for improving intervention outcomes. The upcoming RCT of the B2S intervention in Norway will take this into account, aiming to test a more integrated and holistic approach to support school attendance.

Conclusion

The informants, six regular teachers and one from the Head of Department, who participated in the pilot Back2School Norway, highlighted the need for a clear structure and a predictable process for all parties involved. The informants felt they had the competence and experience to identify students suitable for the intervention. Moreover, they stated a need for better clarity regarding their participation throughout the entire intervention. The informants wanted to be thoroughly involved and engaged in the whole intervention process. Some of the informants experienced higher self-efficacy and competence in working with students experiencing

school absenteeism, while others did not. All informants emphasized the crucial importance of close cooperation with the student, parents, and external support from the B2S team. They particularly valued the B2S team's knowledge and experience, which could help the teachers, the student, and the parents. However, challenges related to workload, resource allocation, and the degree of genuine involvement need attention for future implementations.

Data availability statement

The datasets presented in this article are not readily available because restrictions apply to the availability of the data due to its sensitive nature and ethical restrictions. Data are available from the authors upon reasonable request. Requests to access the datasets should be directed to elisabeth.bania@ntnu.no.

Ethics statement

The studies involving humans were approved by Regional Ethical Committee Norway. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin. Written informed consent was obtained from the individual(s), and minor(s)' legal guardian/next of kin, for the publication of any potentially identifiable images or data included in this article.

Author contributions

EB: Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. TN: Conceptualization, Project administration, Writing – original draft, Writing – review & editing. MT: Writing – original draft, Writing – review & editing. JI: Conceptualization, Writing – original

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The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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EDITED BY

Joanna Anderson,
University of Cambridge, United Kingdom

REVIEWED BY

Johanne Jeppesen Lomholt,
Aarhus University, Denmark
Sümeyye Ulaş,
Erzurum Technical University, Türkiye
Mariola Giménez-Miralles,
Valencian International University, Spain

*CORRESPONDENCE

Stine Ekornes
✉ stine.m.ekornes@ntnu.no

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Identifying students of concern. Primary school teachers' reflections on assessing students' general school functioning based on the concept of typicality

Stine Ekornes^{1*}, Solveig Holen², Jo Magne Ingul¹,
Simon-Peter Neumer², Frode Adolfson³ and
Elisabeth Valmyr Bania¹

¹Regional Centre for Child and Youth Mental Health and Child Welfare, Norwegian University of Science and Technology, Trondheim, Norway, ²Center for Child and Adolescent Mental Health, Eastern and Southern Norway, Oslo, Norway, ³Regional Centre for Child and Youth Mental Health and Child Welfare North, Faculty of Health Sciences, UiT The Arctic University of Norway, Tromsø, Norway

Introduction: The present paper explores how Norwegian primary school teachers' reason and reflect when assessing students' general school functioning in Teacher's Report Form (TRF), where teachers are asked to compare students of concern with what is perceived as a typical student at the same age, regarding work effort, behavior, learning capacity and mood.

Methods: The teachers in the sample ($n = 7$) had recently filled out the TRF as part of their participation in The Echo Study, utilizing the cognitive behavior therapy program Emotion for sad and anxious children.

Results: The results show that teachers base their assessments much on person-relative, rather than group- or age relative comparisons, e.g., what is normal for the individual student. It is also identified that a safe psychosocial environment where students feel confident speaking up and exploring new ideas, is recognized as essential or optimal school functioning and attendance. This is especially important for children experiencing sadness or anxiety.

Discussion: By understanding more of how teachers reason when assessing students' general school functioning, we can aid their efforts to identify students of concern. Poor school functioning is related to school absenteeism, and teachers are front-line professionals to observe early warning signs based on their understanding of whether a student's behavior lies within or outside the range of typical functioning.

KEYWORDS

school functioning, school attendance problems, primary school, student assessment, Teacher's Report Form

Introduction

Teachers work closely with their students daily and are thus well suited to identify changes in their behavior, school performance, and attendance. However, studies have shown that teachers find it challenging to identify social and emotional difficulties in a timely and adequate manner and to know what behavior falls within the normal range or what may

require follow-up and support measures (Kolko and Kazin, 1993; Marsh, 2016). Often, teachers base their judgements on common sense and experience-based knowledge when differentiating between normal, transient, and age-dependent variations in mood and behavior and more worrisome cases (Rothi et al., 2008), and they find it difficult to assess whether a student behavior lies within or outside the range of normal or typical functioning (O'Farrell et al., 2023; Van den Broek et al., 2023). This particularly applies to students with internalizing difficulties, such as anxiety and depression (Cunningham and Suldo, 2014). Because these students also have an elevated risk of developing school attendance problems (Chen et al., 2024; Finning et al., 2019a; Finning et al., 2019b) it is pivotal to identify emerging internalizing difficulties at an early stage.

School attendance problems are shaped by multiple interconnected factors, including those related to the child, parents, family, peers, school, and community (Kearney, 2008; Thambirajah et al., 2008), and refer to the challenges that arise when a child is not present at school without a valid reason (Heyne et al., 2019). As school attendance problems develop, they grow complex, the number of risk factors increase, and the student feels more and more alienated from school. It is therefore important to stop the problems before they develop to prevent an emerging downward spiral of social-emotional difficulties and school absence, where negative thoughts, feelings, and actions mutually and progressively get worse. Often, school attendance problems start with negative appraisal due to a stressor in the school environment, leading to avoidance of specific situations or classes, which in turn reinforces the negative stress and pattern of appraisal (Hancock et al., 2013; Havik and Ingul, 2021; Ingul et al., 2019).

Altogether, this demonstrates how students' school functioning, which includes academic achievement, social and relational skills, adjustment, and behavior, all embedded within the broader context of school climate and organization (Gustafsson et al., 2010), can vary significantly across time and situations. Thus, contextual and relational factors have a major impact on the development, regulation, and maintenance of various students' difficulties, depending on how students' academic and social needs are met, affected, and addressed by school personnel (Bingham and Sidorkin, 2004; Hamre and Pianta, 2006; Kostøl and Mauseithagen, 2011). For example, students who experience a positive psychosocial environment and good relationships with teachers and fellow students also have higher academic functioning (Haapasalo et al., 2015), and meta-analyses have identified significant correlations between the quality of student-teacher relationships and student behavior, academic performance, motivation, engagement, and well-being (Emslander et al., 2025; Quin, 2017). Students with internalizing difficulties are especially vulnerable to poor psychosocial environments and the quality of teacher-student and peer relationships are, together with academic problems, identified as key school related factors for school absenteeism (Gubbels et al., 2019). The creation of a safe environment is also identified as an important signpost for interventions to promote school attendance and prevent school refusal (Heyne and Brouwer-Borghuis, 2022), and unpredictability in learning environments and fear of negative evaluation from peers are both central school related factors for school absenteeism (Dannow et al., 2018).

In the TRF, the concept of school functioning is operationalized through the indicators of work effort, behavior, learning capacity, and mood, and overlaps much with the indicators of social and emotional competence (SEC) understood

as a collective term for a range of skills related to the regulation of behavior, cognition, and emotion in interaction with others (Collie, 2020; Taylor et al., 2017). A key concept here is self-efficacy, understood as a persons' belief in their own capacity to achieve desired outcomes (Bandura, 1978). Self-efficacy is very much formed by previous accomplishments (i.e., mastery experiences) and psychological states, but also by observing others and being encouraged by teachers or peers. Altogether, self-efficacy is vital for students' persistence in activities, their school engagement and levels of defensive behavior. Extensive research has also documented a strong reciprocal correlation between students' school engagement and school functioning, particularly in the sense that improving social skills has a positive effect on school performance and participation in learning activities for students with internalizing difficulties (Cordier et al., 2021; Sancassiani et al., 2015).

This paper investigates how Norwegian primary school teachers reason when assessing students' general school functioning in Teacher's Report Form (TRF) (Achenbach and Rescorla, 2001). TRF is a standardized, validated scoring system, commonly used to assess adaptive and maladaptive functioning in school-aged children and adolescents, and the tool is applied and tested across a wide range of national contexts (Ivanova et al., 2007). However, few researchers have considered how teachers' reason when they assess students' general school functioning. The primary aim of this study was therefore, based on the use of TRF as a tool, to gain greater insight into the process behind teachers' reasoning about school functioning, compared to a typical student at the same age. Related to this, we wanted to explore how these assessments can assist teachers in identifying students with elevated risk for poor school functioning due to emerging internalizing difficulties.

We base our results on individual qualitative interviews with teachers ($n = 7$) who had filled out the TRF related to their students participation in a group-based indicative preventive intervention named 'Emotion'. This intervention targets students in grades 4–6 who exhibit symptoms of depression or anxiety. Emotion was evaluated in a factorial, randomized trial called The Echo Study (Neumer et al., 2021). Teachers used the TRF to assess students' general school functioning compared to typical students of the same age, through the questions: (1) how hard is he/she working, (2) how appropriately is he/she behaving, (3) how much is he/she learning (4) how happy is he/she? The variable values are as follows: (1) much less, (2) somewhat less, (3) slightly less (4) about average, (5) slightly more, (6) somewhat more, and (7) much more (Achenbach and Rescorla, 2001). This assumes that teachers have a clear idea of what constitutes normal functioning or a 'typical student' at the actual grade.

Numerous studies have addressed and discussed the psychometric properties of the TRF applied in different contexts internationally (Ivanova et al., 2007; Seleem et al., 2023), and in Norway (Kornør and Drugli, 2011; Stensen et al., 2023). Nevertheless, very few studies have examined teachers' reasoning behind the assessments they apply. O'Neill and Liljequist (2002) explored the strategies teachers used to complete the questionnaire and identified eight main strategies, often used in combination. Observing students in different situations was by far the most frequently used strategy, whereas only 1.8% of the teachers in the sample used comparisons with students of the same age. This is interesting because the TRF explicitly asks teachers to use such comparisons as a basis for assessing general school functioning.

On this background, the following research questions were formulated:

- RQ1: How do Norwegian primary school teachers reason when scoring students' general school functioning compared to a 'typical student at the same age' in TRF?*
- RQ2: How can such assessments assist teachers in identifying students at risk for poor school functioning and attendance?*

Based on the teachers' use of TRF in this study, we discuss how their understanding of whether a student behavior lies within or outside the range of typical functioning is helpful to identify students at risk for school attendance problems. Although the study concerns a given Norwegian context, it contributes to new knowledge about the topic, and the results may be transferrable to other contexts or settings regarding teachers' reasoning about characteristics of a typical primary level student and potential risk factors for poor school functioning and attendance.

Materials and methods

Study design

The current study utilizes a qualitative research design where data is collected through semi-structured individual interviews with teachers whose students had participated in the Echo study. During the Echo Study, teachers scored their students' academic and general school functioning in TRF at three different measurement times: at baseline, post-intervention, and after 12 months (Neumer et al., 2021). However, based on the overall aim and research questions of the present study, we were not interested in the actual TRF scores, but in the teachers' reasoning about what constituted a 'typical' or 'average' student in this age group, and what they regarded as warning signs for poor school functioning.

Recruitment and sample

When recruiting the sample, we started with a list of teachers from 22 different schools in different parts of Norway, who had completed the baseline questionnaire (*n* = 58) in the Echo study. Of these teachers, 20 were randomly selected and contacted personally via an email that provided information about the study and a request to participate in an individual qualitative interview. Time frame was set to approximately 40 min. Four declined, one accepted, and the rest did not reply. Thus, we moved on to a more targeted purposive sampling (Robinson, 2014), whereby the researchers contacted (by telephone or email) the principals of schools that were nearby or whom they knew well. The principals then forwarded the information to the relevant teachers, also assuring that participation in the interview was seen as appropriate time spent, as the school had consented in teachers being interviewed after the intervention was completed. The researchers scheduled interview times with the teachers at appropriate schedules. This resulted in a total of seven digital interviews. One teacher was also recruited for a pilot interview in the autumn of 2022. This interview was not audio-recorded but contributed to quality assuring of the interview guide. An overview of the sample is presented in Table 1.

TABLE 1 Overview of the sample.

Informant	Gender	Years of experience	Teaching subjects
1	Female	5	English, Norwegian, and CRPE*
2	Male	14	Mathematics, natural sciences, and physical education
3	Male	18	Norwegian and social studies
4	Male	6	CREE*, Norwegian, and physical education
5	Female	14	Norwegian, English, and social studies
6	Female	25	Norwegian, mathematics, social studies, arts and crafts, CREE*, food and health
7	Male	7	Norwegian, mathematics, social studies, CREE*, natural sciences, and physical education

*CREE, Christian and other Religious and Ethical Education.

Interviews and transcripts

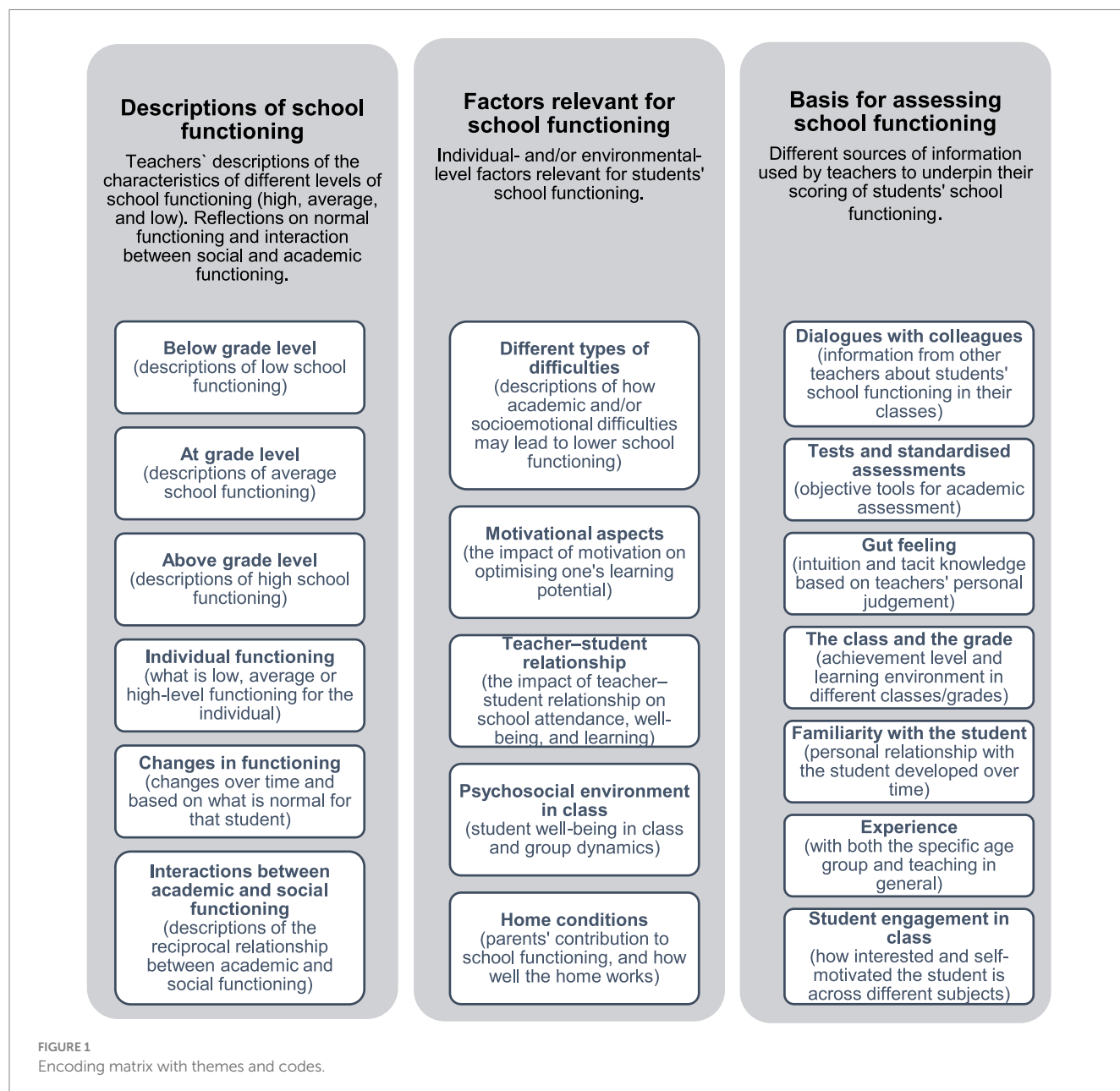
Based on the research questions, we developed a semi-structured interview guide addressing the scoring of students' general school functioning, including assessment of academic levels and what the teachers perceived as a typical student regarding work effort, behavior and mood, and the sources of information used for assessment. The interviews were conducted by two different researchers during November–December 2022. All interviews were conducted online, and audio recordings were made via *Nettskjema*. This is a platform, administered by the University of Oslo, to ensure safe collection and storage of research data in accordance with the national regulations to processing of personal data. The interviews were transcribed non-verbatim, meaning that most utterances like “uh” ah,” and “yeah” were removed. Moreover, some unfinished sentences and irrelevant details were not included in the final data extracts, and these passages were marked with [...], whereas thinking pauses were marked with ... Still, it was important to retain the information from the verbal account as true to its original form as possible (Braun and Clarke, 2006). Although some nuances may be lost in the translation from Norwegian to English, all authors of the present paper have checked and approved the included data extracts to ensure that the original meaning has been preserved.

Thematic analysis: coding and analytical procedure

As mentioned, the choice of analytical strategy affects the strength of the collected data (Malterud et al., 2015), and in our study we chose to use abductive thematic analysis combining a theory-driven, deductive approach with a more empirical, inductive

approach (Thompson, 2022). This approach provides a sound structure and integrates reflexivity in the analysis of textual data derived from small samples (Mackieson et al., 2018). In the analytic process, we followed the five steps of Braun and Clarke (2006, 2022): (1) data familiarization, (2) generation of initial codes, (3) identification of themes, (4) review of themes, and (5) definition and naming of themes. Two researchers coded the material separately, and then they reviewed and revised the codes by adding, removing, and merging codes and sorting them into different themes. Regarding the question of thematic saturation, understood as the point where no new codes or themes emerge from the data, Braun and Clarke (2021) advocate the open sharing of code definitions and examples of codes and themes to improve transparency and give the reader insight into the authors' epistemological assumptions. In the last phase, one of the researchers reviewed all codes and themes before a final matrix was prepared, which consisted of three main themes and 18 codes (Figure 1).

By developing an initial codebook including full definition of codes and thoroughly discussing and resolving any inter-coder discrepancies, we enhance the inter-coder reliability. Still, the necessity and relevance of a codebook is debated among qualitative researchers (Thompson, 2022), and instead of using absolute and written criteria for inclusion and exclusion, the researchers in our study discussed coding choices and the labelling, terminology, and definitions applied in the coding matrix throughout the coding process. It was important to avoid themes too closely resembling the topics in the interview guide while at the same time allow the codes to be guided by, but not determined by underlying theories (Thompson, 2022). Theory gives the analysis its foundation and facilitates analytic power (Braun and Clarke, 2022). Since the TRF defines general school functioning based on the four indicators of mood, work effort, behavior, and learning capacity, relative to average or typical functioning, it was appropriate for us to code the material based partly on these dimensions. However, we also introduced new data-driven codes, such as the classroom



psychosocial environment, the importance of home conditions, and the relationship with the teacher.

Validity and reliability

Validity concerns the quality of the conclusions drawn from the collected data rather than the methodological design, and validity can be threatened by, for example, overreporting how often something was said or failing to communicate important nuances in the material (Shadish et al., 2002). Construct validity is also particularly challenging because it relates to how questions are operationalized in the interview guide and the risk of construct underrepresentation or irrelevance (Kleven, 2008). The former meant that we fail to ask relevant questions about the construct of interest or ask questions that elicit much irrelevant information. Regarding reliability, the researcher effect (Cohen et al., 2017) could have been influential because the interviews were conducted by two different researchers. However, a pilot interview conducted by both researchers together, allowed us to identify potential pitfalls, and identified the room for individual adaptation in the semi-structured interview guide (Qu and Dumay, 2011). The themes included in the final guide were: (1) professional experience, background, and current work situation, including experience with students of different ages and subject backgrounds; (2) scoring of students in different subjects, including the sources of information used, why students were considered far below or above average, and what individual or environmental factors that may contribute to poor school functioning; and (3) scoring of students' general school functioning, including what the teachers perceived as a typical student regarding work effort, behavior and mood, and the sources of information used for assessment. We also asked the teachers about what they regarded as warning signs for poor school functioning.

Compliance with ethical standards

One of the authors of this paper is the national project leader of the Echo study, and several other authors have been involved in the design and implementation of the study. Still, none of the authors have economic or commercial interests in the intervention applied in the Echo study or in the TRF. The Regional Ethic Committee (REC) approved the Echo study (ref. no. 28761), and this additional qualitative study was also approved by the Norwegian Agency for Shared Services in Education and Research (SIKT). Informed consent from the teachers was obtained in accordance with the Declaration of Helsinki and the Guidelines for Research Ethics in the Social Sciences and the Humanities. Since the teachers did not refer directly to individual students or third parties but only gave information about their general reasoning when filling out the TRF, no sensitive data were gathered, and little ethical risk was associated with the material.

Results

The results are presented across the three main themes identified in the coding matrix (Figure 1), to answer the two main research questions of the study. The informants are referred to as i1, i2, etc. based on the sample description in Table 1.

Assessments of typical school functioning

The informants broadly agreed that all students in some ways were 'typical'. One teacher explained, 'In my eyes, they are all typical, even though they are different in their own ways' (i6). Related to this, the informants expressed that what is regarded as typical or normal for the individual is not so easy to generalize to other students as 'every child has his or her normal' (i1), and that even if some students struggle more than others, 'one must look at what is good effort for them' (i1).

For academic assessment, the teachers often found it hard to identify poor academic functioning in less theoretical subjects like social studies and physical education. In the absence of standardized tests, it is much up to the teachers' personal judgement or what some of them called 'gut feeling'. Here, knowledge of the individual student was regarded as an important basis for assessment: 'I feel like you could base it on, almost nothing, because you know them after a couple of—or 3 years' (i2), and 'it is really not that difficult to make assessments when you know the students so well' (i6). This personal knowledge also weighed heavily if different teachers had different opinions of the students: 'I think that most teachers know their students well enough to ultimately trust their own gut feelings and opinions' (i1). Other teachers said much of the same and added previous experiences with the age group as important bases for assessment: 'It is an overall assessment based on experiences I have had with the student group and previous experience with groups of students of the same age' (i7) and 'it becomes an average standard that I kind of make in my own head' (i3). When the teachers described what they regarded as a typical student's learning capacity and work effort, based on age, it largely concerned the student's independence, self-motivation, and academic comprehension in working on assignments in class:

It's kind of hard to say ... what a typical student is. It's tempting to say that's the 'dream student', right? But that's not it. I think that a typical student [...] you expect a sixth grader to be able to take a message and sort of do what is expected of them without too much guidance. (i1).

Regarding mood, the teacher informants described typicality here as the mood being generally steady, with certain fluctuations due to the student being tired or unfocused. However, like informant 2 said, it is not normal to 'be unfocused all the time'. They also found it completely normal that students in grades 4–6 increasingly show that they find schoolwork boring.

School-related influences on school functioning and attendance

The teachers commonly agreed that the class environment is highly important for academic performance. One teacher says: 'It reflects everything. The class that I have now has a much better class environment, better behavior, and they perform much better as well' (i2). Another teacher said:

Class environment is really important. And at this school, the current sixth grade we have is divided into A and B, and in there

we have certain groups that are a bit stronger, in a negative sense. We've rotated the classes a bit, because those who are very good... they sort of end up in the background. They do not really dare to show themselves that much. Because there are others who take up more space. If a student comes to school and is anxious about speaking in class or anything like that, because of their peers, I cannot see it as anything other than negative. (i3).

A similar reflection was shared by a third informant:

The class environment, I think, is of great importance. A safe environment where it's okay to answer incorrectly, or okay to jump into something you are a little unsure about and give it a try. I think this has a big impact on whether someone scores below average'. (i7).

Furthermore, the teachers discussed the problem of narrow range of activities, limiting the students' opportunities to show their competence. Moreover, since active engagement as an expression of effort is often used as a basis for assessing academic performance, the teachers also mentioned that it could be both inhibited or facilitated by the class environment in terms of how safe it is to speak up and dare to try new things.

The teachers also reflected upon how difficulties related to motivation and concentration can prevent students from realizing their potential and functioning optimally:

A lot of other things happen during breaks and things like that, and they cannot keep up when mathematics starts in class. They sit afterwards and say they do not understand anything. Then, their attitudes become very like: 'But I cannot do this.' It's because they do not put effort into it. [...] They do absolutely nothing. They opt out instead of trying to do it right. (i5).

Related to this, the informant expressed a fear that such behavior may create a vicious cycle in which the students stop believing in their abilities, make less effort, fall behind, and eventually start skipping classes. She believes that this problem is more common among girls because they more often set a personal standard for themselves to "understand everything and know it all" (i5). Another teacher also talked about this and reflected upon why some students develop what she calls "lesson specific refusal," representing systematic non-attendance at lessons with subjects they find difficult, for example math (i1).

Reasoning about causes of concern

The teachers recognized that there may be many reasons for why students perform below their potential. One teacher said:

We do have some students who, perhaps initially, are placed at or above average, but for various reasons choose not to work, and as a result, in a way, score lower or start to fall behind because they either do not want to or cannot work for other reasons. We do have cases of this (...) A bit of underperformance. For different reasons. Some do it because they have difficulties at home. Some

do it because they have difficulties with themselves. Some just have not cracked the code, so to speak (...). (i1).

Examples of such "various reasons" were given also by other informants, where especially home conditions were referred to as the 'cornerstone' (i2) and the 'pillars' or 'scaffolding support' (i7) for students to function well at school. One teacher, for example, said that students may have problems absorbing knowledge because 'the focus is elsewhere. Maybe they bring problems from home that we know nothing about' (i6). Another teacher also reflected upon the importance of taking home conditions into consideration when understanding students who 'might be a bit outside of the norm socially and in terms of behavior and such' (i2).

Finally, the teachers made the point that general school functioning needed to be assessed and observed over time, to separate between random events and more enduring patterns of changed behavior:

But of course, when you see that a student suddenly has fewer friends or is always alone, or when no one interacts with them during class—they just sit there. Then you start to think. And this can happen over time. If there's an argument and someone is upset, it might last for a day, and then things go back to normal. But when you see it happening for weeks, then. (i2).

Sudden changes in behavior were also identified as a major cause of concern:

But it is also when we see increasing restlessness among students. I mean, if we notice that they start deviating from their usual behavior, the behavior that is normal for them I. [...] For example if a typically calm student suddenly begins to respond rudely and arrive late to class. Yes, you notice a bit of school avoidance or more of a class avoidance, right (.) if you have students who previously managed to stay focused, but they start becoming distracted and restless. And they show a negative change in behavior. (i1).

Summary of findings

To sum up, most teachers were keen to convey that they generally regarded all students as 'typical' or 'normal', and their reasoning centered much around person-relative comparisons (i.e., what was characteristic of the individual). These assessments required good personal knowledge of the student and the ability to observe changes in behavior and academic performance over time. However, the teachers also relied much on previous experience with students of the same age, and made some average standards based on this. Finally, they considered environmental factors (e.g., psychosocial class environments and home conditions) as highly important for students' school functioning and learning capacity.

Discussion

A prominent finding in our study was that most of the teachers highlighted the importance of assessing students' general functioning

based on the students' own 'normal' and what is typical for the individual. This aligns with O'Neill and Liljequist's (2002) findings showing that only 1.8% of the teachers in their sample used comparison with students of the same age as the main strategy for scoring general school functioning in the TRF. Nevertheless, the teachers shared some common beliefs about what behavioral shifts are normal for students of that age, including concentration, mood, and work effort. They also corrected themselves, stating that a 'typical student' is not the same as a 'dream student'. For learning capacity and work effort, the teachers placed great emphasis on students' ability to work independently, and they assessed typical functioning based on the students' self-motivated problem-solving. This is related to the students' self-efficacy and the levels of work effort and persistence in the face of obstacles (Bandura, 1978). According to Gustafsson et al. (2010), internalizing problems such as depression and anxiety may cause students to view their own capabilities in a more negative manner and thus may also affect their self-efficacy and academic confidence. Low self-efficacy for academic coping is also characteristic for students with school attendance problems (Ingul et al., 2019). Addressing the potential underlying causes of poor effort is therefore important to facilitate school functioning.

The teachers seemed to recognize that students in grades 4–6 gradually become less motivated for and engaged in schoolwork, and more explicitly express their boredom. However, the frequency of behaviors like being unfocused, angry or sad, seems to be perceived as a key characteristic for identifying less typical school functioning and help teachers identify students who might benefit from additional support regarding their SEC (i.e., their ability to regulate their behavior and emotions in social interaction) (Collie, 2020; Taylor et al., 2017). Improving social skills has also been identified as having a positive effect on school performance and engagement in learning activities for students with internalizing difficulties (Cordier et al., 2021; Sancassiani et al., 2015). Internalizing difficulties are found to be a true risk domain for school attendance problems and should be considered when assessing school functioning (Finning et al., 2019a; Finning et al., 2019b; Gubbels et al., 2019; Ingul et al., 2019). Thus, adequate identification of students' psychosocial problems is required to provide sufficient training of social and emotional skills, which in turn may contribute to better school functioning, belonging and school attendance.

Moreover, academic problems and poor psychosocial environments with low quality of teacher-student- and peer relations, may also be a risk factor for school attendance problems (Gubbels et al., 2019). A positive psychosocial environment is therefore very important, and our study revealed that the teachers were highly aware of how the classroom environment could inhibit or promote students' participation in learning activities. The teachers were also aware of their own role, recognizing that insufficient support in the classroom could hinder students from reaching their full potential. This finding is supported by previous research indicating that contextual and relational factors have a major impact on the individual student's school functioning (Gustafsson et al., 2010; Hamre and Pianta, 2006; Kostøl and Mauseithagen, 2011). An unsafe environment in which students are afraid of speaking up or making mistakes reinforces students' existing internalizing difficulties and withdrawals. For some students, this can also hinder help-seeking behavior, such as asking questions when they do not understand, which in turn contributes to reduced learning outcomes and lower academic functioning and attendance.

Moreover, our results indicate that a narrow range of activities in the different subjects may limit the students' opportunities to show their

competence. To broaden educational options and adjust educational tasks is identified as a core factor to promote school attendance (Dannow et al., 2018; Heyne and Brouwer-Borghuis, 2022). Maladjusted academic levels may also reinforce a tendency towards underperformance such as lack of effort or actively avoiding lessons in certain subjects. Several teachers in the study identified this as both a potential cause and result of low academic functioning and talked about a vicious circle of skipping lessons the students find difficult, which in turn makes it even more difficult for the students to keep up with the subject. This negative pattern is highly important to address at an early stage, to prevent school attendance problems from escalating (Hancock et al., 2013) and shows how assessment of school functioning is relevant for identifying students at risk for school attendance problems. Children struggling with school refusal or subject specific refusal are often not properly identified with their emotional difficulties and can be misinterpreted as lacking motivation (Thambirajah et al., 2008). Therefore, it is important that the teachers have sufficient time and opportunity to get to know their students, academically, emotionally and socially, enabling them to better understand the underlying reasons for non-attendance.

Our findings indicated that experience with the age group, overall teaching experience, and knowledge of individual students were all factors that the teachers in our study highlighted as decisive elements to assess school functioning. However, sustained misbehavior, and sudden changes in behavior and mood were both evoking concern among the teachers, and to identify this, they needed to know their students and observe them over time. This resonates with the findings reported by O'Neill and Liljequist (2002), where teachers very much rely on their experience with and observation of students in different settings and interactions, when assessing their school functioning. Hence, these factors may also be relevant when it comes to the validity of their TRF scores, since the TRF also asks teachers to rate how well they know the student (not well—moderately well—very well). Thus, the relevance of TRF as a tool for identifying students at risk for poor school functioning and attendance, depends much on the teachers' familiarity with the student.

The teachers also recognize the importance of family support and talk about the home as the 'pillar' or 'cornerstone' for students' school functioning. They recognize that problems at home can make it difficult for students to focus on class, and in turn contribute to subject-specific non-attendance or underperformance. Altogether these findings illustrate the complex interrelations between individual, school and home factors in school functioning and attendance as discussed by Kearney (2008), and how systemic thinking is useful to address and understand these relationships. A key implication for practice is that raised awareness on how teachers reason about typical school functioning, is vital to identify students' needs for additional support and thereby also reduce the risk for later negative trajectories and school attendance problems.

Limitations

The present study has some limitations. First, seven informants are modest, and we may have achieved richer data with a larger sample. Whether a sample of seven participants can provide sufficiently strong data depends on the purpose of the study, the quality of the interview dialogues, and the analytical strategy chosen (Malterud et al., 2015). In our case, the quality of the interview

dialogues varied somewhat depending on the comprehensiveness of the answers the informants gave, but we achieved suitable breadth of information regarding the informants' teaching subjects and professional backgrounds. Also, they had all filled out the TRF recently, which made it easier for them to recall their reasoning. Thus, we argue that satisfying information power was gained, and the collected data enabled us to address the research questions of the study. Nonetheless, we are aware that the shift of recruitment strategy from random to purposive sampling may represent a potential selection bias, and reflexivity in the analytical process is therefore highly important to strengthen the rigor and mitigate the bias. Thematic analysis is regarded as a highly suitable approach in this regard (Mackieson et al., 2018). Second, the small sample size may limit the generalizability or transferability of the research. However, since the informants represent different teaching subjects and school settings (i.e., urban and rural areas), their perspectives and experiences are likely to be relevant to the broader school community. Still, this transferability may be both an inductive and deductive process, where the first represents an abstraction of data obtained from a specific sample, setting and time to more general insights, and where the latter represents application of these insights to new situations and people (Drisko, 2024). Third, web-based interviewing represents a risk of some aspects of communication getting lost. Still, online methods are more flexible, convenient, and cost-effective, and may also be preferred over in-person interviews by the participants (Archibald et al., 2019). Fourth, there is a risk of interviewer-bias, where the wording of the questions or the interviewer's behavior can lead to an interviewee's response (Cairns-Lee et al., 2022). By using two interviewers and reflecting on our potential different impact on the interviewees, we mitigate this potential bias. One of the interviewers was directly involved in the development and implementation of the Echo study, whereas the other was more peripheral. This facilitated researcher reflexivity and provided a good basis for discussing inter-coder discrepancies in the analytical phase. Finally, overreporting and lack of nuance in reporting the findings are common threats to validity (Shadish et al., 2002). Therefore, we paid careful attention to include quotes from a good breadth of informants, and to highlight both similarities and differences in the informants' views and experiences.

Conclusion

Poor school functioning is a risk factor for school attendance problems, and we know that both academic and emotional difficulties play a role in this. How teachers reason about the causes of poor school functioning, and what is perceived as a deviation from typical or normal functioning, is therefore important in order to help students function better in their everyday school life and to prevent unwanted absence. Since the TRF is a widely used tool for identifying pupils who show signs of emerging or established difficulties related to school functioning and behavior, it is important to understand the reasoning teachers apply when assessing pupils in these areas. This, in turn, can form the basis for better prevention of school absenteeism, by gaining a better understanding of the teacher's perspective on what characterizes and contributes to good school functioning.

The main takeaway message from the current study is that teachers' understanding of age-based typicality is quite variable. First, teachers tend to base their assessments of general school functioning much on person-relative, rather than group-relative comparisons, e.g., what is normal for the individual student regarding work effort, behavior, learning capacity, and mood. Based on this actual use of the TRF, teachers' ability to identify students at risk seem to rely more on how well they know the student and what is normal for the individual, rather than on what they know about normal functioning for the age group. Thus, the teachers' familiarity with the student, and their ability to observe the student over some time and in different contexts, may strengthen the validity of the assessments and enhance TRF's role as a potential aid in identifying students at risk for poor school functioning and attendance. Second, teachers paid strong attention to the psychosocial environment in class, and how this may facilitate or inhibit anxious and/or sad students' school functioning through the provision of opportunities to show active engagement and dare to fail. This insight is important to aid teachers in their efforts to assess and understand students with school attendance problems, and to put focus on the role and mutual relationship between individual, school and home factors in school functioning and school attendance.

Data availability statement

The datasets presented in this article are not readily available because the dataset is only available in original Norwegian language. Requests to access the datasets should be directed to stine.m.ekornes@ntnu.no.

Ethics statement

The studies involving humans were approved by SIKT (Norwegian Agency for Shared Services in Education and Research). The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

SE: Writing – review & editing, Formal analysis, Methodology, Writing – original draft, Validation, Conceptualization, Visualization, Investigation. SH: Conceptualization, Writing – review & editing. JI: Writing – review & editing, Conceptualization. S-PN: Project administration, Writing – review & editing, Conceptualization, Funding acquisition. FA: Conceptualization, Writing – review & editing. EB: Methodology, Investigation, Conceptualization, Formal analysis, Writing – review & editing, Writing – original draft.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Generative AI statement

The author(s) declare that Gen AI was used in the creation of this manuscript. Generative AI was used to translate some of the quotes in the results section from Norwegian to American English.

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EDITED BY

Carolina González,
University of Alicante, Spain

REVIEWED BY

İsmail Seçer,
Atatürk University, Türkiye

*CORRESPONDENCE

Christopher A. Kearney
✉ chris.kearney@unlv.edu

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Framing chronic absenteeism and emotionally-based school absenteeism as public health problems

Christopher A. Kearney*

Department of Psychology, University of Nevada, Las Vegas, Las Vegas, NV, United States

Chronic school absenteeism (CSA) and emotionally-based school absenteeism or avoidance (EBSA) are highly prevalent conditions linked to multiple short- and long-term problems across academic, social-emotional, physical and mental health, family, and occupational and economic domains of functioning. In addition, CSA and EBSA occur disproportionately across vulnerable student groups and have been the focus of extensive preventative and intervention efforts. As such, CSA and EBSA may meet criteria as formal public health problems. This perspective article illustrates various ways of framing CSA and EBSA in this fashion utilizing contemporary public health models. Categories of public health models are emphasized in this regard and include ecological, systems and policy, epidemiologic and statistical, environmental and occupational, and behavioral and social science approaches. Each approach closely parallels research and other work regarding school absenteeism. The article is designed as a step toward advocacy for recognizing CSA and EBSA as formal public health problems contingent upon consensus among key constituencies in this area.

KEYWORDS

chronic school absenteeism, emotionally-based school absenteeism, public health, ecological, systems and policy, epidemiologic and statistical, environmental and occupational, behavioral and social science

1 Introduction

Chronic school absenteeism (CSA) and emotionally-based school absenteeism (or avoidance) (EBSA) have become increasingly severe problems among children and adolescents. The prevalence of CSA, often defined as missing at least 10% of school days, has risen in recent years among European [e.g., 20% in England (1)]; and American (28%) youth (2). Worldwide, 16% of children are not in school at all, a rate that is particularly elevated in central and southern Asia and parts of Africa (3). The prevalence of EBSA, defined here as school absences impacted by anxiety and mood disorders and related emotional conditions, sometimes also referred to as school refusal, is less well-documented and may be as high as 35% (4). Rates of emotional disorders among youth have skyrocketed in recent years and often co-occur with school absenteeism (5, 6). In addition, extensive school absenteeism is associated with significant impairment in academic, social-emotional, mental and physical health, and family domains of functioning (7). School absenteeism and school dropout are also associated with substantial, adverse long-term outcomes across economic, occupational, and health-related domains (8).

CSA and EBSA are addressed by professionals across a wide swath of disciplines such as child development, criminal and juvenile justice, education, medicine, psychology, public policy, and social work, among many others. This has led to a rich literature base and several common core assumptions: (a) school attendance/absenteeism are global issues; (b) school attendance/absenteeism rates differ substantially and especially across vulnerable student groups; (c) school attendance is generally associated with positive student outcomes and school absenteeism is generally associated with negative student outcomes; (d) school attendance/absenteeism are complex constructs impacted by multiple risk and protective factors; (e) positive interventions to enhance school attendance and reduce school absenteeism are generally but moderately effective (9). At the same time, however, disparate perspectives in this area have produced a scattered and uncoordinated set of terminologies, classification strategies, and assessment and intervention practices for CSA and EBSA (10). Calls have thus been made for integrative frameworks to enhance synthesis and collective action regarding these complex constructs [e.g., (11)].

One avenue for integrating various perspectives in this area is to formally recognize or declare CSA and EBSA to be *public health problems*. A public health problem is typically defined as an issue that negatively affects the health of a population, in this case primarily children and adolescents. Although often applied to medical conditions, public health problems have also encompassed nonmedical conditions such as social disconnection or intimate partner or community violence (12, 13). A public health problem may be differentiated from a public health *crisis*, the latter of which usually involves a particularly urgent situation that requires immediate, focused, and often emergency action to mitigate significant harm to a large population. Although CSA and EBSA are harmful, the conditions may not currently rise to the level of a public health crisis in most areas.

Framing an issue as a public health problem promotes more coordinated and comprehensive approaches to address the problem and carries several advantages. First, identification as a public health problem stimulates the mobilization of resources such as funding, personnel, and time to address the problem effectively. Second, identification as a public health problem advances the development and implementation of interventions that can most benefit the entire population, in addition to specific groups. Third, identification as a public health problem spurs policy development and advocacy in the direction of practices that best promote student health and well-being. Fourth, identification as a public health problem facilitates prevention and health promotion strategies to mitigate severe problems. Fifth, identification as a public health problem emphasizes a population-based approach and spotlights important health disparities among different demographic groups. Finally, identification as a public health problem promotes increased awareness and public knowledge of the problem at hand [e.g., (14, 15)].

CSA and EBSA match general criteria for identifying a particular problem as public health-oriented. These criteria include burden of disease/condition, vulnerable populations, and

availability of solutions (16). Burden of disease/condition refers to substantial and negative overall impact on a population, including social, economic, and other costs. Vulnerable populations refer to disproportional impact on specific groups (health disparities) vis-à-vis demographic, geographic, or income and other variables. Availability of solutions refers to the presence of effective preventative and treatment options that could be applied to the public health problem. These conditions apply well to CSA and EBSA (17, 18).

2 Contemporary public health models

The purpose of this perspective article is to illustrate various ways of framing CSA and EBSA as formal public health problems utilizing contemporary public health models. The following sections outline common categories of public health models (i.e., ecological, systems and policy, epidemiologic and statistical, environmental and occupational, behavioral and social science) and demonstrate how each parallels research and other work regarding school absenteeism (Figure 1). The article is designed as a step toward advocacy in this area should stakeholders actively contend that school absenteeism is indeed a population-level public health problem.

2.1 Ecological models

Ecological models of public health emphasize the interconnectedness of numerous factors that impact a particular health outcome. These factors are typically organized into levels of influence to recognize the fact that individuals interact with their surrounding environment and that health conditions are thus influenced by multiple levels of determinants. Many of these determinants are nonmedical in nature and can include living environments, access to quality education and healthcare, financial stability, and social contexts, among others (19). Ecological models of public health have several variations (e.g., socio-ecological model) but many center on individual, interpersonal, organizational, community, and other variables to understand how complex health outcomes are shaped (20). Ecological models are also used to develop comprehensive health interventions by addressing factors at each level.

Ecological models of public health are quite amenable to CSA and EBSA. Researchers and other stakeholders in this area often gravitate to ecological approaches that emphasize multiple levels of risk and protective factors (21). These levels parallel classical ecological systems theory (22). Key risk factors for CSA/EBSA, for example, are commonly arranged across microsystem (e.g., child anxiety), mesosystem (e.g., child-parent/peer conflict), exosystem (e.g., school support), macrosystem (e.g., transportation vulnerability), and chronosystem (e.g., primary vs. secondary school) levels (23). In addition, treatments for CSA and EBSA are designed to enhance family-school-practitioner partnerships to address multiple contextual variables at various levels (24). Others utilize ecological approaches to understand

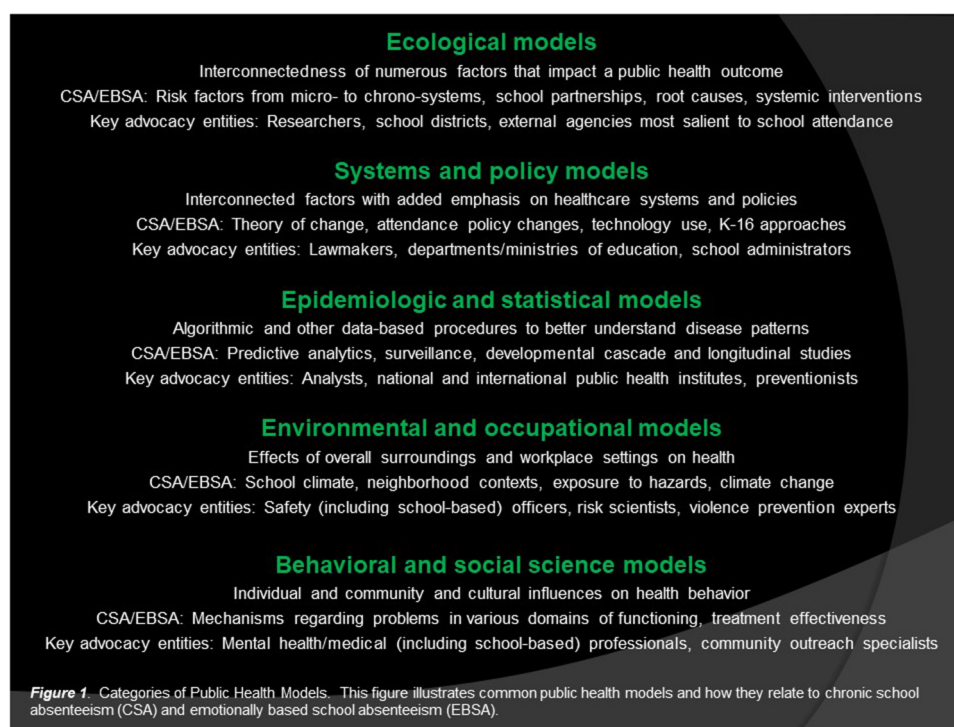


FIGURE 1

Categories of public health models. This figure illustrates common public health models and how they relate to chronic school absenteeism (CSA) and emotionally based school absenteeism (EBSA).

root causes and specific systemic interventions necessary to impact widespread CSA in given districts and geographical areas [see, for example, (25)]. Key entities for advocacy vis-à-vis ecological approaches include researchers, school districts, and external agencies particularly salient to school attendance (e.g., transportation).

2.2 Systems and policy models

Systems and policy models of public health also emphasize the importance of various interconnected factors for shaping health conditions, with an added and specific emphasis on healthcare systems and policies. As such, systems and policy models of public health are often utilized for large-scale, structural, or policy-level interventions. Examples include increased taxes on certain products, improved access to nutritious foods, zoning regulations, and harm reduction practices. Systems and policy models of public health have several variations (e.g., PRECEDE-PROCEED model) that emphasize a collective stakeholder approach to identify key problems and needs (and desired outcomes) and implement and evaluate solutions (26). Such models often work in backwards fashion to identify positive long-term outcomes, conditions that lead to such outcomes, and earliest changes that must occur in the current environment (27).

Systems and policy models of public health are quite amenable to CSA and EBSA. A theory of change approach, for example, has been proposed for these problems (9). This approach centers on

desired long-term goals or outcomes (e.g., readiness for adulthood), intermediate steps or outputs that produce such outcomes (e.g., enhancing attendance, social justice, shared alliances), and current conditions or inputs that might propel the outputs (e.g., changes in education, technology, climate). A theory of change creates a mutual vision among disparate stakeholders and can facilitate large-scale, structural, or policy-level interventions. Examples include eliminating inequities in how students are penalized for absenteeism (including exclusionary discipline) and enacting practices that foster tiered systems of support to boost attendance (28). Other applied examples might include adapting technology to better reach absent students and developing K-16 educational approaches to enhance flexible readiness pathways (29). Key entities for advocacy vis-à-vis systems and policy approaches include lawmakers, departments/ministries of education, and school administrators.

2.3 Epidemiologic and statistical models

Epidemiologic and statistical models of public health emphasize algorithmic and other data-based procedures to better understand disease trends and patterns, risk factors, and effective public health strategies. These data are also used for predictive purposes to forecast future areas of concern and thus assign resources more proactively to enhance public health (30).

Examples include issuing public warnings, closing schools, and developing more effective vaccines. Epidemiologic and statistical models of public health have several variations (e.g., triad, web of causation, disease transmission) that commonly emphasize a relationship between an agent, host, and environment to study how a condition develops and becomes distributed and to inform potential interventions [e.g., (31)]. In many such models, cases are categorized according to those susceptible, infected, and recovered and how people may move between these groups. Such models may be particularly useful for understanding chronic and complex public health problems that involve an interplay of multiple elements.

Epidemiologic and statistical models of public health are quite amenable to CSA and EBSA. The advent of large data sets in education and other (e.g., housing) agencies allows for machine learning, artificial intelligence, and predictive analytics to examine systemic root causes of school absenteeism in a given area and to track students separated from the educational process. Large data algorithmic and other analysis has been used, for example, to identify patterns of residential mobility and household and other variables that drive school absenteeism (32). School absenteeism is also used as a surveillance method for disease (33). Epidemiologic and statistical models that focus on how a condition develops and becomes distributed are also amenable to CSA and EBSA. Developmental cascade models of school absenteeism, for example, focus on how risk factors emerge and metastasize over time. An example is progression from school disengagement to school absenteeism to school dropout (34). Such models may be useful for clinical applications as well. Longitudinal work, for example, illustrates that children with emotional difficulties are at greater risk for specific types of school absences, which may help refine screening and early intervention efforts (6). Key entities for advocacy vis-à-vis epidemiologic and statistical approaches include analysts, national and international public health institutes, and preventionists.

2.4 Environmental and occupational models

Environmental and occupational models of public health emphasize how overall surroundings and workplace settings impact individual and population health. A focus is often made on understanding exposure to specific hazards and their dosage levels to control and minimize negative health impacts and to develop effective prevention practices (35). Examples include limiting exposure to chemicals, implementing safety regulations, and monitoring air and water quality. Environmental and occupational models of public health have several variations (e.g., risk assessment, environmental health paradigm) that commonly emphasize a relationship between hazard sources, exposure, dose, effect, and response (36). Such models may be especially useful for protecting particularly vulnerable populations, reducing instances of injury, and mitigating long-term effects of hazardous exposure.

Environmental and occupational models of public health are quite amenable to CSA and EBSA. Researchers in this area often

focus, for example, on school climate and neighborhood contexts with respect to school absenteeism. Key dimensions of school climate commonly associated with school absenteeism include degree of connectedness with peers and teachers, engagement in school activities, and safety (37). In addition, neighborhood-level variables such as resource deprivation, violence, and dangerous avenues to school impact absenteeism (38). Specific dosage levels are sometimes a part of research in this area as well, such as the number of adverse childhood experiences associated with levels of school absenteeism (39). Surrounding environmental conditions also relate to school absenteeism, including exposure to industrial hazards and pollution as well as dilapidated or inadequate physical facilities at school (40). Effects of climate change impact school absenteeism at proximal and distal levels as well (41). Each of these avenues of study provide potential targets for early and later intervention. Key entities for advocacy vis-à-vis environmental and occupational approaches include safety (including school-based) officers, risk scientists, and violence prevention experts.

2.5 Behavioral and social science models

Behavioral and social science models of public health emphasize individual and community and cultural influences on health behavior. A focus is often made on nonmedical factors that promote and deter healthy and harmful practices and inform interdisciplinary or biopsychosocial interventions (42). Examples include understanding factors that motivate early screening, healthy lifestyle habits, and compliance to treatment regimens and factors that reduce risky behaviors and stigma and other barriers to care. Behavioral and social science models of public health have several variations (e.g., health belief, theory of planned behavior, transtheoretical, social cognitive theory) that commonly emphasize a relationship between various psychological factors and health-based actions (43). Such factors can involve self-efficacy, decision-making, intentions, attitudes, and perceptions of health-based barriers, benefits, control, severity, susceptibility, and threats, among other beliefs. Such factors can intersect with broader processes such as social support, observational learning, and cultural contexts in dynamic or reciprocal fashion to influence health behaviors. Behavioral and social science models of public health incorporate these interconnected factors to better understand resistance to behavior change, consideration and action regarding health-based behaviors, and sustained behavior change toward positive health outcomes (44). Such insights can also inform effective public health interventions targeted to these various stages.

Behavioral and social science models of public health are quite amenable to CSA and EBSA. Researchers often focus on specific mechanisms that explain the relationship between school absenteeism and problems in various domains of functioning. Examples include mechanisms for how school absenteeism relates to problems in academic (e.g., less teacher-based instruction), social-emotional (e.g., fewer friendships), mental health (e.g., stress), physical health (e.g., medical appointments),

and family (e.g., conflict) functioning (7). In addition, a focus is often made on mechanisms of mental health and other treatment that best support a return to school attendance. Examples include improvements in self-efficacy, sleep, coping ability, and social and academic competence [e.g., (45)]. Indeed, a lengthy clinical research history is associated with various forms of CSA and EBSA. Key entities for advocacy vis-à-vis behavioral and social science approaches include mental health and medical (including school-based) professionals and community outreach specialists.

3 Conclusion

Chronic school absenteeism and emotionally-based school absenteeism/avoidance could be considered critical public health problems, but only if those from various constituencies actively advocate for such an approach, and in conjunction with student and family voices. Advocacy in this regard involves gathering evidence from different perspectives, building coalitions, and communicating the scope and impact of CSA and EBSA to relevant stakeholders to drive change. Fortunately, CSA and EBSA have been examined via multiple approaches that parallel contemporary public health models. As such, the approaches may resonate well with professionals who work to protect and improve population health via prevention and promotion of well-being. School attendance and education provide the foundation for a healthy and fulfilling life. Adopting a public health approach to augment these processes would thus seem natural and morally appropriate.

Data availability statement

The original contributions presented in the study are included in the article/Supplementary Material, further inquiries can be directed to the corresponding author.

Author contributions

CK: Writing – original draft, Writing – review & editing.

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EDITED BY

Trude Havik,
University of Stavanger, Norway

REVIEWED BY

Christian Dalton-Locke,
University College London, United Kingdom
Marisa Marraccini,
The University of North Carolina at Chapel
Hill, United States

*CORRESPONDENCE

U. Neumann
✉ ursula.neumann@lvr.de

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Fostering school reintegration after psychiatric inpatient treatment: description and study protocol of an evaluation study about a rehabilitation program for children and adolescents with chronic school refusal (SchuTIng-stAR)

U. Neumann^{1*}, V. Just¹, L. Henke¹, M. Knollmann¹, S. Zellmer², M. Andzinski², S. Schmidtendorf³, M. Noack³, M. Föcker³, J. Seitz¹ and M. Holtmann³

¹LVR-University Hospital Essen, Clinic for Child and Adolescent Psychiatry, Psychosomatics, and Psychotherapy, Essen, Germany, ²The German Pension Insurance (DRV, Deutsche Rentenversicherung Westfalen), Münster, Germany, ³LWL-University Hospital Hamm for Child and Adolescent Psychiatry, Ruhr-University Bochum, Hamm, Germany

Background: School refusal among children and adolescents with mental health issues carries long-term risks for their educational trajectories, future employment, mental health, and social participation. Despite the availability of multiple treatment approaches, a significant number of adolescents continue to experience difficulties with school attendance following inpatient therapy or partial hospitalization. To enhance reintegration into school, a rehabilitation project called “educational participation and integration for children and adolescents with mental illness through a seamless stepwise rehabilitation program” (“SchuTIng-stAR”) was developed specifically for children and adolescents with severe and persistent school refusal associated with psychiatric disorders who are at risk of continued school attendance problems after psychiatric inpatient treatment or partial hospitalization.

Methods/study design: After describing the therapeutic rationale, the development, and the content of the program, the study protocol for its evaluation using both quantitative and qualitative methods is presented. The primary objectives of the evaluation are firstly to assess the effects of the treatment on psychological symptoms and school attendance, and secondly to identify factors that influence the participation and engagement of patients, parents, and other stakeholders involved (teachers, youth welfare services). The operationalization of outcomes, measurement methods and hypotheses regarding effectiveness are described. Measurements will be taken at three points in time: at the beginning of the rehabilitation intervention (T1), at the end of treatment (T2) for the main outcome and after a six-month follow-up period (T3) for follow-up assessment. Therefore, it is a one-group pretest–posttest design with follow-up period. Additionally, it is explained how interviews with families will be analyzed using qualitative content analysis.

Discussion: The formative and summative evaluation of innovative treatment programs for children and adolescents, including the perspectives of relevant stakeholders, is essential to ensure their sustainability and their integration into already existing services provided by health and social care systems. As chronic school avoidance is a multifactorial and complex condition and its course is often characterized by relapses, it is important to develop sustainable treatment approaches and to closely examine treatment commitment using qualitative methods. The discussion focuses on the extent to which the rehabilitation intervention and the study produce the expected results, and what factors might contribute to divergent outcomes.

KEYWORDS

school refusal, emotionally based school absenteeism, rehabilitation, school reintegration, mental health, school attendance, study protocol, children and adolescents

Introduction

Background

Attending school ensures that children and adolescents not only gain cultural skills such as literacy and numeracy and acquire general knowledge but also develop social skills and key qualifications for their future professional and private lives. This is closely associated to the opportunity to lead a self-determined and independent life and to participate equally and actively in social life, what has been examined in detail for years in the OECD Education report “Education at a glance”¹. The aim of compulsory schooling, which exists in Germany and several other countries, is to ensure basic education for all children, regardless of the social class, cultural background and financial status of their parents, and thus to enable employment and independence from social security systems.

Knollmann et al. (1) demonstrate that beside the persisting problem of missing robust data about school absenteeism, we can expect that in Germany about 5%–10% of children and adolescents show problematic school absenteeism despite compulsory education. While absenteeism is minimal in primary school, it increases over the adolescent years (2–4). Beside other risk factors, school absenteeism is one significant factor of school dropout (5). Klemm (4) reports that 5.7–6.9% of German adolescents leave school without lower secondary school certificate, which seems to consist over several years. Rumberger (6) describes as a consequence of absenteeism, that these children and adolescents are at greater risk of being unemployed or employed in lower paid jobs (p. 151). So, it is more likely for them to face financial insecurity or poverty, become dependent on social security systems, to suffer from mental and physical health problems (1, 7–10) or to engage in criminal behavior (2, 6).

Reasons for school absenteeism are manifold (11–13) and various attempts have been made to categorize its different forms. A fundamental differentiation exists between truancy and school avoidance or school refusal. Truancy is typically defined as a deliberate absence from school, whereas school avoidance or school refusal results from emotional problems like anxiety, depression or bullying (13, 14). However, the terms are less clearly defined in the literature than it might initially appear (15, 16) and there are various criteria for subdivisions, such as function for basic needs or interpersonal relationships, school law or type of behavior (17). Havik et al. (13) outlines the careful clarification of the terms used to reveal and challenge potential preconceptions, such as equating truancy with intentional misconduct vs. recognizing school refusal as response to emotional distress. They clarify differences between “School Refusal Behavior (SRB)” as an “overarching construct” for “child-motivated” absence from school, “Truancy (TR)” as “unauthorized” or “illegitimate absence”, “School withdrawal (SW)” caused by parents and “School Refusal (SR)” which is behavior to avoid “strong negative emotions while” or “prior to school” (p. 3–4). Tamlyn (15) suggests the term “Emotionally based school absenteeism (EBSA)” to describe patterns of School Non-Attendance where children or adolescents are unable to attend school due to emotional reasons, although it is not very distinctive in regard of concepts like authorized/unauthorized, internal/external problems or psychiatric diagnoses. But he emphasizes that this group of children and adolescents requires special attention because of a high risk of chronicity (3, 17).

School non-attendance is particularly high among youth facing mental health difficulties, and there is a large number of children and adolescents who are affected by psychological problems. Reiß (18) reports prevalence rates of mental health problems and specific anxious and depressive symptoms among children aged 7–17 years in Germany in the range from 22% to 18% between 2003 and 2017. During the COVID-19 pandemic, which took place mainly in 2020 and 2021, these rates increased to as much as 30%. Although the prevalence of mental health problems subsequently declined, it remained elevated at 23% in the second half of 2022. Witte (19) demonstrates that especially adolescent girls have experienced a marked increase in anxiety

¹https://www.oecd.org/en/publications/serials/education-at-a-glance_g1gha6b0.html

TABLE 1 Treatment elements.

Treatment module	Professionals	Components of intervention
Pharmacological and psycho-therapeutic treatment	Psychiatrists, Psychotherapists	Medical examination, monitoring or initiation of pharmacological treatment, assesment of symptoms and school avoidance (functional analysis), psychoeducational sessions, goal setting, teaching skills for problemsolving in school situations, peer contact and family situations, preparations for the first day in school, support in maintaining motivation for change, special therapeutic interventions according to the psychiatric symptoms (CBT and/ or 3rd-Wave interventions, including Multi-family-treatment) ⇒ in individual and group therapy setting ⇒ with children/adolescents and/or parents/ families
Nursing and educational treatment	Nursing staff, educational staff	Support in everyday life, training of everyday skills like preparation for school (training for using public transport, for social skills and planning skills), support in establishing leisure activities, counselling for parents and families how to manage challenging situations, accompaniment to school
Social service	Social worker	Organization of participation conferences, establishing networks of support with other care systems for the families, home visits, connecting parents and school, advice for teachers about the psychiatric symptoms, accompaniment to school
Other therapies	Occupational therapist, psychomotor therapists	Training of school and work-related skills, training of social skills, improvement of self-efficacy, concentration and planning skills
Participation conferences	Social worker, therapists, Pension insurance advisor, nursing and educational staff, teacher	Assessment and goalsetting, planning for the stepwise treatment, establisging of an interdisciplinary support system between (Rehabilitation project, school, therapists, family, youth welfare system), planing and monitoring the success, assessment for further need for support in family members
School	Teacher of clinic school	Training of school skills, preparation for first days at school, exchainging informations with the school

and depressive disorders in 2022 compared to prepandemic levels of 2019. Lester (20) mentions an impact of increasing mental health issues on school attendance problems in England, which is likely to take place in Germany too. Unfortunately, we have no recent data until now.

Previous research shows, that school absenteeism has complex interacting causes in family environment, personality, school and peer context (12, 21). Therefore, intervention programs targeting EBSA should take into account multiple life contexts and integrate different therapeutic approaches. Melvin and colleagues (22), in their “Kids- and Teens at School framework (KiTeS)”, demonstrate that, from a bio-ecological perspective, interventions should also target broader macro-level factors by engaging stakeholders from education, health, and youth services sectors.

In the case of EBSA it is important to focus on therapeutic concepts that address the existing psychological symptoms. Previous treatment approaches have shown that both, psychological symptoms and school absenteeism can be improved (23–26). However, the specificity of school-avoidant behavior has not always been targeted specifically and accompanied reintegration into school is rare. This could be the reason for relapses or progression of EBSA (7).

While there are a few programs for reintegration in school after psychiatric hospitalization or severe mental health issues in the USA and in Canada [cf. Tougas et al. (27)], they are rare in Germany. White et al. (28) describe that in the USA the number of young people with severe mental health problems and the necessity for inpatient treatment is increasing whereas the length of the treatment is decreasing. Because of remaining symptoms after the treatment and because of challenges that emerge from the step back to school itself (e.g., fear of

stigmatization, dealing with missed learning), there is need for help for reintegration.

Although rehabilitation, which aimed at restoring everyday life skills and work ability is available directly after inpatient treatment for physical illness [“Anschlussheilbehandlung” or early medical rehabilitation (29)] for example after neurological, orthopedic or oncological hospital treatment, there is no comparable offer after hospital treatment for mental health problems, especially not for children and adolescents and especially not focused on reintegration in school after times with school absenteeism before hospital treatment.

In the recent years it became obvious that increasing mental health problems (30) have an impact on many people’s ability to participate in work and social life (30–32). In Germany in 2016 a law called the “Bundesteilhabegesetz” (BTHG) (33) was passed and the Federal Ministry of Labour and Social Affairs initiated a funding program called “rehapro”, which aims at fostering model projects to introduce and research new interventions for prevention and early intervention in case of participation restrictions in work and social life due to medical handicaps. In accordance with the above-mentioned significant correlation between EBSA in youth and later employability, this program includes treatment which address health-issues in childhood and youth.

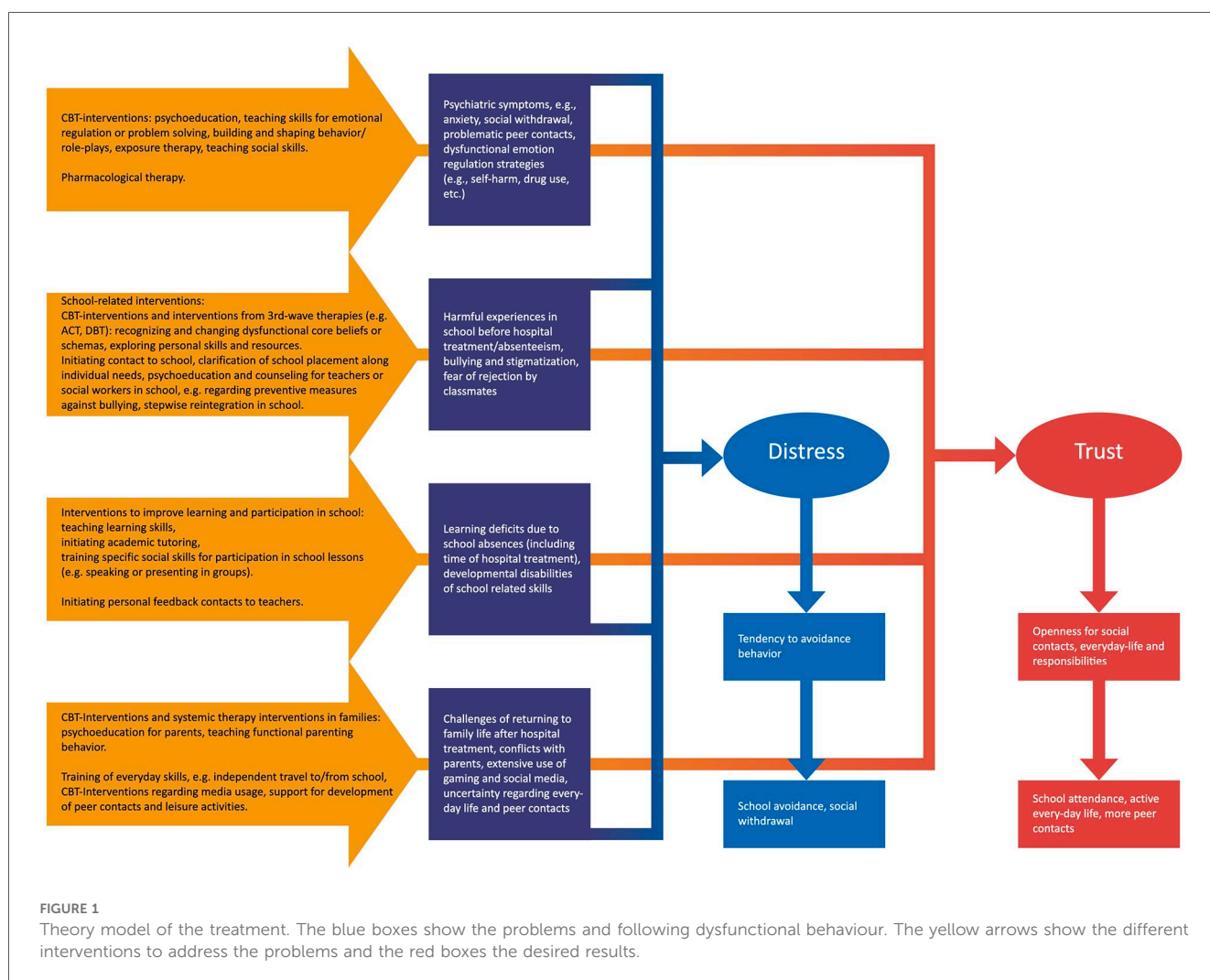
Therefore, the LWL-University Hospital Hamm, the German Pension Insurance and the LVR-University Hospital Essen formed a working group to develop a new rehabilitation project for children and adolescents: “SchuTIng-stAR”—an educational participation and integration program that helps children and adolescents with mental illnesses by focusing on seamless and stepwise rehabilitation. This project is for 12–18-year-old children and adolescents, who had received inpatient treatment

or partial hospitalization for mental health problems. It provides a rehabilitative care immediately following hospitalization. The objective of this project is to facilitate the full reintegration of children into school and to maintain this integration over time.

Recognizing the multifactorial and multisystemic nature of EBSA, the rehabilitation project includes child, family, and school-focused interventions, as well as counseling for teachers and the youth service members involved. Based on an existing psychiatric treatment program for EBSA (25) a rehabilitation program was adapted and extended, which resulted in a rehabilitation project for sustaining school attendance and social participation of patients with chronic EBSA after inpatient treatment. Following a stepped-care-approach, it includes different intensity levels ranging from inpatient-, partial hospitalization-, and outpatient rehabilitation. Our focus is specifically on addressing withdrawal and avoidance behaviour resulting from psychological symptoms, previous stressful experiences, and the resulting dysfunctional perceptions or negative expectations regarding reintegration into school. By enhancing emotional regulation, social skills, academic learning, and everyday functioning, we aim to strengthen self-efficacy, in turn, foster greater openness and motivation to engage in social

interaction, initiate activities, and develop confidence in managing everyday tasks such as attending school (see Figure 1).

There are frequent problems with school attendance after the inpatient treatment, which families are not always aware of. Knollmann et al. (1) describe that up to one third of adolescents with mental health issues who searched for clinical treatment showed persisting problems with school attendance or vocational training after 1.5–3 years after the first consultation. Therefore, we have sought to direct the parents' and adolescents' attention to the importance of successful reintegration and a stable school attendance early in treatment. Thus, we implement a close exchange with the previous treatment team of inpatient or partial hospitalization and invite the families to an early information session. Once they have decided to participate in the rehabilitation project, a participation conference takes place. There, all the assistance systems—inpatient or day care treatment team, rehabilitation team, school, family, adolescents, possibly already working youth assistance representatives—will be involved in order to exchange information about the current symptoms and discuss the need for support. An individualized treatment plan for school reintegration will be developed, and further support can be assessed.



The treatment is composed of individual and group sessions, parents' talks and parents' groups, occupational therapy and psychomotor treatment, social service and everyday support from an educational-care team (see Table 1). In the first phase treatment is continued in the inpatient or day care setting, then the treatment shifts more and more into the family setting. Thus, a combination of treatment elements in the clinic and prospective support in the daily environment takes place. In this way both can be served: further continuation of treatment for the underlying mental health disorder and gradual transfer and reintegration into everyday life. This includes supporting young people in more active leisure activities but also enabling families to communicate better with each other and to cope with everyday family life. Support for parents in challenging situations is also possible.

In the post-care phase, there are more outreach services including telephone support for acute problems. Due to the focus on school reintegration, it is also possible to accompany the child to school by members of the rehabilitation team for some time, if necessary. Participation conferences take place three times to ensure the exchange of all actors involved and the individual adaptation of the treatment. If one compares this design of treatment with the framework for interventions addressing school reintegration from Tougas (34), it fits for almost all nine steps of the framework.

Objective

The aim of this article is to present the study protocol for the evaluation of the described model project. On the one hand the evaluation study has a summative concern, by getting information whether the treatment can improve school attendance, reduce clinical symptoms and enhance participation of young people (main outcome) and whether these effects can be maintained in the long term (follow-up assessment).

The hypotheses are:

1. At the end of treatment psychiatric and school-related symptoms (e.g., anxiety, depression, problems with peers at school, problems with teachers) will improve, school attendance increases, and global functioning in daily life will improve, too.
2. The improvement could be maintained or even augmented in the following six months.

To this end, data on symptoms, school attendance and global functioning will be collected at three points in time: at the beginning of treatment, at the end of treatment and six months after the end of treatment. On the other hand, the formative evaluation aims to explore the acceptance of the treatment by the treated families, the treatment team and stakeholders. For this purpose, data will be collected from stakeholders and interviews will be conducted with children, adolescents, and their parents.

Methods and analysis

There are three institutions involved: The LWL-University Hospital Hamm is responsible for the implementation of the rehabilitation, the German Pension Insurance (DRV-Westfalen), which is in charge of the project, ensures the structural integration into the guidelines of rehapro and rehabilitative care. They are also involved in the participation conferences mentioned above. The LVR-University Hospital Essen will conduct the evaluation study, which has been approved by the ethics committee of Ruhr-University-Bochum (to which the LWL-Clinic belongs) and the medical department of the University Duisburg-Essen. The study is registered in the German Register of Clinical Studies under the ID DRKS0032415.

Study design

The presented study follows a mixed-methods approach: It is divided into a summative evaluation with quantitative data analysis and a formative evaluation with qualitative data analysis. The quantitative data analysis is based on a pre-post design with a six-month follow-up period. There is no control group; therefore, we have a prospective, non-randomized, non-blinded, single-arm pre-post design. Following Landes (35) and Curran (36) the study is a hybrid implementation-effectiveness study of type 1, because of both, interest and data collection in regard of effectiveness of the intervention and of information about factors that would facilitate participation for adolescents, parents and stakeholders.

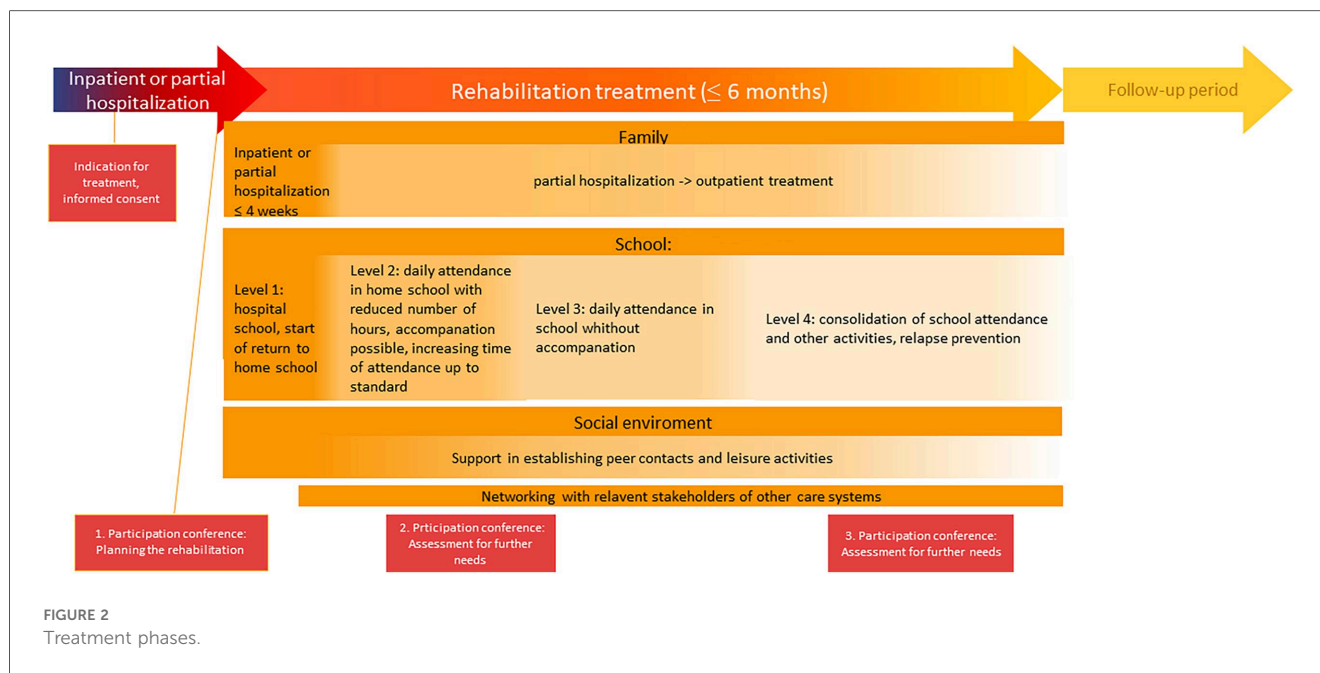
Patients will be recruited from inpatient and partial hospitalization units of the LWL-University Hospital Hamm. If the clinical treatment team identifies any prognostic evidence of problems with school reintegration after hospital treatment—such as persistent preadmission absenteeism or a tendency to anxious-avoidant behavior, which can't be addressed enough by hospital treatment—they may register the patient for the rehabilitation project during ongoing clinical treatment. There are standardized criteria (see below) which has to be met.

The children or adolescents and their parents will have a thorough consultation with the responsible therapists of the rehabilitation team to receive detailed information about the rehabilitation project and the evaluation study.

There has to be a written consent from both, children and parents, to participate in the treatment and the study. The families get the information that they may be admitted to the rehabilitation project regardless of participation in the evaluation study.

Provided the adolescents and their parents give their consent, the teachers and stakeholders of other care systems involved will be informed about the study and asked for written consent in the course of treatment, as they are not always known at the beginning.

Prior to the main study, we will conduct a pilot phase with 15% of the calculated number of participants (=25 participants) to assess the feasibility and to adapt the treatment program to clinical conditions.



Inclusion criteria

Inclusion to the study is possible when the following criteria are met:

1. The children and adolescents to be included in the project have to be 12–18 years old and receiving treatment due to a mental health problem according to ICD-10 in an inpatient or partial hospitalization unit of the LWL-University Hospital Hamm.
2. There has to be a period of at least 10% of time with school-absent behavior in the three month before hospital treatment. This is calculated as the percentage of hours missed in relation to the number of lessons scheduled. Clinical therapists are instructed to ask this information by admission of every patient. Even if there has been no school attendance for weeks or months, patients could be included.
3. The need for rehabilitation and the ability to benefit from rehabilitation has to be assessed by clinical therapists or doctors. No ICD-10 diagnoses are excluded *a priori*, but there has to be a positive prognosis regarding the success of the treatment. Therefore, criteria like medical need, physical and psychological ability to participate, basic consent about the treatment goal (reintegration into school), need for support in daily life or other limitations to participate in society are checked. This means vice versa, that a lack of basic group skills (e.g., communication skills or acceptance of group rules), acute suicidal tendencies or aggressiveness toward other patients or caregivers are exclusion criteria.

If all inclusion criteria are met, the information will be passed to the rehabilitation team, in order to contact the families for further information approximately halfway through the ongoing treatment time. The inclusion will take place after the informed

consent and the treatment contract have been signed. The beginning of the rehabilitation project coincides with the ending of hospital treatment. The patients remain in the same treatment unit of the LWL-University Hospital Hamm, but the rehabilitation team, which comes to the inpatient or partial hospitalization unit especially for the included patient, will replace the treatment team.

Sample size and randomization

Our aim is to recruit a total of $N = 162$ children or adolescents for the rehabilitation project and the study. Based on an estimate of the number of adolescent patients which showed problems with school attendance and problems with reintegration into school after psychiatric hospital treatment in the LWL-University Hospital in Hamm in the year prior to the study, we arrived at a treatment figure of 162 for the duration of 24 month of the study. To every adolescent included in the study is assigned a code consisting of a sequential number. For the interviews, a random selection of thirty cases was made previously on the basis of the codes from 1 to 162. The number of 30 cases was chosen to ensure a representative range of experiences and for possible mixed-methods analysis. At the beginning, all families will be informed about the data collection.

Exclusion criteria

Although the inclusion criteria are met, families may be excluded if their home or the school is too far from the clinic (more than 30 Kilometers). In this case the accompany to school or other outreach treatment elements are not possible. If

acute crises or physical illness occur requiring inpatient treatment (e.g., suicidal crises), the rehabilitation may be interrupted for up to two weeks and then continued seamlessly. If inpatient treatment is required for a longer duration (more than 14 days), the rehabilitation project will be terminated.

Exclusion from the rehabilitation can also take place if the inclusion criteria are no longer met, e.g., if motivation for active participation in therapies can no longer be maintained. These cases will be included in the evaluation as long as the agreement is obtained.

SchuTIng-stAR interventions

The rehabilitation project is parted into three phases with four treatment levels due to school attendance can be distinguished (see Figure 2).

First, there is a preparatory phase, which begins during the ongoing hospital treatment. It includes a consultation for information about the treatment, clarification of motivation, assessment for the including criteria and specification of treatment goals. As soon as the informed consent is signed, the first participation conference will take place where the multi-professional hospital treatment team, a representative of the DRV, the family, the adolescent and the multi-professional rehabilitation treatment team meet to specify treatment goals, special needs and treatment steps. On the same day as the end of the hospital treatment, the patient is admitted to the rehabilitation project.

At this point, the second phase of treatment starts. It continues in the previous setting (inpatient or partial hospitalization unit) and lasts a maximum of four weeks. Regarding school reintegration, the adolescents are at level one, where they either continue to attend the hospital school or can start with the return to home school. Besides establishing a therapeutic relationship with the adolescents, the focus is on psychoeducational elements and the concretization of treatment goals. Interventions based on CBT, including systemic therapy and of 3rd-wave therapy interventions, are used. It is offered in individual and group settings and targets still-existing mental symptoms—as well as building self-efficacy and resilience.

There is a home visit with the nursing staff and at least one therapeutic consultation with the parents as well as occupational therapy and psychomotor treatment. This is followed by the preparation for the return to the home school and the transfer to the home environment. After at least four weeks, the child is dismissed, transferred home, and the third phase of treatment starts, which includes level two to four of school reintegration.

In level two of school reintegration, the adolescents attend home school with a reduced number of hours. They can still be accompanied to school if necessary. The weekly therapeutic sessions in individual and group settings continue.

As soon as daily school attendance is possible without accompaniment, level three of school reintegration starts, which means that school attendance is gradually increased up to standard level and any remaining special arrangements at school are dismantled.

Level four focuses on strengthening the achievements in all areas (school, family, leisure activities) and intensive relapse prevention.

There will be two more participation conferences during the rehabilitation to assess further need for support. At this point, the completely family system is looked at to identify any need for support for other family members, which may affect the child's or adolescent's school attendance in rehabilitation.

Data collection and survey instruments

The first data collection (T1) takes place at the beginning of rehabilitation. The Strength and Difficulties Questionnaire [SDQ², (37, 38)] is used for the global assessment of mental symptoms first in the full-version and then in the follow-up version at the end of the rehabilitation (T2) and six months later (T3). This questionnaire is a very often used, short, easy and economical survey to assess emotional and behavioral problems. Although there are some subscales in the German version, which shows limited reliability, the total difficulties score demonstrates satisfactory psychometric properties, as well it shows overall good criterion and construct validity (39).

In addition, the Inventory of School Refusal [ISV (40)] is used at all three times (T1–T3), which consists of several scales measuring psychological symptoms and their impact on school attendance. A child version and a parent's version are available. We chose this instrument to get more information about school related symptoms. The evaluation study of Knollmann (40) showed good internal consistency and hints for discriminating validity to distinguish between symptoms.

For the individual attitudes and expectations towards further school attendance, the adolescents fill out the Self-Efficacy Questionnaire for School Situations (SEQ-SS³) (41) at all three time points (T1–T3). This questionnaire measures students' beliefs about their skills to manage different school situations. The reliability demonstrates good internal consistency (Cronbach's Alpha up to 0.83) and stable test-retest values (41). The surveys can be completed in the inpatient unit or at home, using a digital version implemented with the "Unipark"-tool.

To assess the level of functioning in daily life and activities, the Health of the Nations Outcome Scale for Children and Adolescents [HoNOS-CA (42)] is used, which can be completed by therapists, nursing staff or social workers after training. It's a short and easy-to-use instrument to assess overall psychosocial functioning from a professional perspective. Although there is heterogeneity in reliability and validity (43, 44) we decided to use it in our study to assess changes in everyday functioning. At T1 and T2, this is done face-to face, at T3 it is done after a home visit or a telephone call.

²<https://www.sdqinfo.org/a0.html>

³German version kindly provided from PD Dr. V. Reissner, Düsseldorf

To assess school attendance, information is collected from the students themselves, their parents and their teachers. We ask for the number of scheduled teaching hours (y) and the number of absent hours (x) to calculate the percentage of absenteeism ($p = x/y \cdot 100$). At T1, we ask about the rate of attendance in the last three months before admission to the clinic, at T2 we ask about the rate in the last four weeks before the end of rehabilitation and at T3 we ask about the rate in the last four weeks before the measurement. In addition, we ask at T2 which proximal school level is being targeted (promotion to the next grade in the following school year or graduation) and at T3, whether it has been reached.

Further data, such as age, gender, type of school, duration of treatment, setting, and ICD-10 diagnosis are collected by interviewing the previous treatment team. Therefore, they receive the case-report form with several instructions for data collecting.

The questionnaires for the formal evaluation were designed based on key questions according to the object of research, which is to obtain information about the acceptance and active participation in the rehabilitation project. They consist of 20–27 items that can be answered on a 5-point Likert-scale. They address the organization of the project (information transfer, transparency, cooperation of the treatment team and equipment of rooms etc.), the evaluation of several elements (therapy sessions, care and education, involvement of parents/ teachers/ youth welfare services, implementation of the stepped-care approach, participation conferences) and the changes experienced in daily activities, school attendance, family life, leisure activities and peer contacts. In addition, participants are asked if they would recommend the rehabilitation project to others.

Based on the same key questions, an interview guide was developed for parents and children. The interviews are semi-structured, which means that questions can be explained or developed in more detail. To ensure the quality of the interviews, the interviewers will be trained through role-plays. The interviews will be conducted at the clinic where the rehabilitation takes place and will be done by members of the research team. The audios will be digitally recorded and then transcribed according to a fixed transcription guideline.

Data analysis

Quantitative data analysis

We will do statistical analysis, for example variance analysis with repeated measurement and chi-square tests to evaluate following hypotheses:

- a) Main outcome: In regard of the development of school attendance and school related symptoms during treatment: The overall symptoms (SDQ) and the school related symptoms (SEQ-SS, ISV) will improve significantly from the beginning of the rehabilitation project to the end of the treatment (SDQ, ISV: $T1 > T2$; SEQ-SS: $T1 < T2$). At least

75% of the participants show a regular school attendance, defined as $<10\%$ of absenteeism in school weeks during the period T2—four weeks. The global functioning in daily life improves significantly from beginning to end of treatment (HoNOS-CA: $T1 > T2$).

- b) Follow-up assessment: In regard of the development of school attendance and school-related symptoms after the treatment: The overall symptoms and the school-related symptoms will stabilize or improve in the 6 months following the end of treatment (SDQ, ISV: $T2 \geq T3$, SEQ-SS: $T2 \leq T3$). At least 75% of the participants achieve the proximal school goal and at least 75% of the participants show a regular school attendance, defined as $<10\%$ absenteeism during the period T3—four weeks. The global functioning in daily life is maintained or improved in the six-month following the end of treatment (HoNOS-CA: $T2 \geq T3$).

Data analyses will be performed with SPSS software.

Qualitative data analyses

For the formative evaluation, we will need self-designed surveys, which ask for the formative evaluation. They will be evaluated using summative scores and cluster analyses.

The interviews are based on a semi structured guide: there are predefined questions that can be explored in more depth interactively during the interview. The questions relate to the decision to participate in the program, which treatment components were offered and participated in, whether these were helpful, and how the cooperation within the treatment team or between stakeholders was perceived. In addition, participants are asked whether their goals were achieved and what exactly helped them to achieve these goals. Finally, participants are asked to summarize their satisfaction with the treatment. The interviews are conducted by trained researchers and then transcribed verbatim.

The analysis of the interviews will use focused analysis of qualitative interviews (45). In this technique, relevant categories are identified through intensive reading of transcripts interviews, summarizing passages and abstracting, then building codes that are fine-tuned by applying them to transcripts of further interviews. The generated codes then are used to find hypotheses about several formative evaluation questions, e.g., do the parents and adolescents think that the rehabilitation project is helpful, which aspects are important for their opinion, which aspects are important for acceptance of the treatment, which aspects are likely to cause a premature end? Then the interrelationship between the results of the quantitative and the qualitative analyses will be discussed.

Discussion

Because of the continuing high number of children and young people with mental illnesses (18, 19) and the associated fractures

in their educational biographies with long-term effects (1, 4), there is an urgent need to improve existing treatments and develop new approaches (1, 12). This is the concern of the described rehabilitation project. The individual and societal costs of low educational attainment, chronic absenteeism and avoidance are long-lasting and high (6, 10). In Germany, the social security system with health, long-term care, unemployment and pension insurance funds the treatment of these restrictions. However, this implies that these systems should work as efficiently as possible. Therefore, a scientific evaluation of all community-financed interventions is of high interest. This study aims to contribute to this.

Previous research on existing treatment for children and adolescents with EBSA shows that there are many helpful approaches especially for the treatment of mental illness (23–28). However, focusing on sustainable school reintegration and promoting participation in all areas of daily life is still little widespread (46). If the scientific evaluation shows that SchuTIng-stAR is an appropriate intervention, which is acceptable to families and has an impact on school attendance and mental health, this may help to ensure that the offer is continued and possibly extended to other clinics.

However, there are limitations to the systematic derivation of causal effects due to the research design. First, there is no control group. This was decided in order to ensure that as many children and adolescents as possible could participate in the rehabilitation project.

Second, the intervention is a completely new form of treatment. We hope to minimize the need for adapting the treatment during the study period by piloting first. But there still might emerge some aspects which leads to adoption or sharpening of interventions during the trial period, what will be documented thoroughly. This also limits the value of the data to be extracted.

Nevertheless, it seems reasonable and worthwhile to evaluate this intervention in this explorative way in order to gain insight into outcome trends relevant factors. The mixed-methods design with interview data and qualitative analysis methods also addresses the need to gain insights in a treatment setting that is as natural as possible. In this way, we can learn about not only the reduction of school absenteeism, but also about what makes it easier for children, adolescents and families to participate in such an intervention, and what leads to treatment refusal, dropout or lack of success.

We are confident that the study, despite its methodological limitations, can make a valuable contribution to understanding the difficulties that mentally ill children and adolescents have in attending school. So we can provide insights into the needs of support in the systems involved (family, school, youth welfare) to cooperate with each other in the best interests of the young people and to help to design effective treatment approaches.

Ethics statement

The studies involving humans were approved by Ethikkommission der Ruhr-Universität Bochum,

Ethikkommission der Universität Duisburg-Essen. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

UN: Writing – review & editing, Writing – original draft. VJ: Writing – original draft. LH: Writing – original draft. MK: Writing – review & editing. SZ: Writing – review & editing. MA: Writing – review & editing. SS: Writing – review & editing. MN: Writing – review & editing. MF: Writing – review & editing. JS: Writing – review & editing. MH: Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

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EDITED BY

Trude Havik,
University of Stavanger, Norway

REVIEWED BY

Marcin Moron,
University of Silesia in Katowice, Poland
Miriam Martín Galán,
Valencian International University, Spain

*CORRESPONDENCE

Katarina Alanko
✉ katarina.alanko@utu.fi

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Network analysis of school absence: central symptoms and their functions

Katarina Alanko^{1,2*}, David Heyne³, Martin Lagerström² and
Martin Knollman⁴

¹Centre for Learning Analytics, University of Turku, Turku, Finland, ²Department of Humanities, The Faculty of Human and Social Sciences, Åbo Akademi University, Turku, Finland, ³School of Psychology, Faculty of Health, Deakin University, Burwood, VIC, Australia, ⁴Department for Child and Adolescent Psychiatry, Psychosomatics, and Psychotherapy, LVR Clinic Dusseldorf, Heinrich-Heine University Dusseldorf, Dusseldorf, Germany

Objective: School attendance problems (SAPs) often develop and persist through complex interactions among numerous influences. This study used network analysis to identify: (i) the most central symptoms reported by youths with SAPs; (ii) the most central functions underlying those symptoms; and (iii) the relationships among symptoms and among functions.

Method: Self-reported symptoms and their functions were assessed via an online survey comprising the Inventory of School Attendance Problems. We analysed data from Finnish middle school students (*M* age = 14.9 years, range 12–17, gender: 40% male, 57% female, 3% other) reporting school absence of ≥10%. There were 349 responses for symptoms and 333 responses for functions. Network analysis was used to identify the most central symptoms and functions (nodes) along with the associations between different symptoms, and the associations between different functions (edges).

Results: Results indicated complex networks among the symptoms and among the functions. Depression emerged as the descriptively most central node in both networks. In the symptoms network, it showed moderate links to Performance Anxiety, Aggression, and Social Anxiety. In the functions network, its strongest links were to School Aversion/Attractive Alternatives and Social Anxiety. Social Anxiety was also highly central in the functions network, with links to Agoraphobia/Panic and Problems with Peers. All 13 nodes were interlinked in both the symptoms and functions networks, reflecting widespread co-occurrence among symptoms and among functions.

Conclusions: Depression's central position across both the symptom and function networks may make it a valuable intervention target, even when other symptoms are also salient.

KEYWORDS

school absence, network analysis, adolescence, symptoms, functions, inventory of school attendance problems

1 Introduction

For some youth, school is not experienced as a supportive place to learn and grow, but rather as a source of distress that can contribute to persistent absence (1). Such difficulties are often captured under the umbrella of “school attendance problems” (SAPs), a collective term for the range of difficulties youth can experience when it comes to going to school or staying there (2, 3). SAPs develop over time, and occur on a dimension of problem severity, ranging from school reluctance, in the form of verbally expressing distress about going to or being at school, through occasional

absences, to long periods of continued absence (4). A 10% threshold is used in many countries as a cut-off for describing absence as problematic (e.g., (5–7)). Short- and long-term consequences of problematic absence from school include academic problems, social isolation, mental health problems, and difficulty completing secondary education (2, 3).

There is substantial heterogeneity in the reasons for SAPs and the ways they present (2, 8). Reflecting this heterogeneity, SAPs have been studied not only collectively, but also according to specific types. Heyne et al. (2) outlined four main types, namely school refusal (hereafter referred to as emotion-related absence), truancy, school withdrawal, and school exclusion. Emotion-related absence (i.e., when a young person is reluctant or refuses to attend school because of emotional distress) occurs among 1%–7% of youth in the general population and 5%–16% of youth in clinical settings (9–11). Truancy (i.e., being absent without the permission of parents or school) occurs among 20% of middle school youth on an occasional basis, and among 4% more frequently (12). The prevalence of school withdrawal (i.e., when a parent directly or indirectly supports absence) and school exclusion (when a school directly or indirectly supports absence) is less well-established (13, 14). However, a recent study indicated that 3.9% of middle school students reported school withdrawal, and 1.7% reported school exclusion (15). Absence from school due to illness is common, occurring among 22% (12) to 35% (16) of middle school students during the prior month. Illness absences may stem from common subjective health complaints such as headache and nausea, and may be related to anxiety (10). Overall, the prevalence of SAPs appears to be rising (6, 7, 12), especially after the COVID-19 pandemic (17, 18). Given this, and the detrimental impact of SAPs on young people, interventions to prevent and reduce SAPs are urgently needed.

Comprehensive assessment is central to understanding SAPs and planning intervention (19). Symptoms are often co-occurring, making it difficult to identify the most relevant targets for intervention (20). For example, Ingul and Nordahl (21) examined the impact of various psychosocial factors on school attendance by comparing high school students with and without SAPs, but with identical levels of school anxiety. They found that problems such as fewer having friends at school, being bullied, and not being treated with respect distinguished anxious non-attenders from equally anxious attenders. Also, bullying is more strongly associated with emotion-related absence than truancy in primary schools, while social isolation was more frequent among lower-secondary students with emotion-related absence (10). Another example is the common co-occurrence of depression and anxiety (22), which not only frequently overlap but also impact areas such as social interaction and physiological processes, including sleep and appetite (23–25). Indeed, just as particular depressive symptoms may contribute to the development of other depressive symptoms (23), symptoms associated with SAPs may contribute to the development of other SAP-related symptoms. Furthermore, just as alleviating a depressive symptom may reduce the severity of other depressive symptoms (26), we propose that alleviating a symptom associated with SAPs could help reduce not only related symptoms, but

possibly the SAP itself. These patterns highlight the importance of identifying core symptoms that may be central to the prevention and amelioration of SAPs.

Expanding beyond symptom identification, researchers have also sought to understand the “functions” of SAPs. First, Kearney and colleagues (27, 28) distinguished between functions related to negative reinforcement and those related to positive reinforcement of school absence. Negative reinforcement includes the avoidance of negative affect that would otherwise be experienced at school, and the avoidance of social and/or evaluative situations at school, such as feeling embarrassed in front of others. Positive reinforcement of absence includes receiving attention from significant adults when staying at home, and gaining access to more satisfying activities outside of school. Kearney’s functional model is operationalized in the School Refusal Assessment Scale (and its revised versions), a widely used questionnaire that focuses on the functions of behavior in young people with established SAPs (28, 29).

Second, Knollmann and colleagues (30) conceptualize function—also referred to as impact—as equivalent to the reason for the SAP. This conceptualization informed the development of the Inventory of School Attendance Problems (ISAP), which explores both symptoms and their functions in parallel. Although symptom-function correlations are generally high (30, 31), it is theoretically possible that they may differ. For instance, a young person may report symptoms of depression, yet identify their primary reason for non-attendance as a desire to stay home with a parent. Furthermore, just as multiple SAP-related symptoms can co-occur, multiple functions may co-occur as well.

The ISAP is a relatively recent assessment tool, notable for two reasons. First, it enables the assessment of a broad range of factors potentially associated with SAPs, spanning individual, family, social, and school domains. Second, it allows for the simultaneous assessment of both the symptoms potentially associated with SAPs and the function each symptom may—or may not—serve in contributing to school absence. The relevant subscales are referred to as ISAP-S (symptoms) and ISAP-F (functions).

Based on research with a sample of German youth aged 8–19 years with school absence, recruited from outpatient child and adolescent psychiatry/psychotherapy clinics (i.e., specialist-referred), Knollmann et al. identified 13 factors across the 48 items of the ISAP by combining scores from the ISAP-S and ISAP-F scales. These factors are: Depression, Social Anxiety, Separation Anxiety, Performance Anxiety, Agoraphobia/Panic, Somatic Complaints, School Aversion/Attractive Alternatives, Aggression, Problems with Peers, Problems with Teachers, Dislike of the Specific School, Problems Within the Family, and Problems with Parents. The psychometric properties of the ISAP have since been examined in two studies using community samples, with support for the 13-factor model found through confirmatory factor analysis in both the Finnish and Swedish translations (32, 33).

Given the frequent co-occurrence of symptoms and their respective functions, a thorough investigation to their interrelations is warranted. However, even with detailed assessment, it may be difficult to identify core symptoms and functions that should be prioritized in intervention planning. In

the initial study on the ISAP, Knollmann et al. (30) reported high correlations between most scales (e.g., Depression and Social Anxiety: $r = .56$; Aggression and Depression: $r = .44$; Problems with Peers and Social Phobia: $r = .57$). This pattern is consistent with findings from the School Refusal Assessment Scale—Revised, which is based on Kearney’s functional model [e.g., Negative Affectivity and Social/Evaluative Fears: $r = .61$; cf (31)]. These findings, based on clinical samples, underscore the need to clarify the interrelations among symptoms and functions associated with SAPs. In addition, empirical knowledge is needed to identify core symptoms with a high functional impact—those that might serve as key intervention targets—both in clinical samples and in non-referred samples displaying early signs of SAPs.

Network analysis offers an innovative method for examining nuanced relationships at the item or factor level. It serves as an alternative to the latent variable approach used in traditional confirmatory factor analysis. In network analysis, direct associations (“edges”) amongst items or factors (“nodes”) are thought to constitute the latent construct itself (34). These factors, and their internal relationships, are conceptualized as active components that contribute to the development and maintenance of a disorder or phenomenon (35). Unlike traditional models, network analysis does not require pathways to be specified *a priori*. Instead, all potential pathways are estimated while accounting for the influence of all other variables in the model, after which the network is regularized to produce a clear and interpretable visual representation. Since many potential network models are estimated, regularization is used as a model-selection technique to overcome the problem of multiple comparisons by punishing more complex network models (i.e., models with a higher number of edges) that are hard to interpret (36). The most commonly used regularization technique for network models is the least absolute shrinkage and selection operator (LASSO); it detects edges that are weak and thus likely spurious (i.e., false positives), removing them from the network and rendering a sparser and more interpretable network model (36).

Central symptoms within a network are those that are most strongly connected to other symptoms (34). The absence of an edge between two variables indicates conditional independence—that is, any shared variance is accounted for by other variables in the network.

In sum, the ISAP provides a comprehensive framework for assessing SAPs. It captures both the symptoms experienced by young people and the functions those symptoms may serve in relation to school absence, across individual, family, social, and school domains. This provides a unique opportunity to study the interrelationships among symptoms and functions, and to identify those that may be most central to SAPs. Such knowledge has the potential to inform intervention efforts for young people with more concerning levels of absence—the focus of the current study—by highlighting symptoms or functions that could be prioritized in support planning.

The present study addressed two exploratory research questions using network analysis. First, when controlling for the complexity of

factors associated with SAPs, are some symptoms more central than others? Second, are some functions more central than others? To ensure a clear focus on problematic absence—specifically SAPs, rather than occasional absences or reluctance to attend school despite regular attendance—the study was conducted with youth reporting $\geq 10\%$ absence from school.

2 Method

2.1 Participants, sampling, and process

The current study drew upon data from the “School Absence in Finland” project.

Youth were recruited via 15 Finnish schools agreeing to participate in the project. Schools were recruited via numerous channels: (1) the webpages and email lists of organizations for teachers and principals; (2) teacher organizations’ social media channels; and (3) various Facebook groups for school professionals. All channels shared information about the study and invited school personnel to participate in an online seminar in which the project was presented. The online seminar was conducted in January 2021, comprising presentations about school absence and information about the project. The 15 participating schools were located in southern and western Finland. Participating schools emailed parents with information about the project and requested consent for their child’s participation. The parents of youth below 15 years were asked to complete an informed consent for their child’s participation in the study. In addition, youth of all ages provided informed written consent at the time of data gathering.

Survey data were collected from youth during school time in May 2021. A research assistant or teacher was present in class during data collection to answer any questions and provide technical assistance if needed. To obtain data from persistently absent youth, school personnel engaged in individual outreach—contacting absent youth directly, visiting their homes if necessary, and inviting them to complete the questionnaire. The responses of 42 youth were collected in this way.

Data were initially collected from 2,137 youth, through both school-based administration of the questionnaire and individual outreach. Of these, 271 cases (12.7%) were excluded principally due to lack of consent, implausible age, or excessive missing data. From the remaining 1,866 respondents, we selected a subsample of 370 youth (19.8%) who self-reported school absence of $\geq 10\%$ over the past 12 school weeks. This subsample was inspected for patterns of missing data, which were imputed where possible (see Data Analysis section for details). In the present analyses, we focused on youth with $\geq 10\%$ school absence. In an earlier study using the full sample, where “days absent” was included as a separate node, the overall network structure was highly similar (32). In the current models, we did not include “days absent” as a node, because the questionnaire items were explicitly framed in relation to school absence, making its inclusion redundant. Importantly, the similarity of the network structures across the full and high-absence samples

suggests that the associations identified are highly similar. An additional item in the ISAP asked youth to estimate how many days they had been absent from school during the past 12 school weeks. The researchers did not ask participants to distinguish between authorized and unauthorized absences. Response options were: 1 = Not at all, 2 = Sometimes (up to 4 school days missed), 3 = Often (5–12 school days missed), 4 = Very often (13–36 school days absent), 5 = Most of the time (37–48 days missed), and 6 = (Almost Always (more than 48 days missed). Responses ≥ 3 were selected. The included options correspond to absence $\geq 8.3\%$ of the previous 12 weeks (where 12 weeks corresponds to 60 school days).

The average age of participants in the final sample was 14.91 years ($SD = 0.84$, range 12–17). Participant gender was male (40%), female (57%), or other (3%). According to the adolescents, their parent's highest educational level was university or higher education (51%), upper secondary school or vocational studies (25%), comprehensive school or equivalent (4%), with the rest of the youth either not knowing their parents' educational level or indicating none of the above (20%). Adolescents lived with both parents (76%), interchangeably with two parents (14%), with one parent (10%), or in residential childcare (under 1%).

The study was approved by the research ethics committee of Åbo Akademi University.

2.2 Measure

To measure symptoms and their function in relation to absence, participants were administered the Inventory of School Attendance Problems [ISAP; (30)]. This 48-item questionnaire was constructed as a screening tool for identifying problems linked to emerging and existing SAPs. The ISAP contains both a symptom scale (ISAP-S) and a function scale (ISAP-F). For each item (e.g., “Before or at school, I feel down or depressed”; “Before or at school, I’m afraid of exams”), the respondent is asked to report: (a) the extent to which the item applies to them (i.e., how true it is for them or how often it occurs); and (b) the extent to which it is why they miss school or find it hard to attend school (i.e., how true it is for them or how often this is the reason). Both questions are answered on a 4-point Likert scale (from “not true at all”/“never” to “very much true”/“very often”). Responses to part (a) of each item are used to form the symptom factors (ISAP-S), and responses to part (b) of each item are used to form the function factors (ISAP-F).

The 48 items of the ISAP reflect 13 factors. The items associated with each factor can be found in [Appendix 1](#), and the questionnaire can be found at [INSA.network](#). The 13 factors relate to the following subscales (reliability estimates in the current sample for each symptom subscale reported in parentheses): (1) Depression ($\alpha = .89$, $\omega_t = .95$), (2) Social Anxiety ($\alpha = .85$, $\omega_t = .88$), (3) Separation Anxiety ($\alpha = .82$, $\omega_t = .86$), (4) Performance Anxiety ($\alpha = .85$, $\omega_t = .85$), (5) Agoraphobia/Panic ($\alpha = .82$, $\omega_t = .87$), (6) Somatic Complaints ($\alpha = .71$, $\omega_t = .81$), (7) School Aversion/Attractive Alternatives

($\alpha = .77$, $\omega_t = .81$), (8) Aggression ($\alpha = .82$, $\omega_t = .83$), (9) Problems with Peers ($\alpha = .81$, $\omega_t = .86$), (10) Problems with Teachers ($\alpha = .77$, $\omega_t = .78$), (11) Dislike of the Specific School ($\alpha = .86$, $\omega_t = .86$), (12) Problems Within the Family ($\alpha = .90$, $\omega_t = .90$), and (13) Problems with Parents ($\alpha = .84$, $\omega_t = .86$).

The internal consistency of the subscales was deemed to be adequate based on administration with the original sample [$.75 \leq \alpha \leq .88$, 3 testlets/scale; (30)] and the current sample ($.71 \leq \alpha \leq .90$, $.72 \leq \omega_t \leq .95$).

2.3 Data analysis

2.3.1 Descriptive statistics

Descriptive statistics were used to summarise the characteristics of the sample and the key variables of interest.

2.3.2 Handling missing ISAP data

For the ISAP-S, responses on the 48 items were incomplete for 56 of the 370 youth. Thirty-five of these 56 youth (62.5%) had less than 30% missing data. The pattern of missing data was inspected and handled using the *mice* (37) and *VIM* (38) packages, via which data was determined to be missing at random. Thus, missing values were multivariate imputed. For the ISAP-F, responses were incomplete on the 48 items for 80 of the 370 participants and missing values for 43 of these 80 youth (53.8%) could be multivariate imputed. Missing values were imputed using predictive mean matching to create complete data sets for the two network analyses. After imputation, the sample sizes were $N = 349$ for ISAP-S and $N = 333$ for ISAP-F.

2.3.3 Conducting network analysis

All data preparation and analyses were performed in R version 4.2.0. The following R packages were used for data analysis and plotting: *qgraph* (39), *bootnet* (36), *mgm* (40), and *tidyverse* (41).

Mixed graphical models were estimated for both networks using the Extended Bayesian Information Criterion [EBIC; (42)] for the regularization tuning. The algorithm creates multiple competing network models, by estimating all potential pathways between variables and then either shrinking weak edges or setting them to zero according to tuning parameters. The model that is selected is the one that minimizes the EBIC and most accurately corresponds to the level of sparsity that is preferred in the network. Here, the tuning hyperparameter lambda controlling for sparsity was set to 0.25, following Haslbeck and Waldorp's (40) recommendation for creating a final, readily interpretable network model. In our network model, solid edges indicate positive associations, whereas dashed edges indicate negative associations. Moreover, the thickness of the line indicates the magnitude of the edge. Edges were estimated using nodewise regression, with each node both regressing and being regressed by all other nodes in the network. Edges thus represent partial correlations after combining the two regression coefficients two variables share (40). Additionally, as an effect size network models, upper-bound nodewise predictability (R^2) can be

calculated for each node by predicting the node from all other nodes in the network. The R^2 obtained in this manner thus represents an upper-bound of how much variance in the node is maximally explained by the other variables. If the explained variance is low, it indicates that important variables may have been omitted from the model (43) and that future studies should try to incorporate additional variables to increase explained variance. In the present study, predictability was calculated for all nodes, indicated by the grey border around each node. The centrality index strength, which is the sum of the absolute weights of the edge connecting the node to all other nodes, was calculated to highlight which symptoms were most influential in the network (26, 44). We opted to only calculate strength centrality based on work by Bringmann and colleagues, who suggested that strength centrality is the most appropriate measure of centrality compared to other centrality measures such as degree and betweenness centrality used in other types of networks (45). Another popular centrality measure is expected influence, where instead of taking the absolute sum of edge weights, the raw sum of edge weights is calculated (46). In the case where all edges share the same sign (i.e., are positive or negative), strength centrality and expected influence will be identical. We tested for statistically significant differences in strength centrality using bootstrapping as suggested by Epskamp and colleagues (36). To assess redundancy in the network, that is, whether two nodes share too similar edges with the other nodes, the goldbricker algorithm with the Hittner method from the *networktools* package was used (47). Furthermore, in accordance with Epskamp et al. (36), we assessed the stability of the networks using case-dropping bootstrap to calculate the correlation stability (CS)-coefficient for both edges and centrality that indicates the proportion of the sample that can be excluded while still sharing a strong correlation (.70) with the original data. High stability indicates that the results are likely to replicate in future research, and the CS-coefficient should ideally be above 0.5 to indicate high stability.

2.4 Transparency

Materials and analysis code for this study are available upon request.

3 Results

3.1 Descriptives

The large majority of respondents described themselves as being absent frequently: 80% selected “often,” 15% “very often,” 3% “mostly,” and 2% “always.”

For each of the 13 ISAP-S scales and 13 ISAP-F scales, sum score variables were calculated for the items within a given scale, and these sum score variables were used in the network model. Means and standard deviations for each sum score variable are displayed in Table 1. Visual inspection indicates that the mean values for the symptom scales were consistently higher than the mean values for the equivalent function scales. For example, the mean symptom score for the six items related to Depression was higher than the mean function score for the same six items. Across all 13 symptom scales, the scale with the highest mean score was Depression. The same is true for the 13 function scales.

To obtain a clear understanding of elevated scores in the subscales, we also report descriptive statistics of the proportion of participants who scored higher than a cut-off value of 1.5 on the ISAP subscales, consistent with the definition employed for descriptive purposes (i.e., mean scale value above or equal to half of the maximum of 3) in the original study conducted by Knollmann et al. (30). Of the youth who scored ≥ 1.5 on any of the subscales, symptoms of School Aversion (42%) and Depression (25%) were the most common, whereas functions of School Aversion and Somatic Complaints (both reported by 14%), followed by Depression (11%) were the most common (see Table 1).

TABLE 1 Means and standard deviations, and responses ≥ 1.5 for the sum scores of the ISAP-S scales and the ISAP-F scales.

Variable (number of items)	ISAP symptom				ISAP function			
	<i>M</i>	<i>SD</i>	Range	<i>N</i> (%) symptoms $\geq 1.5^a$	<i>M</i>	<i>SD</i>	Range	<i>N</i> (%) function $\geq 1.5^a$
Depression (6)	5.58	4.68	0–18	87 (25)	3.33	3.95	0–18	37 (11)
Social anxiety (5)	3.42	3.66	0–15	52 (15)	1.68	2.76	0–15	22 (7)
Separation anxiety (4)	1.61	2.30	0–12	29 (8)	0.62	1.67	0–12	13 (4)
Performance anxiety (3)	2.67	2.56	0–9	75 (21)	1.14	1.97	0–9	28 (8)
Agoraphobia/Panic (4)	1.39	2.33	0–12	22 (6)	0.78	1.88	0–12	11 (3)
Somatic Complaints (3)	2.60	1.99	0–9	55 (16)	2.15	2.03	0–9	48 (14)
School Aversion/Attractive Alternatives (4)	5.09	3.18	0–12	145 (42)	2.31	2.81	0–12	48 (14)
Aggression (3)	2.76	2.52	0–9	73 (21)	0.89	1.78	0–9	19 (6)
Problems with Peers (4)	2.01	2.74	0–12	48 (14)	1.20	2.22	0–12	19 (6)
Problems with Teachers (3)	1.68	2.06	0–9	37 (11)	0.82	1.56	0–9	14 (4)
Dislike of the Specific School (3)	1.87	2.39	0–9	43 (12)	0.80	1.68	0–9	17 (5)
Problems Within the Family (3)	1.29	2.11	0–9	32 (9)	0.60	1.52	0–9	13 (4)
Problems with Parents (3)	1.06	1.88	0–9	22 (6)	0.45	1.34	0–9	9 (3)

^aMean symptom scores ranged from 0 to 3.

The cut-off value of a mean score of 1.5, indicating elevated scores, was chosen based on previous research (30).

3.2 Network estimation for the ISAP symptom scales

We estimated a network structure based on the 13 sum score variables (nodes) for the symptom scales, yielding partial correlations (edges) between the nodes. All reported correlations are partial correlations. There were 31 edges with non-zero weight. (See also Table 2 for partial correlation coefficients.) Some nodes were more connected than others, as can be seen in Figure 1. The redundancy analysis revealed several overlapping nodes. For the symptoms network, Problems with Teachers and Aggression, Dislike of Specific School and Problems with Teachers, Agoraphobia and Social Anxiety, Problems with Peers and Social Anxiety, and Dislike of Specific School and Aggression shared significant overlap. These overlaps indicate that these combinations of nodes may measure the same underlying construct. However, we chose not to combine the overlapping variables to keep the results comparable with other studies using the ISAP questionnaire. The symptoms network showed high stability, with CS-coefficients of .673 and .593 for edges and strength centrality, respectively. The strongest edge was found between Problems within Family and Problems with Parents, with a partial correlation of .37 (see Table 2). Other strong edges were found for Social Anxiety with Peer Problems ($r = .24$), and with Agoraphobia/Panic ($r = .25$) and Depression ($r = .25$); and for Depression with Performance Anxiety ($r = .26$) and with Aggression ($r = .28$).

3.3 Centrality estimation for the ISAP symptom scales

Figure 2 shows the centrality estimate *strength*. The strength measures the sum of all absolute partial correlations that are associated with the edge. The strength is also a measure of centrality in the model. Depression is the most central node according to this measure, while Agoraphobia/Panic was the

next most central node in the network, although they did not differ in strength based on the bootstrapped significance test (bootstrapped confidence interval: $-0.50, 0.10$).

3.4 Network estimation for the ISAP function scales

When we estimated a network structure based on the 13 sum score variables (nodes) for the function scales, we found a pattern similar to the symptom network, with some small differences. The redundancy analysis revealed several overlapping nodes. In the functions network, Problems with Teachers and Problems with Peers as well as Problems with Peers and Performance Anxiety shared significant overlap. The functions network showed high stability, with CS-coefficients of .593 and .593 for edges and strength centrality, respectively. The strongest correlations (see Table 3) were between Depression and School Aversion ($r = .32$), Depression and Social Anxiety ($r = .25$), Social Anxiety and Agoraphobia/Panic ($r = .26$), and Separation Anxiety and Problems Within the Family ($r = .23$). A strong link, similar to that found in the symptoms network, was observed between Problems with Parents and Problems Within the Family ($r = .31$) (Figure 3).

3.5 Centrality estimation for the ISAP function scales

Figure 4 shows the centrality estimate *strength* for the ISAP function scales. Depression is the most central node, according to this measure, and Social Anxiety was the next central node in the network, although they did not differ in strength based on the bootstrapped significance test (bootstrapped confidence interval: $-0.57, 0.01$).

TABLE 2 Network edges: partial correlation coefficients for the 13 ISAP-S scales.

Variable	ISAP1	ISAP2	ISAP3	ISAP4	ISAP5	ISAP6	ISAP7	ISAP8	ISAP9	ISAP 10	ISAP 11	ISAP 12
ISAP2	.25											
ISAP3												
ISAP4	.26											
ISAP5		.25	.20	.11								
ISAP6	.16			.05								
ISAP7	.11					.08						
ISAP8	.28					.06	.14					
ISAP9	.10	.24			.22							
ISAP10			.11		.13	.16	.08	.09				
ISAP11	.14		.				.09	.05		.21		
ISAP12	.18		.15									
ISAP13					.09			.07		.10	.05	.37

For ease of interpretation, only non-zero-partial correlations are displayed. Average absolute partial correlation (excluding zero) was 0.15. ISAP1, depression; ISAP2, social anxiety; ISAP3, separation anxiety; ISAP4, performance anxiety; ISAP5, agoraphobia/panic; ISAP6, somatic complaints; ISAP7, school aversion/attractive alternatives; ISAP8, aggression; ISAP9, problems with peers; ISAP10, problems with teachers; ISAP11, dislike of the specific school; ISAP12, problems within the family; ISAP13, problems with parents.

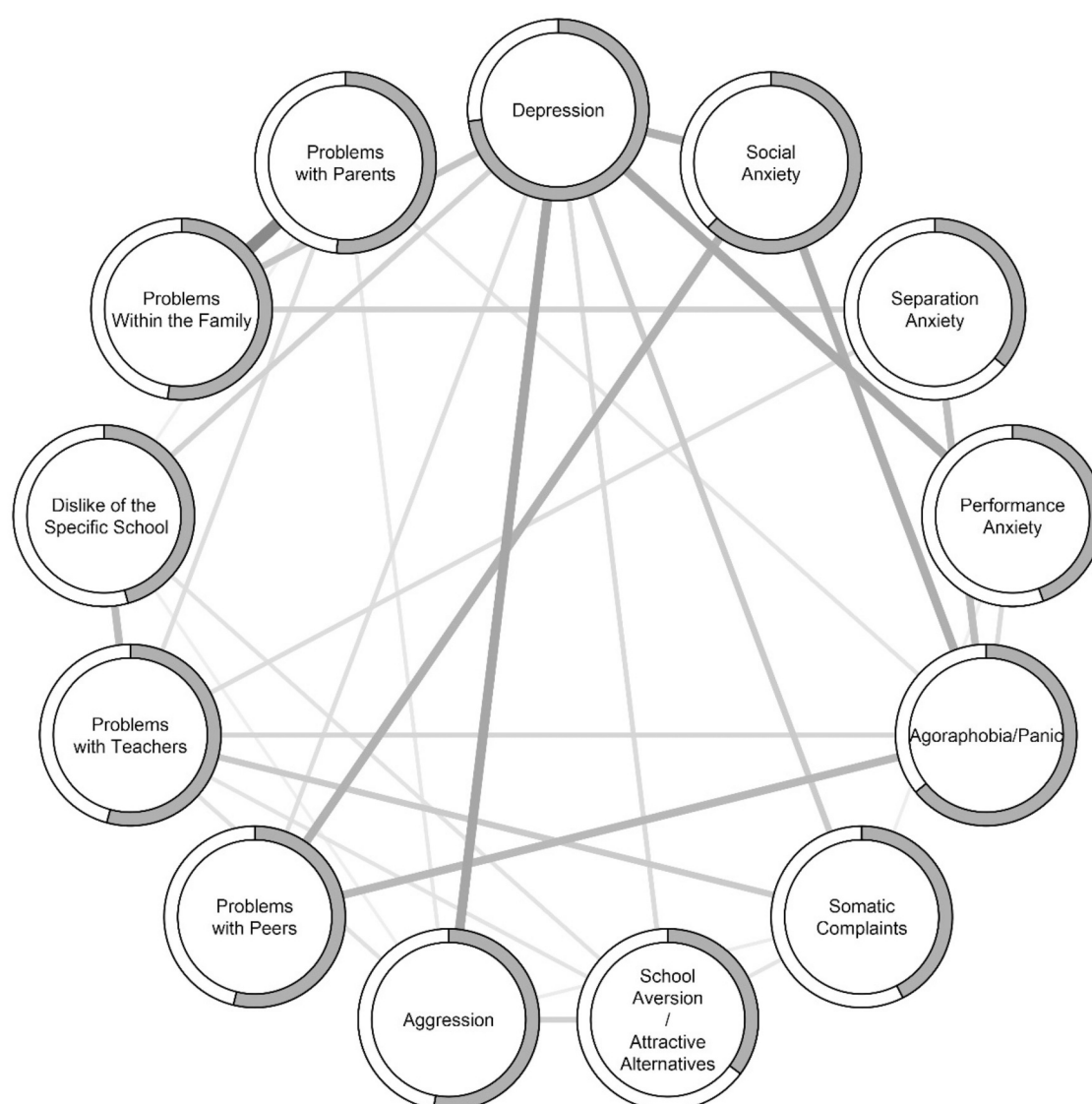


FIGURE 1

Network model of the 13 ISAP-S scales. Solid lines indicate positive partial correlations between nodes (circles). The shaded border around nodes indicate predictability (R^2) of that node. Average absolute non-zero partial correlation was $r = .15$, strongest partial correlation between “problems within the family” and “problems with parents” ($r = .37$), and weakest partial correlation between “aggression” and “dislike of the specific school” ($r = .05$).

4 Discussion

This study represents an early effort to better understand SAPs utilizing network analysis. The aim was to identify central symptoms associated with absence and the functions served by these symptoms, among adolescents reporting 10% or more school days missed. Specifically, we estimated edges (partial correlations) between nodes (sum scores of variables) for scales derived from the ISAP, namely 13 symptom scales and 13 function scales.

Of the original sample of 1,866 youth, we selected the 349 who reported $\geq 10\%$ absence for analysis. This proportion (18.7%) underscores the widespread occurrence of absence at levels

considered problematic within the studied population. Furthermore, within this subsample, relatively high rates of scale scores ≥ 1.5 were observed, indicating that a substantial proportion of youth experienced symptoms suggestive of various psychosocial challenges.

4.1 The centrality of symptoms associated with SAPs, and the centrality of functions served by these symptoms

Considering the findings from both networks—the network of symptom scales and the network of function scales—depression

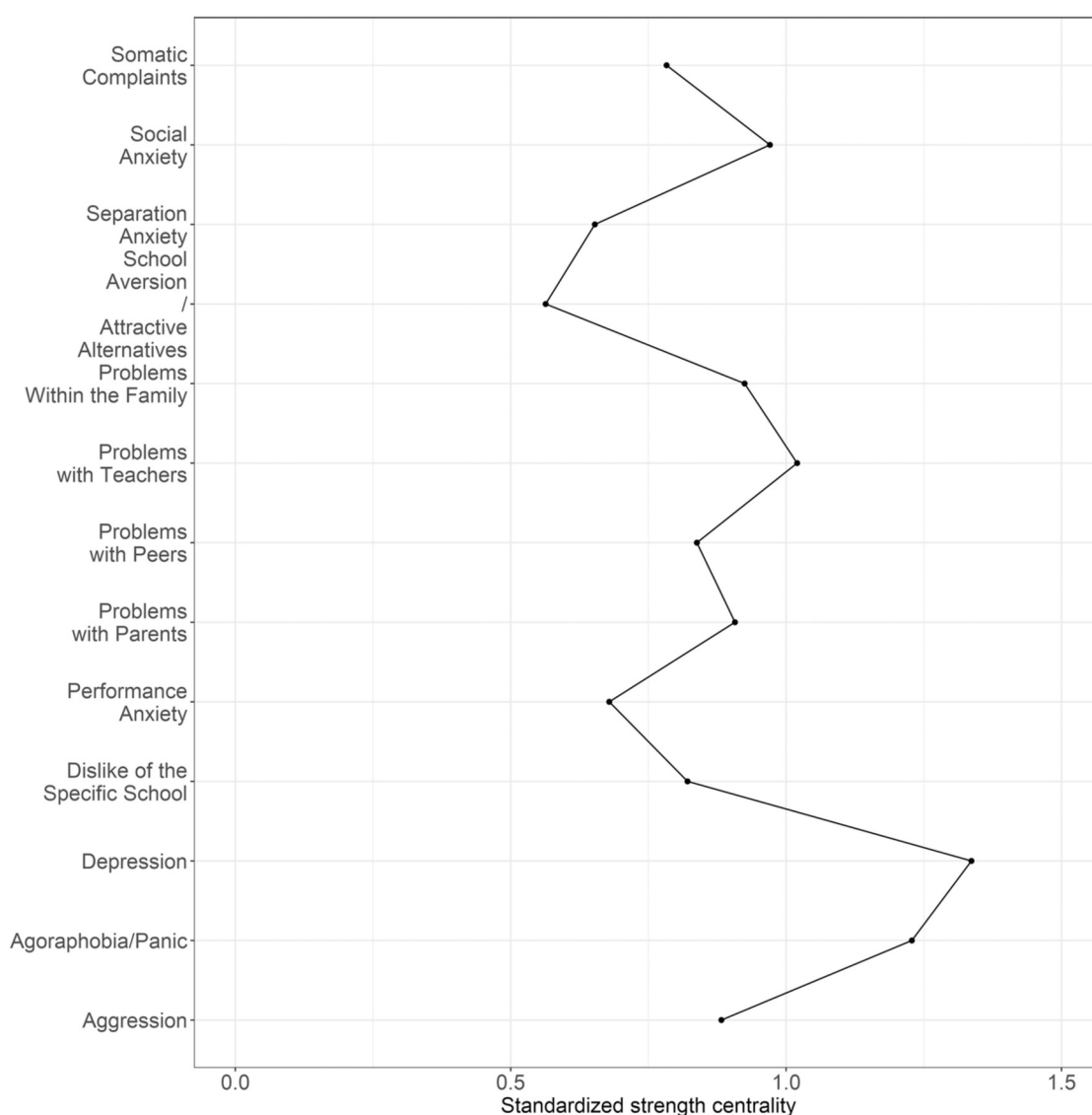


FIGURE 2

Strength centrality estimates for the 13 ISAP-S scales. Absolute standardized strength centrality scores per node, higher values indicate a higher centrality in the network.

emerges as an important construct in understanding SAPs. Specifically, Depression was the most central node in both networks. However, although Depression was descriptively the most central symptom, bootstrap difference testing indicated that it was not significantly more central than Agoraphobia/Panic in the symptoms network, or Social Anxiety in the functions network. This pattern suggests that a cluster of symptoms, including Depression, Social Anxiety, and Agoraphobia/Panic, may represent particularly important processes in SAPs.

Prior research on SAPs has highlighted the prominent role of depression (48). Building on this, the present study distinguished between Depression as a symptom and as a function, allowing for a more nuanced examination of the role of Depression in SAPs. Depression as a symptom reflects the young person's experience

of depressive feelings and emotional distress within the school-related emotional landscape. In contrast, Depression as a function—or reason for absence—suggests that absence from school may serve to manage depressive symptoms, or that the young person's overall functioning is severely affected by depressive symptomatology.

In the current study, both the symptom and function network analyses revealed that Depression was strongly associated with School Aversion/Attractive Alternatives—a construct resembling truancy (2). The association between Depression and School Aversion was stronger in the function network than in the symptom network, suggesting heightened functional difficulties related to depressive symptomatology. This finding adds nuance to earlier evidence from Finning et al.'s (48) meta-analysis, which showed that depression was associated not only with

TABLE 3 Network edges: partial correlation coefficients for the 13 ISAP-F scales.

Variable	ISAP1	ISAP2	ISAP3	ISAP4	ISAP5	ISAP6	ISAP7	ISAP8	ISAP9	ISAP10	ISAP11	ISAP12
ISAP2	.25											
ISAP3												
ISAP4	.18	.19										
ISAP5		.26	.18	.06								
ISAP6	.15			.09								
ISAP7	.32	.08				.11						
ISAP8	.15		.05				.12					
ISAP9	.08	.21			.16							
ISAP10		.06		.18	.08	.08		.07				
ISAP11		.10	.13				.08	.14	.05	.20		
ISAP12	.11		.23	.14								
ISAP13			.10		.26			.25			.11	.31

For ease of interpretation, only non-zero-partial correlations are displayed.
Average absolute partial correlation (excluding zero) was 0.15.
ISAP1, depression; ISAP2, social anxiety; ISAP3, separation anxiety; ISAP4, performance anxiety; ISAP5, agoraphobia/panic; ISAP6, somatic complaints; ISAP7, school aversion/attractive alternatives; ISAP8, aggression; ISAP9, problems with peers; ISAP10, problems with teachers; ISAP11, dislike of the specific school; ISAP12, problems within the family; ISAP13, problems with Parents.

overall absence but also with specific types of absence, including emotion-related absence and truancy. Moderate-to-large associations were observed between depression and emotion-related absence, whereas small-to-moderate associations were found for unexcused absences typically equated with truancy (48). Consistent with this pattern, a review by Heyne et al. (49) suggested that depression is more characteristic of emotion-related absence than of truancy.

A further pattern observed in the current study was the association between Depression and Aggression, consistent with previous research (50, 51). These findings suggest that some youth with SAPs who ostensibly display aggressive behavior may also experience depressive symptoms that are less readily visible (mixed disorder of conduct and emotions; ICD-10: F92x). Understanding this association is important, because among youth with SAPs—especially when the absence is characteristic of truancy—depressive symptomatology may go unnoticed, being overshadowed by behavioral issues. The redundancy analysis revealed that Aggression overlapped with having Problems with Teachers and Dislike of the Specific School. This pattern suggests that these factors account for similar variance in absence, possibly reflecting a broader pattern of school-related conflict and disengagement. However, results from the confirmatory factor analysis based on the same dataset suggest that they represent distinct latent constructs (32, 33). That is, rather than indicating that they are identical constructs, the overlap highlights how aggressive behavior, strained teacher relationships, and negative attitudes toward school may co-occur and reinforce one another in ways that contribute to problematic absence.

From a network perspective, symptoms may form self-sustaining loops, whereby strong interconnections help maintain them even after the original trigger has subsided (35, 52). However, because our data are cross-sectional, such feedback processes cannot be directly tested and should therefore be considered speculative. Consistent with prior network studies of

adolescent depression (53, 54), we found that Depression and specific symptoms such as sadness and loneliness occupied central positions, supporting the view that depressive symptoms often function as structurally central features within broader symptom networks. This centrality may reflect the frequent co-occurrence of depressive symptomatology among adolescents experiencing persistent difficulties or comorbidity (55, 56). Nevertheless, potential causal or sustaining dynamics should be interpreted with caution when based on cross-sectional designs (57).

Agoraphobia/Panic emerged as another central node in the symptoms and functions networks. Prior research has consistently shown associations between anxiety and school absence (58). A meta-analysis by Finning et al. (48) identified social anxiety, separation anxiety, and generalized anxiety as commonly associated with absence, and these forms of anxiety also showed many edges in the current symptoms and functions networks. While Agoraphobia/Panic has received comparatively less attention in the field of school attendance, a study by Hella and Bernstein (59) demonstrated its relevance to absence. In the present analyses, Agoraphobia/Panic overlapped considerably with Social Anxiety in the redundancy analysis, suggesting shared explanatory variance. However, the CFA based on the same dataset suggested that they remain separable constructs (32, 33).

Social Anxiety also emerged as a central node in the functions network. It was linked to Depression, Agoraphobia/Panic, and Problems with Peers—a pattern consistent with prior meta-analytical evidence (48). Studies investigating interventions for emotion-related absence have shown less favorable outcomes when young people experience social anxiety (1). Social anxiety may contribute to strong avoidance of the school environment as a means of evading peer interactions. Ingul and Nordahl (21) similarly reported higher levels of social anxiety and peer problems among non-attending youth in Norway, and problematic social functioning appears to be a distinguishing feature of emotion-related absence in adolescence (60).

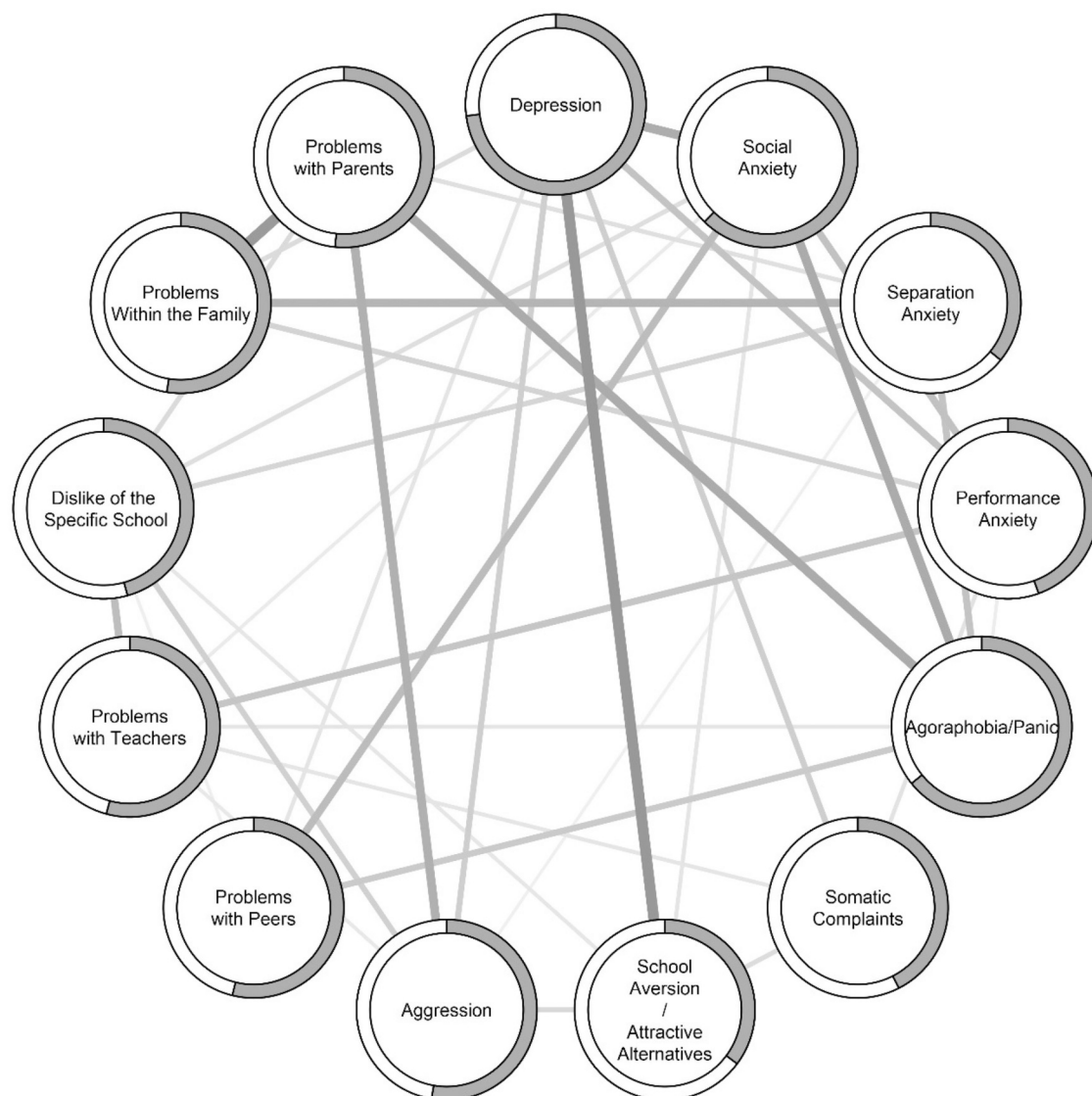


FIGURE 3

Network model of the 13 ISAP-F scales. Solid lines indicate positive partial correlations between nodes (circles). The shaded border around nodes indicate predictability (R^2) of that node. Average absolute non-zero partial correlation was $r = .15$, strongest partial correlation between “depression” and “school aversion/attractive alternatives” ($r = .32$), and weakest partial correlation between “separation anxiety” and “aggression” ($r = .05$).

4.2 Relationships between symptoms, and relationships between functions

Previous studies employing path analytical methods have documented several pathways akin to those that emerged in the current study, such as connections between variables like depression and anxiety (22), separation anxiety and problems with parents (61), and social anxiety and problems with peers (62). The distinctive strength of network analysis lies in its ability to transcend predefined (*a priori*) pathways, estimating all potential pathways and subsequently regularizing them to zero if they prove too weak. This unique feature allows for the identification of pathways that might otherwise be overlooked.

Given the relative newness of the ISAP, considering the patterns observed across its symptom and function subscales—although not part of a formal research question—offers valuable insight into how SAP-related processes may interact.

The intricate relationships among symptoms reported by young people displaying SAPs, and among the functions of these symptoms, are reflected in the complexity of interconnectedness between the nodes presented in Figures 1, 3, respectively. The symptoms network reveals 31 significant associations, and the functions network reveals 36 significant associations. This suggests that when adolescents with school absence of 10% or more have high scores on a symptoms and/or functions subscale, they are likely to also experience problems

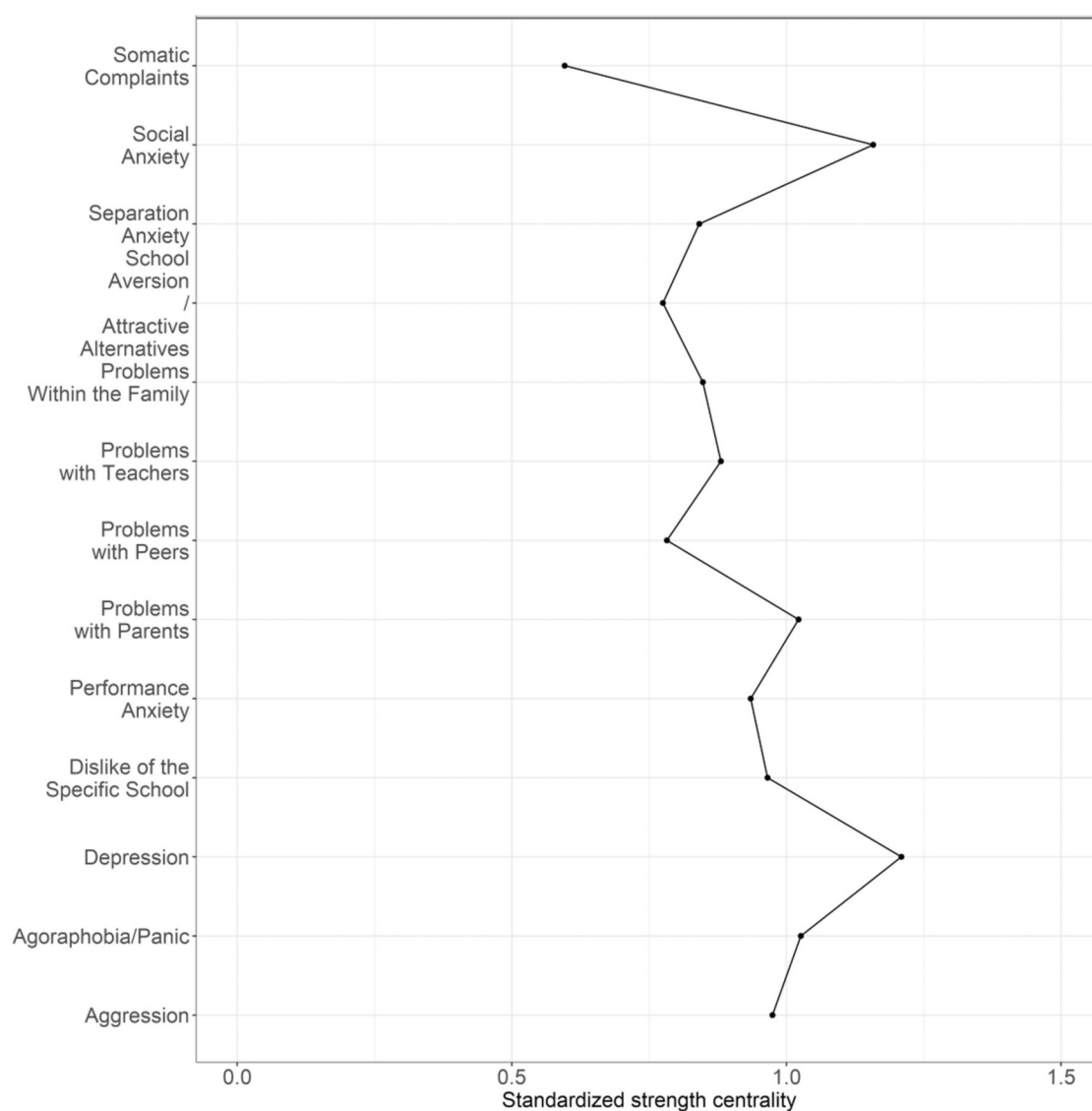


FIGURE 4
Strength centrality estimates for the 13 ISAP-F scales. Absolute standardized strength centrality scores per node, higher values indicate a higher centrality in the network.

related to another subscale. The effect sizes on most nodes were large, indicating that when accounting for the effect of all factors in the symptoms model simultaneously and all factors in the functions model simultaneously, these factors collectively account for a substantial portion of the variance attributed to the respective node.

The strongest edge in both the symptoms network (.37) and the functions network (.31) was between Problems within the Family and Problems with Parents, after controlling for all other nodes. This moderate association is theoretically consistent, given that both constructs refer to challenges situated within the family domain, albeit with slightly different emphases. Problems within the Family contains specific reference to events/specific problems within the family, whereas Problems with Parents includes items about feeling

rejected or overlooked by parents. The former node may be thought to include contextual factors, such as parental unemployment, or family dysfunction or conflicts. This could also be reflected in the association of the node with separation anxiety—cases when the anxiety is related to worry about parent wellbeing or home environment stability while the young person is at school. Conversely, Problems with Parents may reflect the quality of the parent-child relationship and parenting style, as evidenced by the emotional responses of the young person. The findings suggest a bidirectional influence between family dynamics and parent-child relationships.

Most associations at both the symptom and function levels were small to moderate in size and largely involved the same nodes across the symptoms and functions networks. Thus, the

rationale for the differentiation between symptoms and the function of symptoms needs to be considered. The mean values for the symptoms scales were consistently higher than the mean values for the equivalent functions scales, possibly reflecting the generally high level of functioning in the current sample. That is, the participants may report symptoms, but may not experience functional difficulties related to the symptoms (i.e., report no function of the node). Furthermore, at the individual level, a separate analysis of symptoms and functions is still warranted for treatment planning purposes.

4.3 Strengths and limitations of the study

The current study capitalizes on the strengths of network analysis, a robust statistical approach enabling the simultaneous estimation of all potential connections. In this context, we were able to examine connections between symptoms often associated with SAPs, and the connections between the functions those symptoms serve with respect to absence from school. This methodological choice yielded valuable insights, highlighting the central position of depression among symptoms of SAPs and the reasons for absence from school. Additionally, a notable strength of this study is the incorporation of a sizable community sample, enhancing the generalizability of the study's findings. The network showed high stability in our analyses, meaning that it is likely that the networks would replicate in other similar samples.

Our use of the ISAP to measure 48 symptoms potentially associated with SAPs, along with the function each symptom serves in youth's absence, can be considered both a strength and limitation of the study. On the one hand, the ISAP allows for the simultaneous measurement of symptoms and the function of each symptom, surpassing the scope of other questionnaires that focus on either symptoms or functions, but not both. On the other hand, the novelty of the ISAP presents a potential limitation, given the limited—albeit growing—information on its psychometric properties. Overall, we suggest that the strength of using the ISAP outweighs the limitation, as no other available instrument provides information about the function of each specific symptom assessed.

In general, all ISAP constructs had acceptable to excellent internal reliability in the current study. Several subscales of the ISAP were identified as redundant in the networks. Whereas redundancy analysis identified overlap between several factors, the CFA models of ISAP using the same sample (32) and other samples (33) suggested that they represent distinct latent constructs. This difference arises because redundancy analysis is outcome-oriented, highlighting predictors that account for similar variance in the dependent variables, while CFA evaluates the measurement structure of the constructs themselves. Thus, factors can appear redundant in terms of explanatory power without being indistinguishable at the latent construct level.

Six limitations merit consideration. It is important to adopt a cautious approach in interpreting the findings in light of these limitations.

First, the study's reliance on self-reported data introduces potential recall and response biases, as participants' perceptions and memories may not fully capture their actual experiences or behaviors.

Second, the use of a non-random, self-selected sample limits the generalizability of the findings. It is possible that schools already engaged with attendance-related issues were more inclined to participate, resulting in a sample that may not fully represent all school contexts. Nevertheless, within participating schools and classes, most students took part, which helps mitigate—but does not eliminate—these sampling concerns.

Third, youth experiencing more severe SAPs may have been absent on data collection days. Given the limited outreach capacity for this extensively absent group, their underrepresentation introduces the likelihood of non-representative responses.

Fourth, the categorical measurement of “days absent” may have reduced the specificity of subsequent analyses. The ISAP questionnaire's non-intuitive categorical response options may also have been difficult for respondents to interpret.

Fifth, the study did not include some symptoms previously associated with SAPs, such as neuropsychiatric conditions such as autism spectrum disorder (63) and attention deficit hyperactivity disorder (64, 65), or symptoms associated with eating disorders (64).

Sixth, data collection occurred during the latter phase of the COVID-19 pandemic, potentially leading to distinct network structures compared with pre- or post-pandemic contexts. Although schools in Finland had resumed in-person instruction by that time, students' routines, well-being, and perceptions of school were likely still influenced by earlier disruptions caused by school closures and public health measures. These lingering effects may have shaped both the experiences reported by students and the observed network structures, thereby limiting the generalisability of the findings to fully post-pandemic conditions. Nevertheless, all students had returned to at least partial in-person instruction during data collection, marking a period of relative normalisation. The data therefore likely capture enduring effects of the pandemic without being confounded by the acute disruptions of earlier phases. This contextualises the findings and underscores the need for future replication studies in clearly post-pandemic settings.

At the same time, important shifts in school attendance research were already underway prior to the pandemic (77). Specifically, there has been a growing move from focusing primarily on individual and family determinants of absence toward considering broader systemic and structural influences (78), alongside a shift from addressing absence to actively promoting attendance (66). While the pandemic drew increased attention to school attendance issues, it is best understood as having accelerated—rather than initiated—these ongoing developments.

4.4 Practical implications and suggestions for future research

Adolescence is a pivotal period for identity development (67) and the safeguarding of mental well-being (68), making it a critical

time for identifying and addressing SAPs, which tend to peak during this stage of development (1, 69). This underscores the importance of developmentally sensitive interventions that promote school re-entry, engagement, and well-being (1).

Given that SAPs are prone to become chronic when co-occurring with mental health symptoms (1, 70), timely and focused intervention is essential. Intervention efforts should strategically address symptoms that impede progress toward increased school attendance (1, 71, 72). The findings suggest the importance of ensuring that depressive symptoms are included in the assessment process—even when other mental health challenges initially appear salient. This emphasis does not minimize the relevance of other symptoms but acknowledges depression as a potentially central contributor to SAPs that might otherwise be overlooked. Depending on assessment outcomes, interventions may need to address depressive symptoms alongside social anxiety, school aversion, bullying, and related concerns. Several existing intervention protocols, including @school (73, 74), Back2School (75), and Modular Treatment (72), already include modules targeting depression. Future research could investigate whether prioritising central nodes (e.g., depression, social anxiety) leads to measurable reductions in absence. Combining network analysis with intervention trials may ultimately yield more efficient and personalised treatment strategies.

The results also indicated that symptoms and their functions tend to cluster, suggesting that certain emotional and contextual difficulties commonly co-occur. For example, problems within the family, difficulties in the parent-child relationship, and separation anxiety often appeared together. Recognizing these clusters highlights how interconnected factors may maintain or exacerbate SAPs. This has important implications for both assessment and intervention, as practitioners can target groups of related factors rather than addressing symptoms in isolation. Interventions that strengthen family relationships, improve communication, and reduce anxiety around separation may therefore alleviate multiple, interlinked challenges.

Future research should take into account the research context—whether community-based or specialist-referred. SAPs vary along a continuum of severity (76), and the current study included youth with absences ranging from 5 to over 48 days, most at the lower end. Thus, the findings likely reflect network patterns characteristic of milder forms of SAPs, which may differ from those observed in more severe or clinically referred samples. Investigating whether similar network structures of symptoms and functions emerge in such samples represents a valuable next step.

In addition, future studies should consider the broader context in which data are collected. The present study was conducted during the latter phase COVID-19 pandemic, a period marked by unique disruptions to students' social and school lives. Replicating the current analyses in post-pandemic conditions would help clarify the extent to which the observed patterns reflect enduring features of SAPs vs. context-specific patterns shaped by the pandemic environment.

5 Conclusion

This study is one of the first to apply network analysis to better understand SAPs through the examination of a broad range of self-reported symptoms and their functions in relation to school absence. The analysis identified depression as a central node, interconnected with many other symptoms and functions, suggesting that depressive symptoms play a structurally important role in the broader network of SAPs. While causal inferences cannot be drawn from cross-sectional data, the findings indicate that depression may represent a useful target for intervention and prevention efforts, particularly through strategies aimed at enhancing emotion regulation and life skills associated with a reduced risk of mental health problems. Interventions that address depressive symptoms may also yield broader benefits by alleviating co-occurring difficulties among youth at risk of, or already experiencing, SAPs.

Data availability statement

Data is available upon reasonable request from the first author.

Ethics statement

The studies involving humans were approved by the research ethics committee of Åbo Akademi University. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

KA: Conceptualization, Funding acquisition, Methodology, Writing – original draft, Writing – review & editing. DH: Writing – original draft, Writing – review & editing. ML: Formal analysis, Methodology, Writing – original draft, Writing – review & editing. MK: Writing – original draft, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The author(s) declare that Generative AI was used in the creation of this manuscript. During the preparation of this work the author(s) used [ChatGBT/OpenAi] in order to improve grammar and shorten some parts of the text. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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Appendix 1. Item number of variables that loaded on each factor.

Factor number	Item numbers	Factor label
ISAP 1	1, 8, 35, 41, 45, 48	Depression
ISAP 2	9, 12, 24, 32, 47	Social Anxiety
ISAP 3	6, 25, 27, 38	Separation Anxiety
ISAP 4	28, 29, 44	Performance Anxiety
ISAP 5	7, 19, 33, 46	Agoraphobia/Panic
ISAP 6	10, 17, 36	Somatic Complaints
ISAP 7	2, 15, 18, 21	School Aversion/Attractive Alternatives
ISAP 8	4, 16, 37	Aggression
ISAP 9	3, 22, 23, 26	Problems with Peers
ISAP 10	5, 11, 42	Problems with Teachers
ISAP 11	14, 30, 39	Dislike of the Specific School
ISAP 12	31, 34, 43	Problems Within the Family
ISAP 13	13, 20, 40	Problems with Parents



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EDITED BY

Joanna Anderson,
University of Cambridge, United Kingdom

REVIEWED BY

Carol Nash,
University of Toronto, Canada
Buyi Mbele,
University of Zululand, South Africa

*CORRESPONDENCE

Isabella Sasso
✉ isabella.sasso@paedagogik.uni-halle.de

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"I wanted to learn something. I just couldn't"—Autistic students' perspectives on emotions as drivers of absenteeism and attendance

Isabella Sasso^{1,2*}

¹Department of Special Needs Education and Rehabilitation, Faculty of Educational and Social Sciences, Carl von Ossietzky University of Oldenburg, Oldenburg, Germany, ²Department of Rehabilitation Education, Philosophical Faculty III, Martin-Luther-University Halle-Wittenberg, Halle (Saale), Germany

Introduction: The right to education is recognized as a fundamental human right in international law. Despite these legislative foundations, education systems still often fail to recognize and provide the necessary accommodations and support needed by many autistic students. Studies on mainstream schooling of autistic students predominantly report negative experiences, as their needs are not adequately addressed, leading to stress and anxiety. Attendance at mainstream schools has also been identified as a potential risk factor for school attendance problems. In Germany, research on the school experiences and absences of autistic students remains scarce. The present study therefore aims to investigate the role of emotions in the development of school attendance problems among autistic students in mainstream school settings in Germany.

Methods: The study employed a constructivist grounded theory design. Semi-structured interviews were conducted with 20 autistic students between 7 and 20 years, who experienced school attendance problems within the German mainstream school system. Interviews were transcribed with high level of accuracy to capture how emotions were expressed. The interviews analyzed through iterative coding, including initial, focused, and theoretical coding. *In-vivo* codes were applied to preserve participants' perspectives and generate a theory grounded in the data.

Results: Findings show that autistic students experience school attendance as stressful and exhausting due to sensory overload and barriers in reciprocal interaction with peers and teachers. Stress accumulated over time, resulting in anxiety, panic, anger, and exhaustion, which directly contributed to school absenteeism. Students used strategies to adapt and endure the environmental factors, which did not regulate but rather intensified their stress. At the same time, positive emotions such as the desire to learn, willingness to attend or return to school, and hope to re-engage occurred as central motivational drivers for attendance. Results highlight the importance of environmental factors in shaping students' ability to fulfill their desire to learn and attend school.

Discussion: The study adds to existing literature by centering autistic students' perspectives and demonstrating how emotional experiences contribute to school attendance and absenteeism. The findings underscore the need for strength-based, flexible, and context-sensitive approaches. Future research is required to examine educational outcomes and wellbeing of students in mainstream schools.

KEYWORDS

inclusive education, neurodiversity, autistic students, school attendance problems, anxiety, youth perspectives

1 Introduction

The right to education is recognized as a fundamental human right in international law. It is enshrined in the [Universal Declaration of Human Rights \(1948\)](#) and the [Convention on the Rights of the Child \(1989\)](#), and explicitly extended to persons with disabilities through the [Convention on the Rights of Persons with Disabilities \(2006\)](#). In Germany, this right is also anchored in the Basic Law [particularly Art. 7 in conjunction with Art. 2(1) and Art. 1(1)] as well as in the education laws of the federal states. With this right comes the obligation to design education systems that guarantee participation and non-discriminatory access to learning for all students. Achieving this requires structural change, flexible learning arrangements, and a professional stance that actively acknowledges and values diversity ([Booth and Ainscow, 2002](#)). Education therefore, means more than the transmission of knowledge, it is a central part of social participation and personal development. For an inclusive society, it is essential that all children and young people are able to learn together ([Booth and Ainscow, 2002](#)). Yet despite these legislative foundations, education systems still “often fail to recognize and provide the necessary accommodations and support needed by many autistic students” ([McGoldrick et al., 2025](#)). Educational provision continues to be shaped by deficit-oriented assumptions that construct neurological differences as deviations from an assumed norm, thereby undermining the principles of inclusion ([Ducarre, 2024](#)).

An approach that views diversity not as a deficit but as a natural variant of human existence is offered by the neurodiversity paradigm ([Alcorn et al., 2024](#); [Ducarre, 2024](#); [Shaw et al., 2024](#)). This perspective recognizes variation in perception, action, and thought as intrinsic to all individuals and provides a framework for discussing diversity while simultaneously advancing an inclusive understanding of education ([Ducarre, 2024](#)). By moving away from a medical model that defines autism as a “disorder,” attention shifts toward the societal barriers that produce restrictions in the first place. Central to this paradigm is ensuring that the experiences and perspectives of neurodivergent individuals are placed at the center, and that language, structures, and support are not shaped by neurotypical norms but oriented toward the wellbeing and goals of neurodivergent people ([Shaw et al., 2024](#)). From this perspective, learning environments should be designed to acknowledge and foster diversity while enabling autonomy, belonging, and participation for all students ([Ducarre, 2024](#)). An inclusive education system, in line with the CRPD, therefore both recognizes neurodivergence as a valuable form of human diversity and responds to barriers by providing needs-based support. Autistic students nevertheless often experience educational settings as exclusionary, as these remain shaped by neurotypical expectations ([Alcorn et al., 2024](#)). At the institutional level, autistic traits are still frequently viewed through a deficit-oriented lens, resulting in support and interventions that aim at normalization rather than participation and the development of individual strengths. To overcome educational exclusion and to strengthen autistic students’ self-efficacy and mental health in the long term, a true paradigm shift toward neurodiversity is required ([Ducarre, 2024](#)).

While there is research regarding general school attendance in Germany (a.o. [Enderle et al., 2024](#); [Speck and Stauvermann, 2025](#)), currently, there is no representative data on school attendance of autistic students ([Sasso and Sansour, 2024](#)). However, two non-representative surveys conducted by the national autism association (autismus Deutschland e.V.) collected parental reports on their children’s educational experiences ([Czerwenka, 2017](#); [Grummt et al., 2022](#)). The first survey ([Czerwenka, 2017](#); $N = 621$) found that at the time of data collection in 2016, one-third of the autistic students attended special schools, 45 percent attended secondary schools or grammar schools, 20 percent were enrolled in primary schools, and five students attended alternative forms of schooling. According to parents, 21 percent of students enrolled in special schools met the criteria for attending a mainstream school. Parents nevertheless reported that conditions such as smaller classes and greater teacher knowledge of autism made attendance possible only in special schools. They further indicated that placement in a special school was “not seldom [...] the result of several school changes” ([Czerwenka, 2017](#)). In total, 132 exclusions from school were reported (approx. 21 %), with durations ranging from several months to as long as one and a half to two and a half years, most without replacement provision. Parents expressed the need for less bureaucracy in the application and continuation of support, increased expertise and openness among teachers, better cooperation between teachers and school support staff, smaller class sizes, access to quiet spaces, and acceptance of alternative forms of schooling. The second non-representative survey was conducted in 2019 with $N = 1,343$ participating parents. Here, 72 percent of the general statements about schooling were negative, describing the system as “inadequate” or even “catastrophic” ([Grummt et al., 2022](#)). 25 % of parents reported that their child had been excluded from school, with durations ranging from single days to several years. Forty-two percent reported at least one school change explicitly attributed to the child’s impairment. Parents also noted that their children were often expected to adapt and display inconspicuous behavior. When this adaptation failed, a school transition became necessary. In this context, parents also reported severe psychological consequences, including self-injury and suicidality. Once again, parents emphasized the need for supportive conditions that had already been identified in the earlier survey. Numerous international studies on the schooling situation of autistic children and adolescents confirm the findings of these surveys and provide a comprehensive picture of autistic students’ experiences in mainstream education. [Mullally et al. \(2024\)](#), for example, investigated the experiences of 136 autistic children aged 8–14 through semi-structured online surveys. Many reported experiencing school as an unsafe place where they felt misunderstood by both peers and professionals. A systematic review by [Horgan et al. \(2023\)](#), synthesizing 33 qualitative studies, identified three overarching themes: the demands of mainstream schooling, social participation, and the influence of school environments on students. The demands were described as academic, sensory, and transitional, with many participants characterizing their surroundings as crowded, chaotic, and sensory-challenging. Social participation emerged as a second key theme, encompassing relationships with peers, teachers, and school staff, as well as bullying. Several studies emphasized that, from the

perspective of autistic students, effective teachers were those who understood individual needs, held high expectations, showed genuine interest, and refrained from shouting or expressing frustration. Conversely, lack of understanding and support were recurring concerns. The third theme related to the impact of mainstream school environments on wellbeing and mental health, with students reporting anxiety, loneliness, fear, anger, and frustration. Negative social constructions of autism and broader notions of difference often led students to conceal or mask their autistic identity in order to fit in. Anxiety was linked both to the intensity of sensory environments and to school-related demands such as heavy workloads, deadlines, and examinations. Feelings of fear, anger, and frustration were often internalized, leading in some cases to depressive symptoms and suicidality (Horgan et al., 2023). Despite these burdens, some students reported valuing their autism and associated differences positively, for example: “I like being like this you know, that’s the way it is” (Humphrey and Lewis, 2008) and “I think I’m special, I am different from others and that marks me out of the crowd” (Poon et al., 2014). Zakai-Mashiach (2025) hypothesizes that the predominance of negative experiences among autistic students in mainstream schools may be partly explained by the absence of strength-based approaches within education systems.

1.1 Autistic students

Children and adolescents on the autism spectrum are highly diverse, a reality reflected in the very concept of the “spectrum” and underscoring the principles of neurodiversity. Autism is far more than the symptom-oriented criteria of diagnostic classification systems. Autistic individuals experience both challenges in interaction with their environments and distinct strengths, such as detail-oriented perception, cognitive abilities in logical reasoning, pattern recognition, and analytical skills (Cherewick and Matergia, 2024). Accordingly, many autistic people reject the notion of autism as a “disorder.” Because autism and its associated characteristics cannot be separated from the individual, and thus cannot be “cured” or “treated” (Vivanti, 2020), many prefer identity-first language (Gernsbacher, 2017; Kenny et al., 2016). To reflect this, identity-first terminology is also used in the present article. Autism typically manifests in early childhood, but developmental trajectories vary widely, influenced by an interplay of individual and environmental factors (Mailick et al., 2025). It is estimated that about 70 percent of autistic individuals experience at least one co-occurring mental health condition, such as anxiety or depression (Rosen et al., 2018; Curnow et al., 2023). These conditions substantially affect the development of autistic children and adolescents (Simonoff et al., 2008; Micai et al., 2023) and can have significant long-term consequences for health and quality of life (Lai et al., 2019; Curnow et al., 2023). Deficit-oriented diagnostic criteria, which are often used to describe autism-specific characteristics, particularly communication and interaction patterns, fail to account for strengths and abilities (Gernsbacher and Yergeau, 2019). Social interaction patterns and rules are generally learned by autistic

children and adolescents less intuitively and more explicitly, often through targeted instruction (Plavnick and Hume, 2014; Ying Sng et al., 2018). Research shows that autistic students particularly benefit from structured, visually supported, and consistent learning environments, as these provide transparency regarding social expectations (White et al., 2023). Building on existing strengths, such as systematic thinking or detail-oriented perception, can further support the acquisition of social rules and patterns (Gernsbacher and Yergeau, 2019). Importantly, understanding between autistic and non-autistic people is a reciprocal challenge (Gernsbacher et al., 2017). Milton (2012) and Milton et al. (2022) conceptualized this phenomenon as the “double empathy problem,” emphasizing that empathy is a bidirectional process in which both autistic and non-autistic individuals may struggle to adopt the other’s perspective. Misunderstandings can arise from differences in communication styles, interests, and perceptions in social situations. Thus, difficulties in communication should not be attributed solely to autistic individuals but rather understood as relational challenges. Positive interaction quality is marked by mutual understanding, reflected in less effortful and more relaxed communication, in which autistic adults report feeling less pressure to explain or adapt themselves, thereby reducing stress (Watts et al., 2024). Similarly, autistic children show greater social engagement when interacting with autistic peers (Kasari et al., 2016; Sutherland et al., 2025), and autistic adults disclose more personal information to other autistic individuals (Morrison et al., 2020; Watts et al., 2024). Morrison et al. (2020) conclude that “social interaction difficulties in autism may be better understood as relational rather than individual impairments.” One common strategy autistic individuals use, either consciously or unconsciously, to gain social acceptance and avoid rejection is “camouflaging” (Lundin Remnélius and Bölte, 2024). This involves masking autism-related traits in social interaction, for example by suppressing repetitive behaviors, maintaining eye contact despite discomfort, or preparing extensively for communicative situations (Hull et al., 2017). In addition, autistic individuals often experience differences in the perception and processing of sensory information. These may occur in any sensory modality (hearing, vision, touch, smell, taste, as well as proprioceptive and vestibular senses) and can involve either heightened sensitivity (hyperreactivity) or reduced responsiveness (hyporeactivity) to sensory input (Marco et al., 2011; Robertson and Baron-Cohen, 2017; Gray et al., 2023). Within educational contexts, such sensory differences may significantly affect students’ capacity to learn and sustain attention, particularly in cases of heightened sensitivity to auditory or visual stimuli. These sensitivities have been linked to elevated anxiety, avoidance behaviors, and hypervigilance, all of which hinder full participation in classroom learning and social interaction. Schools represent environments rich in sensory input where students have limited control over their surroundings while simultaneously facing high demands (Gentil-Gutiérrez et al., 2021). Sensory issues therefore constitute a major source of elevated stress. Multiple studies emphasize the need to adapt school environments and to provide safe spaces to support regulation (Anderson, 2020; Gray et al., 2023; Martin-Denham, 2022).

1.2 Emotionally based school attendance problems

A growing body of research recognizes the role of the school system and school-related interactions in shaping school attendance problems, alongside the stress that contributes to them (Connolly et al., 2023). While school attendance problems and absences are widely acknowledged as multidimensional phenomena involving multiple systemic levels (Melvin et al., 2019, 2025), autism-related research has tended to focus primarily on individual factors (Mailick et al., 2025). Mailick et al. (2025) emphasize the need for research that examines how contextual factors influence autistic individuals over time. As school-avoidant behaviors often arise from unmet needs, terminology surrounding school non-attendance should reflect that responsibility for such behavior or absences cannot be placed on the young person (Knage, 2023; Leslie et al., 2025). In the present study, the term school attendance problems was used to capture a broader conceptualization of engagement and disengagement in school, one that goes beyond physical presence or absence to also include forms of mental disengagement (Kearney, 2016; Enderle et al., 2025).

Even though school attendance problems among autistic students seem to gain internationally more attention in research and practice, the topic is still underrepresented in Germany in research, intervention and practice.

As most research on school attendance problems among autistic students is primarily based on parent and teacher perspectives (Sasso and Sansour, 2024), the research presented in this article is based on the perspectives of autistic students. The study presented in this article, therefore, seeks to explore how emotional experiences in mainstream school settings in Germany influence school attendance and absenteeism among autistic students.

The study is guided by the following question: *How do autistic students experience their school attendance problems in mainstream school settings in Germany?*

This article especially focuses on the question: *Which role do emotions play in the development of school attendance problems?*

2 Methods

This study examines the perspectives and lived experiences of autistic students regarding school absenteeism and the role of related emotions. To capture these experiences and reconstruct students' realities, a qualitative design was adopted, drawing on Charmaz's (2025) constructivist grounded theory. Grounded theory allows researchers to analyze complex relationships and processes (Corbin and Strauss, 2008). Unlike earlier, objectivist-oriented variants (Glaser and Strauss, 1967), Charmaz's constructivist approach conceptualizes reality as socially constructed. Researchers are active participants in the research process, and their subjectivity must be critically reflected as part of knowledge production (Charmaz, 2025). This approach is particularly suited to the present study, as it is theory-generating, reflexive, and context-sensitive. It enables

TABLE 1 Sample characteristics.

Autistic students			
Name	Age	Gender	Longest time absent
Ella	12	f	7 months
Matilda	20	f	approx. 24 months
Toni	12	m	5 months
Sven	15	m	4 weeks
Julian	18	m	2 months
Felicitas	13	f	approx. 24 months
Leonie	15	f	20 months
Fred	15	m	5 months
Enno	9	m	no information
Alexandra	14	f	1 week
Till	14	m	approx. 12 months
Marten	15	m	approx. 24 months
Frida	15	f	4 months
Edda	9	f	8 months
Malte	18	m	5 months

an inductive development of theory while acknowledging the researcher's influence on the analytical process. In sensitive fields, where existing interpretations are often normatively shaped and lack nuance, constructivist grounded theory provides a robust and appropriate framework (Charmaz, 2025).

2.1 Participants

Eligible for participation were autistic children and young people who are experiencing or experienced school attendance problems while educated in mainstream schools. No age range was specified. Participants were recruited through centers for autism support, via social media and self-help forums. Interested parties were asked to contact the project leader (I.S.) via e-mail or phone. Only participants who reported having a confirmed autism diagnosis were included. The diagnosis was not independently verified but was accepted based on participants' statements.

Twenty participants were recruited between seven and 20 years, 8 female and 12 male. The participants were from 9 out of 16 federal states in Germany (Bavaria, Baden-Württemberg, Hesse, Thuringia, North Rhine-Westphalia, Lower Saxony, Saxony-Anhalt, Berlin, Schleswig-Holstein).

The present article draws on the perspectives of $n = 15$ students (7 female, 8 male) between 9 and 20 years. Most participants reported periods of absences during secondary school, except for students still enrolled in elementary schools. Characterisations of the sample are presented in Table 1.

TABLE 2 Notation system for interview transcription.

Transcription symbols	Meaning
(.), (..), (...)	Short pause (seconds)
(Number)	Duration of pause over 3 s
(Word)	Uncertain transcription
(Unintelligible)	Unintelligible utterance
UPPERcase	Accentuation
:	Elongation
–	Word cut-off
,	Rising tonation
.	Falling tonation

2.2 Data collection

Semi-structured interviews were conducted between July and December 2023, 11 online, eight in person and one participant answered the questions in written form as he is non-verbal. The interview guide was structured and informed by the findings of the systematic review (Sasso and Sansour, 2024) and covered individual, school and parental factors while encouraging participants to narrate their experiences. The semi-structured interview format was chosen because it combines openness, by providing space for narratives and accommodating situational and individual variations in the narrative process with specific questioning techniques guided by theoretically informed prompts (Witzel and Reiter, 2012). Shortly before the interviews, participants completed a brief questionnaire that gathered relevant personal and contextual information such as age, interests, grade level, school type, and longest period of absence, serving as preparation for the interviews. Following each interview, a postscript was written to document key points discussed before and after the interview. In addition, important observations regarding the interview situation were noted, and the researcher's own interview conduct was critically reflected.

2.3 Data analysis

The transcription was carried out with a high level of accuracy, capturing not only the content of speech but also the nuances of how it was expressed. This included noting pauses, repetitions, filler words, and other speech markers, which provide important context and convey the speaker's emotional tone, hesitation, or emphasis. These elements were preserved to allow a more nuanced analysis of the verbal exchange and are demonstrated in Table 2. The interviews were conducted in German, and quotations presented in this paper were translated by the author. Quotations are referenced using the interviewee's pseudonym, age, and position within the interview.

Constructivist Grounded Theory was utilized as the analytical framework for this study (Charmaz, 2025). This approach allowed to develop a theory grounded in the participants' experiences and perspectives. Through an iterative process, themes and patterns

emerged inductively, offering deeper insights into the emotional, social, and sensory factors influencing school attendance problems among autistic students.

The core of the analytic process was stepwise coding, serving to structure, interpret, and theoretically condense the data. Coding proceeded through three interrelated phases that unfolded iteratively rather than linearly: initial, focused, and theoretical coding (Charmaz, 2025; Strauss and Corbin, 1990). This approach enabled the development of central meanings, relationships, and interpretive patterns directly from the material without imposing predefined theoretical categories (Strübing, 2021).

Initial coding aimed to identify meaningful codes in the data relevant for building categories. Charmaz (2025) conceptualizes initial coding as an open approach, staying close to participants' own language in order to capture subjective meanings. Here, *in-vivo* codes which are taken directly from participants' words, were employed to preserve dense or symbolic expressions, emphasize participants' perspectives, and avoid premature interpretation. Comparative methods (Charmaz, 2025) were used to generate dimensionalized categories by contrasting codes both within and across cases. Constant comparison helped identify contradictions, ambivalences, and dimensions that informed theory development.

Focused coding was used to reach a higher level of abstraction and to identify relationships and interactions between categories. This phase built a more systematic understanding of the data by connecting initial codes and condensing them into central categories, which were then differentiated through subcategories and further specified in terms of their properties and dimensions. In this study, focused coding first produced analytically meaningful categories; in subsequent steps, relationships among categories were further elaborated.

Emotions were treated as integral components of motives, meaning-making, and coping strategies that shape participants' responses and actions (Corbin and Strauss, 2008). Their role was analyzed through analytic memos, explicit coding of emotions, and attention to nuances in how participants expressed themselves.

Theoretical coding then served to link analytically rich categories in interpretive ways (Charmaz, 2025). Categories were not merely descriptive but functioned explanatorily by highlighting patterns, relationships, and processes within the data. Theoretical coding, in this sense, supported the exploratory and context-sensitive integration of meaning structures, remaining open to ambiguity, tensions, and processuality while taking participants' perspectives seriously. The aim was not to produce a universal explanation but to develop a theoretically dense, empirically grounded interpretation of social reality that captures the complexity of autistic students' experiences. The development and refinement of the central category was carried out through an ongoing interpretive process in which meaning structures, categorical connections, and theoretical ideas were continuously reflected.

Through this iterative process, a grounded theory was constructed that highlights how participants made sense of their experiences and how their emotions were shaped within the context. As the present article is part of a broader dissertation project, it does not present the full range of finding. Instead, it concentrates on the emotions which were expressed by the autistic students and their role in developing school non-attendance.

2.4 Ethical considerations

Prior to the start of the study, approval was obtained from the ethics committee of the University of Oldenburg. The interviews were recorded, transcribed, anonymised and pseudonymised. Data were managed in accordance with German data protection law. In both the analysis and presentation of results, attention was given to protect privacy of data. Students and parents were provided with appropriate information to ensure informed consent.

Throughout the process, the researcher's role was subject to continuous reflection. This involved careful attention to (1) personal behavior, particularly in interactions with participants; (2) thoughts, especially regarding one's own expectations and preconceptions as well as the potential expectations of participants; and (3) emotions that arose during the research process and how these shaped interactions with participants and engagement with the data.

3 Results

Based on the findings, a grounded theory was developed that explains the process of school attendance problems, with particular emphasis on emotions. These emotions were constructed as the main phenomenon within the grounded theory that is based on the perspectives of autistic students. Causal conditions to negative emotions were found within the school environment, whereas positive emotions were determined by intervening conditions such as capabilities and qualities:

"So, in class, I understood everything quite quickly. (...) Um (5) well (4) I learn very quickly. (...) That means if I- well- (...) if I really WANT to learn something then I just understand it very quickly." (Leonie, 15, pos. 58).

"So, I can, uh- When I'm awake and also interested I can learn very quickly, so I don't have to study too much, and I grasp the material in class quite quickly and can apply it directly." (Malte, 18, pos. 73).

"That I um actually pick up things quite quickly and try to understand them as well [...] I can just remember things very quickly." (Matilda, 20, pos. 46).

"So right now, because the material is appropriate, I can usually- well, I, (.) uh (.) once I- once I get into it- I mean, once I start, I usually get thru it very quickly." (Marten, 15, pos. 188).

Some participants expressed limitations in their capability to "understand quickly" and "to learn". Leonie emphasized the link to the willingness to learn, while Malte explicitly referred to personal interest as a factor that enhances the speed of learning. Malte further tied quick learning to the condition of being "awake," which may allude to challenges with early school start times or the need for sufficient rest. Marten's remark, "once I start" points to potential difficulties with initiating tasks, suggesting a need for support in getting started. These limitations are closely related to contextual circumstances,

prerequisites, challenges, and structural conditions of everyday school life, such as resources, subject matter, support, and time of day, and illustrate how these factors can influence students' capability to learn. The significance of the school environment for the desire to learn is, for example, articulated by Felicitas:

"especially at the [name of the] school I noticed that I-, I was so eager to learn and when I left, I thought, noo, I don't want to learn if it's not absolutely necessary right now" (Felicitas, 12, pos. 98).

Negative emotions appeared mainly in the context of school attendance, while positive emotions were reported mainly in the context of learning. School non-attendance therefore appears as consequence, as autistic students experienced attendance as an obstacle to learning. The autistic students are primarily occupied with adapting to the learning environment and the expectations during their school attendance, which is why they can no longer muster any capacity for learning itself:

"So, let's assume, that I WENT to school, it was super stressful, I didn't really do ANYthing in class, I mean, I didn'- didn't really aCHIEVE anything. And then, yeah, I was-" (Marten, 15, pos. 128).

"Hm so the main thing, is that I hang in there or get thru the day, just sit in class, keep myself away from everything, mostly just in my own thoughts. I never really took any notes or anything like that," (Matilda, 20, pos. 36).

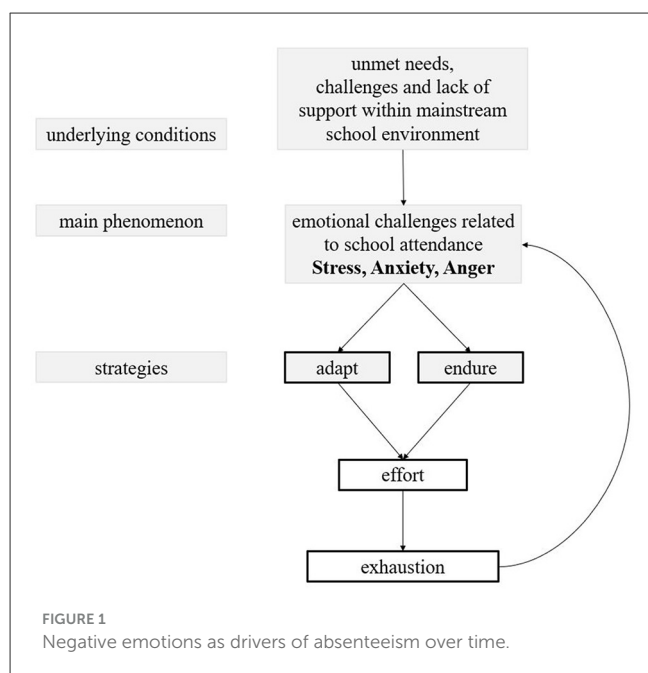
"Going to school was no longer- I basically just went there to survive, so to speak." (Till, 14, pos. 58).

"(I didn't) really keep up with the lessons anymore, so it wasn't really a proper school attendance anymore." (Till, 14, pos. 64).

Enduring the conditions of everyday school life generates negative emotions and results in exhaustion (Figure 1). The initially strong will to learn, under the pressure of persistent stressors, shifts into an inability to learn. Autistic students report that their individual effort is insufficient to sustain regular school attendance. Over time, this constant adaptation, combined with limited opportunities for recovery or change, culminates in exhaustion.

3.1 Positive emotions as driver for attendance and learning

The narratives of how autistic students began to develop school attendance problems often started with their willingness to attend school in order to fulfill their desire to learn. The accounts show that school attendance and learning itself were frequently viewed and evaluated separately. In several examples, particularly those of Ella, Julian, and Leonie, school attendance was itself described as a desire:



“My strong will has also helped me, namely that I want to go to school. (4)” (Ella, 12, pos. 96).

“I always wanted to go to school and love the classes, if I couldn’t go, it was always due to circumstances” (Julian, 18, pos. 18).

“And actually um so it makes me a little angry that I actually want to go to school. And I want- well I really want to go to school.” (Leonie, 15, pos. 90).

Felicitas, however, regarded school attendance primarily as a necessary burden in order to fulfill her desire to learn:

“I really wanted to learn a lot, and I just thought that, there was no other way to do it than in school. [...] because I wanted to learn all of that, but, actually I never wanted to go to school itself” (Felicitas, 13, pos. 26).

Across all participants, it became evident that learning itself was the primary driver of their willingness to attend school, as exemplified by Julian’s statement. The desire to learn thus emerged as a central motivation and a key driver of attendance. At the same time, this desire was frequently linked to frustration, anger, and hopelessness about not being able to attend school, as powerfully expressed in Leonie’s account and echoed by Ella:

“I WANTED to learn something. I didn’t want to learn nothing. I just couldn’t.” (Ella, 12, pos. 40).

Extending these perspectives, Frida emphasized the link between successful learning and the enjoyment of learning, suggesting that the desire to learn is not only tied to attendance but also to the positive affective experience of learning itself:

“If I WANT to learn something or WANT to come to class, because I ENJOY it, because the learning methods are FUN, then LEARning works better.” (Frida, 15, pos. 179).

3.2 Stress, anxiety, and anger as driver for absenteeism

When schools fail to meet students’ needs and they feel misunderstood, attending school becomes associated with negative emotions. Some participants described how numerous unresolved conflicts and situations accumulated over time. The lack of resolution and the inability to express their emotions led to significant stress, ultimately making them feel unable to attend school. Notably, participants often retained these experiences, recalling them years later with emotional intensity.

Participants reported experiences related to burdens such as shame, sadness, confusion, despair, pressure, and feelings of injustice. In most cases, one or several of these emotional burdens were mentioned. Stress was also accompanied by physical symptoms. The most frequently reported emotional burdens were stress, anger, and anxiety. Stress was described primarily as being triggered by conditions within the school context, most notably sensory challenges and difficulties in reciprocal interaction.

Sensory Challenges and Overload:

- “When they all screamed and talked so loudly, it was like a huge wave of sound, that completely overwhelmed the center of my brain and irritated it.” (Ella, 12, pos. 102).
- “I went to school, sat there, um, saw nothing, heard nothing, had (terrible) headache, so I didn’t really accomplish much.” (Felicitas, 13, pos. 82).
- “due to my autism I couldn’t filter the stimuli around me. And I perceived everything more intensely.” (Leonie, 15, pos. 52).

Reciprocal Interaction including Interaction with peers and teachers, as well as the lack of a sense of belonging:

- “I found it hard to do things with others because, somehow everyone, expected something from me. Um (..) well I was often overwhelmed um the- also with the communication somehow and conversations, um and I just- well I often felt somehow out of place, and well I was never really myself? I had to always pretend and somehow adapt (..) and that was just exhausting.” (Leonie, 15, pos. 50).
- “That’s difficult because I can’t talk or react when they [his classmates] say hello, I like them and I’m one of them, and they accept me but doing things together is difficult. I’m in but doing something together is difficult.” (Julian, 18, pos. 56).
- “I don’t know. I often feel- (.) like (.) different from everyone else. (..) First of all because (...) autism and (.) yes I speak so much less than (..) all the other children. (..) And I’m mostly like (.) quiet. (...) Yes. (4)” (Enno, 9, pos. 90).
- “the teachers somehow couldn’t take care of my problems there anymore, it was just too much, I was just a bit too different, I would say” (Till, 14, pos. 57).

- “where the teachers then put a lot of pressure and yes, directly told me and my mother that I should leave the school and that I don’t belong there” (Malte, 18, pos. 21).

Within the framework of the grounded theory, the underlying conditions can only be outlined briefly at this point, as the present article is primarily oriented toward the role of emotions.

The experience of **stress** resulting from these conditions was directly expressed by several autistic students:

“actually a school day for me consisted only of stress. So I arrived at school and, then, it was actually already too much. [...] Um I was already anxious about the class um and then in the class even more stress was added.” (Leonie, 15, pos. 48).

“Too many kids were stressing me out and it was too LOUD it was, (.) generally always TOO MUCH. I, couldn’t THINK anymore and no one underSTOOD me.” (Felicita, 13, pos. 15).

“I wouldn’t say that those were specific situations. It was just the long accumulation of (.) stress and so on.” (Fred, 15, pos. 51).

“because I didn’t learn anything and just became more stressed, which for some reason made the stress even worse. (4)” (Sven, 15, pos. 44).

“If it ever worked out completely eh it was usually just stress, especially if there were insults in class, yeah. So the day was always relatively stressful.” (Toni, 12, pos. 76).

The accounts indicate that stress during the school day is associated with feelings of being overwhelmed and agitated. Stress appears to accumulate over the course of the day, intensifying until it manifests as anxiety. One form of this anxiety is a more general fear of school:

“I also often didn’t GO to school because I was afraid of it” (Leonie, 15, Pos. 6).

“I was too nervous (.) to go. School anxiety.” (Enno, 9, Pos. 44).

In many cases, it appears that anxiety itself is not the primary barrier to school attendance, but rather specific aspects of the school environment:

“Um I:I was afraid that I would have to say something in front of the class. (..)” (Leonie, 15, pos. 48).

“I always have some kind of fear, that I might do something wrong. Yeah I was worried I might get in trouble with my classmates or with my teacher- my gym teacher.” (Alexandra, 14, pos. 120).

“Yes I think it’s because of STRESS and fear of the other classmates because maybe someday it could come out that I for example have a (special educational need) or that they might laugh at me. So that (*unintelligible*) I didn’t want to take any DAmage there.” (Till, 14, Pos. 15).

An increase in anxiety manifests as panic. Panic episodes were reported in direct connection with school attendance and

appear to result from significant stress, developing over time as burdens accumulate:

“as soon as the bell rang for class to start um, I started having panic attacks and they just kept getting worse” (Leonie, 15, pos. 28).

“Because it was such a PANIC reaction, eventually I just couldn’t go to school anymore.” (Marten, 15, pos. 20).

“shortly after I stayed home I had to go back to school to get my textbooks and stuff I then-then had this panic and was so stressed and (.) somehow totally uh (.) somehow yeah- (4) And yeah (.) I don’t know if I could even go back to school.” (Fred, 15, pos. 63).

“The PANIC ATTACKS have already (started early) in class” (Till, 14, pos. 58).

“I always had these panic attacks and could hardly concentrate on the lessons. That was very bad.” (Till, 14, pos. 12).

Anxiety can also co-occur with anger, which appears to be directed both at objects and, more prominently, at the self:

“Mm (4) so, um- so I feel a lot of FEAr and also PANic. (...) Mmmh and, somehow also helplessness. Hm (4) Somehow also a bit of anger” (Leonie, 15, pos. 20).

“But I think I was really angry and really really desperate” (Ella, 12, pos. 69).

“I am frustrated and angry and sometimes I hurt myself because I have to channel my anger somewhere.” (Julian, 18, pos. 35).

“So- it also happened that I:I punched the back of my bed or got very, very angry.” (Matilda, 20, pos. 30).

Negative emotions consistently co-occurred with mental health issues and impacted school attendance. Autistic students experienced emotional disturbances throughout all stages of their process. While absences initially provided short-term relief, this was quickly replaced by cognitive concerns about the future, alongside boredom, anger, and frustration. A key finding highlights the role of the environment: autistic students often reported anger and frustration due to a lack of support and limited opportunities to access education when attendance of a mainstream school was not viable. Leonie, in particular, expresses her anger and despair over the lack of support she and her family receive in re-engaging with school:

“a lot has actually happened but in the end somehow nothing at all because I’m still sitting at home and the school isn’t really contacting us anymore, I haven’t received any assignments from the school and so on. And actually um it makes me a bit angry that I actually want to go to school. And I want- well I really want to go to school. But somehow they just leave us alone. [...] And I wish it were different.” (Leonie, 15, pos. 90).

3.3 Emotions as driver for re-engagement

Despite their disturbing experiences of negative emotions in school, autistic students expressed hope for finding a solution and a willingness to return to school, while others appear to have lost their hope over time and trust in the process.

“I longed so much to go back and just be there because that’s my place where I can learn something.” (Julian, 18, pos. 26).

“I have always- always HOPED, that I- that I could go back to SCHOOL.” (Ella, 12, pos. 40).

“I knew, I couldn’t handle it anymore, but I also wanted to learn something. (.) I- (8) I always hoped, that we would somehow find a solution” (Ella, 12, pos. 44).

Particularly through Ella’s use of the past tense, it appears that she maintained hope over an extended period but currently no longer believes that she and her family can independently find a solution to their situation. Ella seems to occupy the same “waiting position” that Leonie describes in relation to her anger and frustration. This waiting position, combined with the ongoing search for a long-term solution, constitutes a significant challenge for autistic children and adolescents. They are also acutely aware of the consequences of absenteeism, including concerns about the future (Leonie, 15, pos. 42), reduced contact with friends (Fred, 15, pos. 39), and the feeling of missing out on both interpersonal experiences and academic content (Fred, 15, pos. 39; Edda, 9, pos. 214).

Nevertheless, participants reported a sense of relief following the cessation of school attendance, reflecting a temporary alleviation of the stress, anxiety, and pressures associated with the ongoing struggle to maintain regular attendance.

“but (.) in any case, I feel much better now than before” (Fred, 15, pos. 37).

“And, I would say, I am now happier than before, when I used to spend, 5 hours, until 4, recovering from school.” (Ella, 12, pos. 110).

“Compared to before I feel so good now better than I could ever feel. So on a scale from 1 to 10 I would say 1000. Um well compared to before. Of course not everything runs perfectly, but it never does.” (Marten, 15, pos. 40).

From the perspective of the autistic students, there currently appear to be “simply no good SOLUTIONs” (Frida, 15, pos. 189) to the dilemma that autistic students are unable to fulfill their desire to learn during school attendance using the strategies and resources available to them (see Figure 1). This underscores the pressing need to modify environmental factors in order to reduce their stress and support autistic students’ learning within school.

4 Discussion

This study aimed to investigate the role of emotions when it comes to school attendance problems among autistic students.

The findings of this Grounded Theory study provide insights in how the interviewed autistic students experience their school attendance. A main outcome is the fact that the autistic students expressed a strong desire to learn and willingness to attend school, while simultaneously experience barriers to learning that cause stress, anxiety and anger. Their opportunities to fulfill the motivation to learn were significantly constrained by sensory challenges and difficulties in reciprocal interaction in the school environment. The inability to overcome these barriers with the means available to them led to experiences of helplessness and frustration, as well as broader concerns about future prospects, social participation, and a sense of missing out. These findings underline the urgent necessity of adapting school environments to meet the needs of autistic students and to enable their participation in learning without disproportionate emotional cost.

Emotions seem to play a crucial role when it comes to school attendance and absenteeism among autistic students. Negative emotions such as stress, anxiety and anger can therefore be seen as drivers for school attendance problems and absenteeism. However, these emotions are responses to environments that fail to meet the needs of autistic students over extended periods of time. Although inclusion is widely framed as a central educational priority, the reality often resembles integration, in which students are still expected to adapt to mainstream school settings rather than schools adapting to them (Pellicano et al., 2018; McGoldrick et al., 2025). The pressure to adapt amplifies the sensory, social, and emotional challenges experienced by autistic students, ultimately contributing to mental health difficulties, school attendance problems, and absenteeism (Den Houting, 2019; Shaw et al., 2024). Practices such as camouflaging meaning masking salient autistic behaviors and compensating for social-communicative challenges in order to meet external expectations and blend into specific environments, require considerable effort. This effort has been linked to emotional exhaustion, identity conflicts, and an increased risk of mental health problems (Hull et al., 2017; Lundin Remn lius and B lte, 2024). Research further shows that adolescence is a period marked by heightened stress and exhaustion (Byrne et al., 2007; Pascoe et al., 2020; Sisk and Gee, 2022), which is associated with poorer mental health outcomes (Eppelmann et al., 2016; Snyder et al., 2019; McGorry et al., 2025) and an increased risk of educational underachievement (Kaplan et al., 2005; Raufelder et al., 2018). For autistic children and adolescents, who already face a heightened risk of developing mental health conditions (Simonoff et al., 2008; Micai et al., 2023), these challenges result in complex, cumulative burdens. When adequate resources and support are lacking, these burdens can escalate into significant psychological consequences (Hoferichter and Raufelder, 2022). The findings of this study extend these perspectives by showing how the desire to learn and the willingness to attend school are gradually undermined by cumulative stressors in the school environment. As illustrated in Figure 1, the sustained effort to cope with adverse conditions leads to exhaustion and ultimately transforms a strong motivation to learn into an inability to engage in learning. This highlights the urgent need to reconfigure environmental conditions in schools to sustain attendance and participation.

The emotional burdens reported in this study, which contribute to both mental health challenges and school absenteeism, should therefore not be understood as a reflection of personal deficits but

rather as the result of an imbalance between needs and available support within the mainstream school system in Germany. The necessity of adapting in order not to stand out socially is also described in the present study as an effort that leads to exhaustion and, ultimately, absenteeism. This underscores the need for environments that recognize and acknowledge autism-related differences in social interaction (Alcorn et al., 2024). Only when schools allow autistic students to show and communicate their challenges can these needs be adequately identified and addressed. Camouflaging, by contrast, makes the recognition of such needs more difficult (Truman et al., 2021). In Truman et al.'s (2021) study, parents reported that their children were able to mask their difficulties at school but subsequently broke down from exhaustion once at home. Similar patterns of profound exhaustion were also described by participants in the present study, such as Ella and Felicitas.

In a study by Atkinson et al. (2025), 72 autistic students attending mainstream schools were surveyed about school belonging, camouflaging, and anxiety. Of the participants, 38.9 percent reported feeling safe, accepted, and comfortable at school, whereas 61.1 percent indicated that this was not the case. When asked what helped them to be themselves, students highlighted friendships, but also support from teachers as well as inclusive adjustments such as the option to wear headphones and having access to a quiet room.

Especially the desire to learn, the willingness to attend and return to school highlight the importance of language when it comes to school attendance, especially when talking about autistic students. Phrases like “school refusal” or “school avoidance” imply that it is the individual that causes and chooses to refuse or avoid school. Leaving out the crucial role that emotional disturbances due to contextual environmental factor play in the process of becoming absent (Leslie et al., 2025).

A process of becoming absent emerged across participants, which appeared consistent across age groups but was described as occurring at different points as participants age varied. While several participants reported an initial increase in school-related difficulties during primary school, most experienced school attendance problems during secondary school. This pattern aligns with previous findings indicating that stress and emotional strain tend to intensify during adolescence and secondary education (Byrne et al., 2007; Pascoe et al., 2020).

The processual nature of school attendance problems is also reflected in the study by Hamadi et al. (2025), which emphasizes the lack of support that, from the perspective of participants, was provided “too late.” This process corresponds to the development of school absenteeism described by Kearney et al. (2019). The contradiction between the experience of “no longer being able to attend school” and terms such as “school refusal” or “school avoidance” has likewise been highlighted in other studies (Corcoran and Kelly, 2023). Furthermore, students in these studies predominantly identified school-related factors, which, against the backdrop of insufficient support, contributed to absenteeism (Corcoran and Kelly, 2023; Hamadi et al., 2025). The fundamentally positive orientation toward learning, expressed in the present study as the desire to learn, is also reflected in the findings of Hamadi et al. (2025) as well as the “vicious cycle” of short-term relief when becoming absent, followed by negative emotions and the

fear of missing out which was expressed by participants in the present study. At the same time, autism-specific differences become evident in this study, particularly regarding sensory processing, interactional challenges in reciprocal understanding, and the resulting needs within the learning environment. Accordingly, it is assumed that the burdens described occur with increased intensity in autistic students, whereas more general burdens can also be observed among other vulnerable students and may be interpreted as expressions of broader structural challenges within the school system.

The results highlight the need for holistic and strength-based approaches when addressing school attendance problems.

Findings from a scoping review by White et al. (2023) underscore the importance of such approaches in creating inclusive learning environments, reducing barriers, and supporting learning. While deficit-oriented interventions have shown some effectiveness in promoting executive or communication skills, they have also been linked to negative impacts on mental health, school experiences, and educational outcomes (White et al., 2023). By contrast, studies included in the review indicate that tasks aligned with autistic students' personal interests can significantly enhance motivation, concentration, and learning outcomes. A key condition for the successful implementation of strength-based approaches is a positive attitude among teachers toward neurodiversity, combined with professional awareness of autism-specific modes of perception and learning. Beyond individual pedagogical perspectives, structural conditions are also essential such as visual supports, predictable daily routines, sensory-regulated classrooms, and designated quiet spaces. Furthermore, the active involvement of students and their families in shaping these structures is consistently emphasized as critical. Shifting toward a strength-based paradigm in education fosters participation, improves wellbeing, and supports academic development among autistic students by reframing autistic characteristics not as challenges but as valuable resources (White et al., 2023).

Examples for such approaches can be found in autism-specific research and literature, as well as literature addressing school attendance problems. Autism specific approaches are exemplified by the Autistic SPACE framework (McGoldrick et al., 2025), which highlights five core domains, Sensory needs, Predictability, Acceptance, Communication, and Empathy, supported by considerations of physical, processing, and emotional space. Applied in education, this framework provides teachers with a practical roadmap to recognize and respond to autistic students' needs by making small but meaningful adjustments in classroom environments. This is directly relevant to the present findings, where sensory overload, lack of predictability, and limited acceptance emerged as central stressors that undermined students' desire to learn and contributed to absenteeism. It shifts the focus away from deficit-based models toward a neurodiversity-affirmative ethos that values autistic strengths and wellbeing, thereby supporting both learning and participation. Complementing this, the LEANS programme (Alcorn et al., 2024) represents a classroom-level intervention that introduces all students to neurodiversity concepts. The feasibility study demonstrated that LEANS is both acceptable and effective in enhancing students' knowledge, attitudes, and intended inclusive actions, with minimal risks of harm. This aligns with the results of

the present study, in which social misunderstandings and lack of peer acceptance were identified as drivers of stress and emotional exhaustion. By fostering peer understanding and promoting more positive classroom dynamics, LEANS addresses precisely these social barriers. Together, SPACE and LEANS illustrate how inclusive practices can operate on different levels. While SPACE supports teachers in adapting environments to autistic needs, LEANS builds a broader culture of acceptance and awareness among peers, both of which are crucial for reducing stressors and supporting school attendance.

5 Strengths and limitations

The results must be understood within their limitations. First, due to the qualitative design, the ability to generalize findings is limited. The study was conducted within the German mainstream school context, and while this provides important insights, the findings may not be directly transferable to other educational systems, though they may serve as a basis for comparison. A further limitation is that autism diagnoses were not independently verified but relied solely on participants' self-report. Consequently, the accuracy of diagnostic status cannot be assured, which may limit both the validity and generalizability of the results. Moreover, the findings are based exclusively on the perspectives of autistic students, no interviews with parents or school staff were conducted. While this means that alternative perspectives may exist, the aim of the present study was to reconstruct the subjective perspectives of autistic students with school attendance problems. As shown in the discussion, these perspectives align with findings from other studies, highlighting the validity of the results.

At the same time, a strength of this study lies in its focus on autistic students' own voices, which provided in-depth insights into their lived experiences and the social constructions surrounding school attendance problems. The use of numerous direct quotations and *in-vivo* codes ensured that participants' perspectives were preserved and foregrounded. In line with Charmaz's (2025) criteria for assessing the quality of grounded theory studies which are reflected in originality, credibility, resonance, and usefulness, this study demonstrates originality by making the perspectives of autistic students on the development of school absenteeism visible within the "inclusive" German school system. The credibility of the findings is enhanced through systematic coding and continuous reflexivity, while the resonance is reflected in their relevance both for autistic students and for professionals working in this context. Finally, the usefulness of the study lies in its potential to inform future research and to generate concrete implications for inclusive educational practice.

6 Conclusion

The study investigated the perspectives and lived experiences of autistic students regarding school attendance problems and the role of emotions in the process of becoming absent. The study mainly identified how environmental conditions contributed to emotional burdens including stress, anxiety, and anger, which in turn lead to and intensified school attendance problems. These findings underscore the importance of shifting from deficit-oriented

explanations toward a contextualized understanding of school attendance problems as outcomes of systemic and environmental challenges rather than individual failings. At the same time, the findings highlight the role of positive emotions such as the desire to learn, the willingness to attend and return to school, and the hope to re-engage. These emotions emerged as central motivational drivers that sustained students' connection to education despite adverse environmental circumstances. Recognizing and fostering these positive emotions is essential for approaches that not only reduce barriers but also build on students' intrinsic motivation for participation and learning. The current study adds to the growing body of literature highlighting the interplay between emotions, school environments, and attendance, thereby advancing autism-specific insights. To further explore these dynamics, future studies should investigate environmental conditions and emotional burdens in larger and more diverse samples. Quantitative data are needed to provide an overview of the prevalence of absenteeism among autistic students in Germany, while longitudinal studies are essential to examine long-term educational outcomes and wellbeing in the mainstream school system.

Finally, the study highlights once more the importance of centering students' perspectives in both research and practice. Participatory approaches are essential to ensure that educational and learning processes are designed to adequately reflect the needs, strengths, and lived realities of autistic students.

Data availability statement

The data generated and analyzed for this study obtain sensitive qualitative data from interviews with a vulnerable population. Due to ethical and privacy concerns data cannot be shared publicly. Access to anonymized data may be granted upon reasonable request.

Ethics statement

Approval for this study was obtained from the Ethics Committee of the University of Oldenburg. Participants and, where applicable, their guardians received comprehensive written information about the study. Written informed consent was obtained from all participants, and from guardians for participants under 18. Participation was voluntary, and participants could withdraw at any time without consequences. All data were treated confidentially and anonymised prior to analysis.

Author contributions

IS: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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EDITED BY

Tracy Vaillancourt,
University of Ottawa, Ottawa, Canada

REVIEWED BY

Johanne Jeppesen Lomholt,
Aarhus University, Denmark
Darren Moore,
University of Exeter, United Kingdom

*CORRESPONDENCE

Alice Middleton
✉ alice.middleton@nhs.net

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What school-based interventions work to improve attendance in secondary school students with persistent absence? A systematic review

Alice Middleton^{1*}, Martha Watson² and Joanna K. Anderson³

¹Department of Public Health and Primary Care, University of Cambridge, Cambridge, United Kingdom, ²West Suffolk NHS Foundation Trust, Bury St Edmunds, United Kingdom, ³Department of Psychiatry, University of Cambridge, Cambridge, United Kingdom

Background: Absence from school is an increasing concern internationally, with significant consequences for children's mental health, academic achievement, and future opportunities. The multifaceted causes of absenteeism, including factors like emotionally based school avoidance (EBSA), have prompted a variety of interventions aimed at addressing this complexity. These efforts include recent plans from the UK government. This systematic review evaluates the effectiveness of school-based interventions targeting persistently absent secondary school students, to inform evidence-based strategies.

Methods: A systematic search was conducted across six electronic databases in health and education for studies published up to April 2024. Eligible studies assessed school-based interventions aimed at improving attendance among persistently absent secondary school students. The Effective Public Health Practice Project (EPHPP) and Critical Appraisal Skills Programme (CASP) tools were used to assess study quality. A bioecological framework was applied to map interventions to influence levels and evaluate their impact on attendance.

Results: Sixteen studies, mostly from the United States with one from Australia, were included. Study designs varied, including randomised controlled trials, quasi-experimental designs, and cohort studies, with quality ratings from weak to moderate. Interventions demonstrated variable effectiveness, reflecting the challenges of addressing persistent absenteeism. Favourable outcomes were reported for mentoring schemes, family involvement initiatives, school counselling, incentive programmes, school-based healthcare, and a police partnership strategy. However, inconsistencies in significance and impact were observed across studies.

Conclusion: The evidence base for interventions to improve attendance among persistently absent secondary school students remains limited. High-quality research is needed to build robust evidence, incorporating comprehensive attendance metrics alongside academic and health outcomes. Future studies should document and analyse demographic subgroups and include qualitative approaches to address the needs of diverse at-risk groups and guide intervention design.

Systematic Review Registration: <https://www.crd.york.ac.uk/PROSPERO/view/CRD42024490992>, PROSPERO [CRD42024490992].

KEYWORDS

persistent absenteeism, school attendance, school-based interventions, secondary schools, chronic absenteeism, intervention effectiveness

1 Introduction

Consistent school attendance plays a vital role in the individual development of young people and is associated with long-term life chances (1). Higher attendance has been linked to a number of positive outcomes including attendance in continued education, higher earnings, and economic empowerment (2). Consistent attendance is also associated with improved mental and physical health (3), and development of skills in making positive health-related choices (4).

Conversely, lower levels of school attendance are associated with a number of challenges throughout life, including low academic attainment (5–7), low social functioning (8) and increased risk of unemployment (9). Lower attendance is also linked to mental and physical health difficulties (10), including an elevated risk of self-harm and suicide (11). These associations are complex and multi-directional; for some children, reduced attendance may be a response to unmet needs within the school environment, particularly in the context of neurodivergence, emotional distress, or anxiety-based avoidance (often referred to as Emotionally Based School Avoidance, EBSA), and lack of tailored support.

The implications of these outcomes extend beyond the individual, with costly impacts on society. Unemployment and reliance on benefits strain the economy, while poor health outcomes increase the burden on the healthcare system (12). An association with criminal outcomes has also been identified, increasing pressure in juvenile and adult justice systems (13).

In this context, absenteeism can be seen as a pressing public health issue, with the potential to shape individuals' overall health, well-being, and functional capabilities. Addressing this issue and its drivers, both within and beyond the school environment, will ensure that children can thrive and develop to become part of a healthier community and resilient society.

There are many reasons why students cannot or do not attend school, such as physical and mental health issues, anxiety-related school avoidance, family responsibilities, logistical challenges, social problems, participation in out-of-school activities, and school-related factors (14). The multifaceted nature of the underlying causes of absences poses a challenge in understanding and addressing issues to help students attend (15).

Attendance data in England shows that school absence is a critical issue, particularly when compared with pre-pandemic levels. The overall absence rate increased from 4.7% in 2018/19, to 7.1% in 2023/24. Some pupils miss school at higher rates than others. When absences exceed 10% of possible sessions, this is classified as persistent (or chronic) absence (16), which is associated with greater risk of negative outcomes. Persistent absence rates have risen sharply, from 10.9% of pupils in 2018/19 to 20.0% in 2023/24, with secondary schools experiencing the highest rates of persistent absence.

The absence rate is not uniform across the student population. Using eligibility for free school meals (FSM) as an indicator of disadvantage (17), pupils eligible for FSM were more than twice as likely to be persistently absent (34.8%) compared to their

non-eligible peers (14.1%) (18). A similar disparity is seen among pupils with Special Educational Needs (SEN), where 31.3% were persistently absent, compared to 18.4% of those without SEN (18).

Pupils with persistent absence often cite multiple reasons for missing school, and interventions are less likely to be successful (19). For some students, school-related anxiety and distress play a central role, and these patterns can become entrenched if early support is unavailable. If unaddressed, absences may escalate, and can be associated with a higher risk of poor academic achievement and school dropout (20). In the UK, missing over 50% of sessions is known as severe absence (17). 171,269 pupils (2.3%) were classed as severely absent in 2023/24, the highest level recorded.

Rising rates of absenteeism, wide-ranging underlying causes, and the disproportionate burden on disadvantaged groups add complexity to tackling the issue. Addressing school absence effectively requires system-wide interventions informed by public health principles. Given the strong links between absenteeism and wider determinants of health, coordinated efforts are needed across schools, families, health services, policing, and community organisations (21).

In the UK, the Education Committee of Parliament conducted an inquiry into persistent absences in 2023, highlighting uneven distribution and recent increases in absence rates (22). The Government's response includes a "support first" approach, enhanced attendance reporting, designated champions, and multi-agency collaboration across education, health, social care, and policing (23). While these plans build on previous initiatives and stakeholder input, they are limited by a lack of robust evidence.

A 2021 Education Endowment Foundation (EEF) rapid evidence review concluded that most attendance interventions had limited or inconsistent impact, and that few studies were of high methodological quality (24). The review primarily included randomised controlled trials and quasi-experimental designs, which, while rigorous, represented only a narrow subset of the interventions being delivered in schools. A 2022 meta-analysis (25) similarly focused on controlled intervention studies and confirmed that although more interventions are being trialled, the evidence base remains weak and heterogeneous, with no clear consensus on which approaches work best. The EEF review also included interventions with both direct and indirect effects on attendance, such as mentoring, meal provision, and wellbeing programmes, reflecting the multiple interconnected factors shaping school attendance. However, there remains no agreement on which intervention approaches are most effective in different contexts. Together, these reviews highlight the ongoing uncertainty that this review seeks to address.

A 2013 review (26) found that attendance interventions improved truant students' attendance by an average of 4.7 days. It found that collaborative approaches were no more effective than interventions led by single-agencies, supporting a pragmatic approach based on available resources. However, this review focused on truancy and excluded students who were absent due to anxiety or distress. A 2010 review (27) categorised

findings according to the level of intervention; student/family-based, school-based, and community-based. This revealed promise for contingency management at the individual level and organisational partnerships at the community level, but they noted that the classification itself had limitations that could misrepresent effectiveness.

Other reviews reinforce limitations of research in this area. A 2018 review (28) found that skills training, family support, and incentive-based strategies often led to improved attendance, but the review lacked quality appraisal, raising concerns about study bias. A meta-analysis of 22 studies (25) found small positive effects for behavioural and academic interventions but noted that many strategies remain understudied or have only minor impacts. Strict inclusion criteria in these reviews often excluded potentially effective approaches that lack precise quantitative measures.

Challenges in studying absenteeism include high family mobility, school disengagement, and inconsistent reporting (26). Standardised evaluation frameworks have been recommended to address inconsistencies (29). Research has also highlighted age-related differences in absenteeism drivers, with younger students dependent on parental involvement and older students facing challenges linked to past academic struggles (28, 30). Older students who have experienced prolonged absence may disengage further, making interventions less effective (31).

Beyond structured interventions, school culture may play a critical role in attendance. Studies link positive school environments to improved engagement (32), and there is growing emphasis on fostering an “attendance-focused” culture (24, 33). Approaches like Multi-Tiered System of Support (MTSS) (34) and Positive Behavioral Interventions and Supports (PBIS) (35) have shown promise in creating supportive environments that encourage attendance. These approaches are increasingly discussed in the context of EBSA for this reason, with potential to reduce sources of emotional distress. Whilst this may strengthen students’ sense of safety and belonging, these approaches are implemented inconsistently, and research on their long-term impact remains limited.

Building on this, a recent review of truancy interventions identified that approaches which strengthen students’ sense of connection to school tend to have more sustained effects on attendance. Interventions grounded in a school bonding or relational approach, where the focus is on improving relationships between students, staff, and the wider school environment, were found to be more effective than those that rely primarily on rewards or sanctions directed at students or parents (36). In some cases, sanction-based approaches were shown to be ineffective or counterproductive, particularly for students who were already disengaged. This highlights the importance of considering relational and contextual influences on attendance, rather than treating absenteeism solely as an individual behaviour.

A framework adapted from Bronfenbrenner’s theory of human development (37) has been used to identify risk and protective factors for school absenteeism across multiple ecological levels; The “Kids and Teens at School” (KiTeS) framework (38). This

conceptualises influences on school attendance at four interconnected levels (as shown in Figure 1):

Microsystem: Direct influences, including individual characteristics, family, and school.

Mesosystem: Interactions between these microsystems, such as family-school relations and school climate.

Exosystem: Indirect influences, including school and community services or parental work settings.

Macrosystem: Broader structural factors, such as socioeconomic status, cultural norms, and public policies.

The framework has been used to structure the identification of both risk and protective factors for absenteeism; for example, one study analysing data from over 121,000 students identified 18 risk and protective variables within the microsystem and mesosystem (40). Another found that interventions often overlooked exosystem and macrosystem factors in elementary school settings, suggesting the need for a more comprehensive approach (41). Additionally, the KiTeS framework has been linked to Multi-Tiered Systems of Support (MTSS) models, incorporating interventions across multiple levels (34). This framework can provide a useful way to consider how different intervention components relate to the wider system influencing attendance.

While various interventions exist, gaps in high-quality, context-specific research persist. The effectiveness of attendance strategies depends on multiple factors, including individual circumstances, school engagement, and broader systemic challenges. Further work is needed to establish which strategies are most effective for different drivers of absence, student populations, and school settings.

Although absenteeism is a global issue, approaches to monitoring, thresholds, and school structures vary internationally. This review focuses on the UK context, but draws on evidence from comparable education systems where international findings may still offer transferable insights.

As understanding of absenteeism evolves, there are increasing calls to shift away from framing non-attendance solely as misbehaviour, instead recognising the broader factors contributing to absence (42). This includes recognising emotionally based school avoidance as a response to distress, and implementing supportive strategies and adjustments.

Given rising rates of persistent absence in secondary schools and the lack of robust evidence on effective interventions, this systematic review evaluates the effectiveness of approaches targeting this group to guide policy and practice. It compares interventions across individual, family, school, community, and societal levels, examining the role of school culture in shaping attendance outcomes. Findings aim to inform UK policies at a time of significant investment in attendance strategies.

2 Methods

This systematic review uses the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to

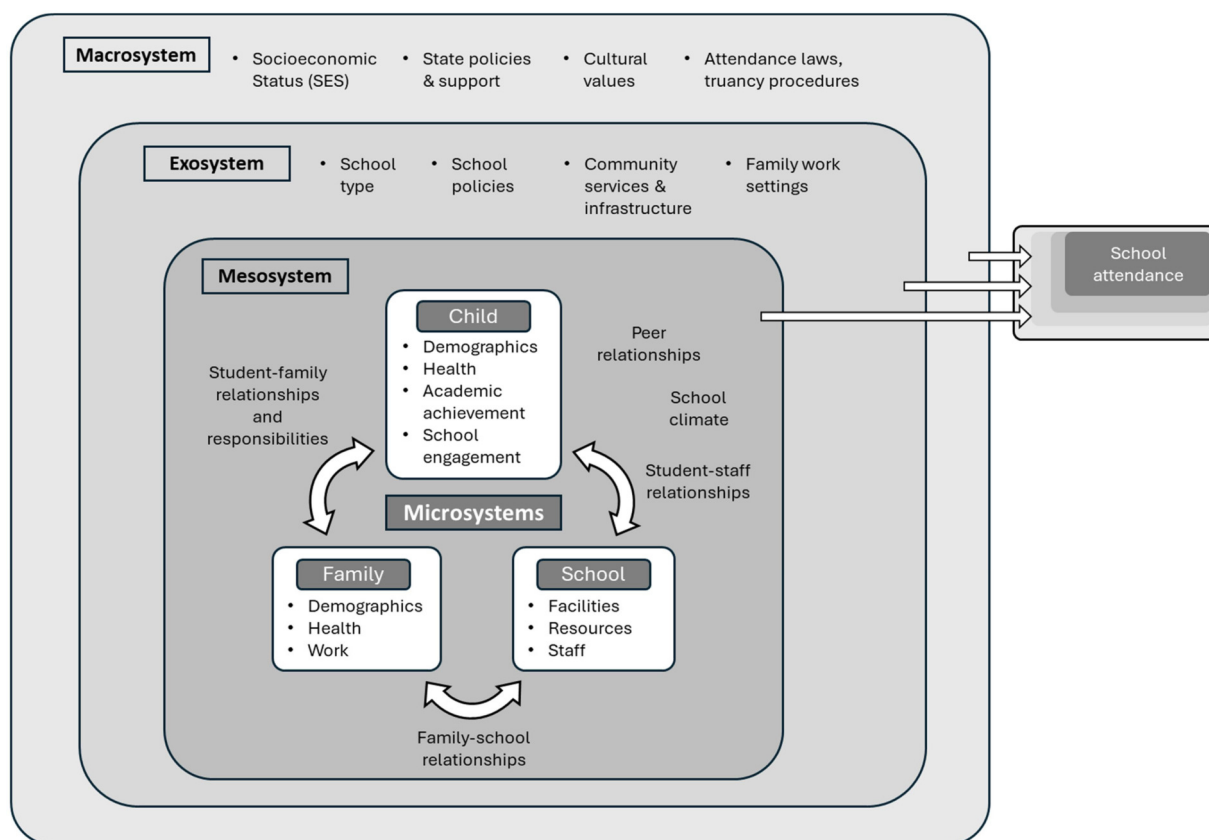


FIGURE 1
Bioecological framework for school attendance, adapted from KITES framework (38).

ensure reporting rigour and transparency (43). The project was registered on an international Prospective Register of Systematic Reviews [PROSPERO] on 09/01/2024, reference ID: CRD42024490992.

2.1 Study design and search strategy

The question being addressed is which interventions are most effective in reducing persistent absenteeism and how effectiveness varies across different levels of influence. This is outlined using the PICOS framework: the review focuses on secondary school students (Population), examining interventions designed to address persistent absenteeism (Intervention), with or without a comparator (Comparison), assessing school attendance as an outcome through various measures (Outcome). Only empirical peer-reviewed studies were included (Study Design), ensuring a rigorous evidence base.

The search strategy was developed in Ovid MEDLINE, informed by a review of key publications and refined with input from a librarian to optimise search terms and combinations. Once finalised, it was adapted for use in additional databases. The search incorporated terms related to persistent absenteeism (e.g., “emotionally based school avoidance”, “school refusal”,

“non-attendance”), interventions (e.g., “program”, “mentorship”, “counseling”), and school culture (e.g., “school belonging”, “student-teacher relationships”, “classroom environment”). Boolean operators and database-specific subject headings were used to refine the search strategy. The full search strategy is available in the [Supplementary Material](#). Citation and reference list searches were undertaken to explore potential additional studies.

Given the intersection of school absenteeism with both health and education research, multiple databases were searched to ensure comprehensive coverage; PsycINFO (Behavioural Sciences and Mental Health), ERIC (Education Research Information Centre), BEI (British Education Index), Child Development and Adolescent Studies, ASSIA (Applied Social Science Index and Abstracts) and MEDLINE (Medical Literature). The final searches were conducted on 16th April 2024.

2.2 Eligibility criteria

Inclusion and exclusion criteria were structured using the PICO framework and informed by pilot searches and background literature. Eligible studies examined interventions targeting persistent absenteeism among secondary school-aged students (aged 11–18), defined using the UK threshold of

missing 10% or more school sessions. Studies including mixed-age samples were included where at least 90% of participants met the inclusion criteria or where subgroup data were reported. Interventions designed to proactively support at-risk students were included, and interventions where attendance was a secondary outcome (for example, interventions targeting mental health or behaviour) were included where attendance outcomes were reported.

Studies were required to measure school attendance through any method, including school records, self-reports, or staff reports. Both qualitative and quantitative studies were eligible, provided they included primary data. Although attendance outcomes are often reported quantitatively (e.g., percentage of sessions missed), qualitative evidence was included to provide insight into mechanisms of change, student and staff engagement, and contextual factors influencing acceptability and feasibility. Qualitative data relevant to attendance could include student, parent, or staff descriptions of experiences of returning to school, perceived barriers and facilitators to attendance, and changes in attitudes, confidence, or school connectedness. This supports a more complete understanding of how and why attendance outcomes vary across settings. Studies reporting only feasibility or acceptability without attendance outcomes were excluded.

Commentaries, opinion pieces, and reviews were excluded to avoid secondary interpretation bias, but reference lists of reviews were screened for additional primary studies. Case studies with fewer than five participants were also excluded, as small samples limit the interpretability of findings and restrict generalisability.

The review focused on school-based interventions; therefore, pharmacological treatments, medical interventions, and those delivered in non-school settings were excluded. Given the broad and varied conceptualisation of school culture, the role of culture was assessed in result synthesis rather than used as a strict inclusion criterion.

To ensure relevance to the UK context, studies were limited to countries with comparable compulsory education systems, including Europe, the USA, Canada, Australia, and New Zealand; Comparable systems were pragmatically defined as those with universal compulsory schooling to at least age 16 and broadly similar primary and secondary structures. No date restrictions were applied, but studies were limited to English due to resource constraints.

2.3 Study selection

Search results were uploaded and managed using the web-based reference management tool CADIMA (44) for efficient tracking and documentation (45). Duplicate studies were automatically removed using CADIMA and EndNote (46), followed by title and abstract screening to exclude remaining duplicates and obviously irrelevant studies. Screening was conducted by one reviewer, with 10% independently screened by a second reviewer to assess consistency in applying inclusion criteria; agreement exceeded 90%. Any uncertainties at this stage were taken forward to full-text screening.

Full texts were screened using the same process: one reviewer screened all studies, and a second reviewer independently screened 10% to ensure accuracy and reduce the risk of missing relevant studies (47). Disagreements were resolved through discussion. The screening process is outlined in the PRISMA flowchart (Figure 2).

2.4 Data extraction

A spreadsheet was used to extract and organise data from the included studies, with iterative development of categories. The final spreadsheet captured key details, including authors, year of publication, study title, study design, data type, population type, sample size, setting, intervention, comparison, outcome measures, time points of data collection, and findings, which were organised by attendance and other outcomes.

The Template for Intervention Description and Replication (TIDieR) guideline (50) was used to extract further details of interventions. This checklist provides a structured framework for describing interventions, including their rationale, materials and procedures, mode of delivery, personnel involved, setting, timing, and implementation details such as fidelity. These elements facilitated structured comparisons between strategies and their implementation, supporting a comprehensive understanding of the interventions reviewed.

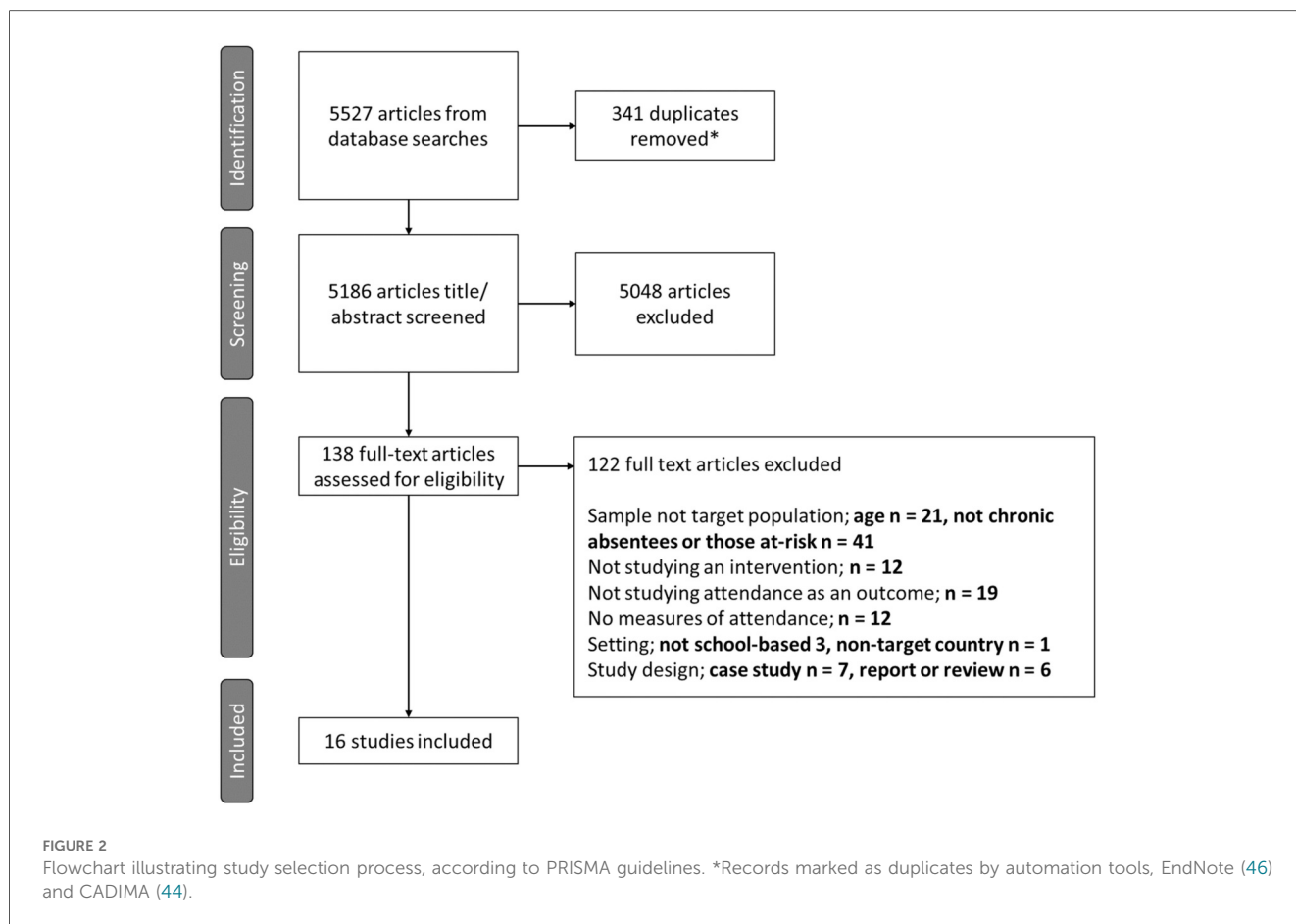
Data extraction was conducted by a single reviewer, with the extraction framework refined iteratively to support consistency across studies.

2.5 Critical appraisal

Quantitative studies were assessed using the Effective Public Health Practice Project (EPHPP) Quality Assessment Tool for Quantitative Studies (51), a recommended tool for appraising public health interventions across different study designs (39). This tool evaluates selection bias, study design, confounders, blinding, data collection methods, and participant withdrawals, with each domain rated as strong, moderate, or weak. These ratings determine the overall risk of bias (low, moderate, or high). Two additional components, intervention integrity and analytical methods, further contextualise study limitations.

Qualitative studies were appraised using the Critical Appraisal Skills Programme (CASP) Qualitative Checklist (52), a widely recognised tool for assessing methodological rigour and the relevance of findings in health research (53). This checklist consists of ten prompts across three sections: validity of results, findings, and applicability to practice.

Critical appraisal was conducted by one reviewer, with a sample of studies independently assessed by a second reviewer as a quality assurance measure to ensure consistent application of criteria. A small number of discrepancies were discussed and resolved through consensus, which refined and clarified the application of appraisal criteria before continuing with the remaining studies.



2.6 Data synthesis and analysis

Given the diversity in population characteristics, settings, and interventions, a narrative synthesis approach was chosen. This method integrates study results while considering statistical significance, confidence intervals, and risk of bias. A meta-analysis was deemed inappropriate due to the heterogeneity of study designs, which could obscure important contextual factors. Findings were interpreted in relation to study robustness rather than methodological exclusion, acknowledging the complexities of researching a highly mobile population with school engagement challenges (54).

The synthesis followed the Economic and Social Research Council (ESRC) guidelines for narrative synthesis (55) to ensure a systematic and comprehensive analysis. Interventions were grouped through iterative review of study characteristics, identifying common mechanisms of action. Eight categories were developed that reflected the dominant modes of support used to influence attendance [Multifaceted Interventions, Mentoring, Family Involvement, Counselling, School-based Healthcare, Social-Emotional Learning (SEL), Police Partnership and Incentive Schemes].

The KiTeS framework (38) was used to analyse intervention components across the microsystem, mesosystem, exosystem, and macrosystem. Intervention activities were coded to one or

more ecological levels depending on their mechanisms of influence. For example, mentoring schemes typically operate at the microsystem through one-to-one relational support, but also influence the mesosystem by facilitating communication and problem-solving between school, family, and the student. These components were therefore coded across both levels. Coded intervention levels were then used to structure the narrative synthesis and to compare the distribution and focus of intervention strategies across studies.

Applying this framework allows an exploration of relationships between interventions and absenteeism, identifying key influences on attendance outcomes. Particular attention was given to school culture within the mesosystem and its interaction with exosystem-level factors such as school policies. The robustness of the synthesis was assessed to account for methodological variability.

3 Results

The searches identified 5,527 articles. After title and abstract screening, 138 full-text articles were assessed for eligibility. Of these, 122 were excluded for not meeting the inclusion criteria, leaving 16 studies for the final review, as shown in the PRISMA flowchart, Figure 2.

3.1 Study characteristics

The included studies were conducted between 1990 and 2017, with publication dates from 1993 to 2024. Fifteen were based in the US and one was in Australia.

Seven studies were experimental designs (all randomised controlled trials), four were quasi-experimental and five were observational. Thirteen studies collected only quantitative data, while the other three collected both quantitative and qualitative data. One study used a survey to assess students' willingness to attend, the other fifteen studies used school records to measure absence using various metrics. This included days absent, measures of consistent attendance, and percentages of students who were persistently absent. Two studies specifically assessed unexcused absences, and one subdivided absences by specific class attendance.

3.1.1 Participants

Two studies assessed intervention assignment at school-level (schools were classified as implementers or non-implementers). The remaining 14 studies examined individual-level assignment and involved a total of 6,915 participants.

There was notable variability in the reporting of participant demographics, including of characteristics known to be common confounders. Table 1 shows the consistency of reporting for sex, ethnicity, economic disadvantage, and special educational needs (SEN) status across the studies. Only three studies reported all of these demographic characteristics for either the participants or the overall population. SEN status was least frequently reported, with no evidence of measurement or reporting in over half of the studies (9/16), followed by economic disadvantage, which was missing in six of the 16 studies.

The included studies varied in their design, populations, and interventions. Table 2 provides an overview of the key characteristics, including study design, population, data type, intervention and comparison types, and attendance-related outcomes.

The interventions assessed in the included studies were all delivered in school settings, with 11 of 16 incorporating

additional home or community-based elements where indicated. Half of the interventions were standalone strategies (56–58, 60, 63, 64, 66, 67), while the other half explicitly linked to external services through referrals or signposting (54, 59, 61, 62, 65, 68–70).

A range of strategies were assessed, involving interventions that can be organised under eight broad categories. Some strategies included elements from multiple categories. The categories were multifaceted interventions, mentoring, family involvement, counselling, school-based healthcare, social-emotional learning (SEL), police partnerships, and incentive schemes. Several interventions incorporated elements from multiple categories. Further details of the intervention characteristics, including their rationale, delivery format, providers, and fidelity assessments, are summarised following the TIDieR framework (42) in Table 3.

3.1.2 Reported outcomes

Across the included studies, outcomes primarily measured student attendance, academic performance (grades, class failure), school engagement, and discipline (suspensions, referrals). Several studies also included qualitative or indirect indicators related to student experience, such as school attitude, reflections on mentoring, willingness to attend, and self-reported adjustment. These outcomes were reported inconsistently and were not systematically extracted, so they are not synthesised in detail. Nevertheless, they may reflect aspects of emotional wellbeing, confidence, or engagement that underpin attendance improvements and highlight areas for future research.

3.2 Quality assessment

All studies were assessed using the EPHPP quality appraisal tool (51), with no studies achieving a global rating of “strong”. Eight were rated “moderate” and eight were rated “weak”.

This is summarised in Figure 3. Assessments of each study are detailed in Tables 4, 5.

The included studies had significant sources of bias, with common weaknesses in selection bias, blinding, and intervention integrity. No studies were rated as strong for selection bias, as participants were often not fully representative of the target population due to stratified sampling, risk-based selection, or exclusion of key groups. Recruitment challenges were also prevalent, with some studies reporting extended start-up periods and low participation rates.

Study design was rated strong for eight controlled trials and moderate for quasi-experimental and observational studies. Confounding risk varied; studies rated strong demonstrated no baseline differences between groups in key demographics such as sex, ethnicity, income, and education status. In contrast, weaker studies lacked baseline data or reported significant group differences.

Blinding was the most frequently rated weak domain, primarily due to unclear participant awareness of study aims and insufficient reporting on assessor blinding. None of the experimental studies

TABLE 1 Number of studies which measured and reported demographic characteristics. *N* = 16.

Reporting completeness	Sex (%)	Ethnicity (%)	Economic disadvantage (%)	SEN status (%)
Fully reported	12 (75)	11 (68.75)	4 (25)	4 (25)
Partially reported	0	2 (12.5)	6 (37.5)	2 (12.5)
Measured, but not reported	0	0	0	1 (6.25)
Not reported or measured	4 (25)	3 (18.75)	6 (37.5)	9 (56.25)

Economic disadvantage was assessed by household income or eligibility for subsidised meals. SEN=Special Educational Needs. Fully reported=Studies that reported detailed participant characteristics for control and treatment groups. Partially reported=Studies that reported characteristics for the overall population or school(s). Measured, but not reported=characteristics were included in the analysis or modelling, but not separately reported. Not reported or measured=no evidence that characteristics were recorded or accounted for in the study.

TABLE 2 Characteristics of included studies.

Study	Population	Study design Data type	Number of participants	Intervention type(s)	Comparison type, details	Attendance outcome type and measure
Akos et al. (56)	All students in public schools within a school district	Observational, analytic cohort study Quantitative	34 schools (2,040 students)	Counselling	Pre-intervention period and non-matched control group; school services as usual	Total absent days in a year Rate of chronic absenteeism (<90% attendance) School records
Barnet et al. (57)	Pregnant students attending an alternative school	Observational, analytic cohort study Quantitative	341	School-based healthcare	Non-matched control group; off-site healthcare	Days absent in a year School records
Converse et al. (58)	Students with a history of, or at-risk of chronic absence at a middle school	Quasi-experimental, pre-post with control group Quantitative	32	Mentoring	Wait-list control group; school services as usual	Number of unexcused absences per student over 18 weeks School records
DeSocio et al. (54)	Students with a history of, or at-risk of chronic absence in a high school with high levels of disadvantage and low academic achievement	Experimental; randomised controlled trial Quantitative	103	Multifaceted approach Mentoring Family involvement School-based healthcare	Control group (and unable-to-enrol group for treatment-on-treated analysis); school services as usual	Days absent, categorised into most-missed and least-missed classes School records
Durham et al. (59)	All students in a school district	Observational, analytic cohort study Mixed	210 schools (211,513 students)	Multifaceted approach Family involvement	Non-matched control group; school services as usual	Percentage of students missing 20 or more days during the school year School records
Gottfredson et al. (60)	All students in a school with high rates of chronic absenteeism, dropout and low academic achievement	Quasi-experimental, pre-post with control group Quantitative	274	Social Emotional Learning	Non-matched wait-list control; school services as usual	Number of days absent during semester School records
Guryan et al. (61)	Students with a history of, or at-risk of chronic absence at a middle school	Experimental; randomised controlled trial Quantitative	1,938	Mentoring Family involvement	Control group; school services as usual	Days absent per year School records
Heppen et al. (62)	Students with a history of, or at-risk of chronic absence across 10 high schools	Experimental; randomised controlled trial Quantitative	553	Mentoring Family involvement	Control group; school services as usual	Percentage of students attending >90% School records
Johnson & Lampley (63)	Students with a history of, or at-risk of chronic absence at a middle school	Quasi-experimental, pre-post without control group Quantitative	57	Mentoring	Pre-intervention period	Mean number of days absent per year School records
Kang-Yi et al. (64)	Students with mental health diagnoses in middle schools within a school district	Observational, analytic cohort study Quantitative	2,617	School-based healthcare	Non-matched control; ex-or never users of school clinic	Percentage of unexcused absent days per year School records
Maynard et al. (65)	Students with a history of, or at-risk of chronic absence at high schools within a school district	Experimental; randomised controlled trial Quantitative	260	Mentoring Family involvement	Control group; school services as usual	Total number of days missed over 9 weeks School records
Mazerolle et al. (66)	Students with a history of chronic absence at schools within a district	Experimental; randomised controlled trial Mixed	102	Police partnership Family involvement	Control group; district services as usual	Student willingness to attend school Survey
McCord et al. (67)	Students with a history of chronic absence in an alternative high school for students who were not able to succeed in traditional education programmes	Observational, analytic cohort study Quantitative	332	School-based healthcare	Non-matched control group; students not registered at school clinic	Percentage absence in school year School records
Powers et al. (68)	Students with a history of, or at-risk of chronic absence in a low-performing high school	Experimental; randomised controlled trial Mixed	54	Mentoring Family involvement	Control group; school services as usual	Days absent from school per year Student records

(Continued)

TABLE 2 Continued

Study	Population	Study design Data type	Number of participants	Intervention type(s)	Comparison type, details	Attendance outcome type and measure
Sinclair et al. (69)	Students with emotional or behavioural disabilities across 7 high schools in a district	Experimental; randomised controlled trial Quantitative	175	Mentoring Family involvement	Control group; school services as usual	Percentage of students with consistent attendance (no periods of “dropout”, defined as 15 absences within 20 school days) per year School records
Young et al. (70)	Students with a history of chronic absence in a middle school	Quasi-experimental, pre-post with control group Quantitative	77	Incentive scheme Family involvement	Non-matched control group	Monthly attendance percentage School records

detailed whether participants were informed of research aims, increasing the risk of reporting bias. Additionally, outcome assessors, often school staff, may have been aware of intervention status, leading to potential detection bias.

Data collection was also a concern, particularly for attendance measures, which were drawn from school records in most studies. While considered valid, such records may not always accurately reflect student presence due to tardiness, selective attendance, or procedural inconsistencies. No studies provided reliability checks for attendance data, leading to cautious assessments of validity.

Handling of withdrawals and dropouts varied, with nine studies rated strong for reporting attrition by group and maintaining over 80% completion rates. Some studies did not report dropouts, while others had attrition rates exceeding 20%, raising concerns about data completeness and potential bias.

Intervention integrity was inconsistently reported, with 12 studies failing to measure consistency, and nine acknowledging possible unintended intervention. Statistical analysis methods were generally appropriate, with nine studies following an intention-to-treat approach.

Overall, all studies presented some risk of bias, often linked to challenges faced by at-risk populations, such as conflicting priorities, low school engagement, and circumstantial barriers. Insufficient reporting undermined the certainty of quality assessments. These limitations are consistent with challenges reported in other school-based intervention research and are considered in the interpretation of results.

The qualitative findings from the three mixed studies were appraised using the CASP tool, which revealed potential limitations in validity, and consistently identified a lack of reporting on ethical issues, as shown in Table 5. The aims of this review were not necessarily addressed by all qualitative aspects of these studies, so further examination of limitations is detailed according to relevance in the synthesis.

3.3 Main findings

The level influence of most interventions was individual, focusing on the needs and characteristics of students. For instance, mentoring and counselling schemes provided direct

student support, incentives aimed to increase individual student motivation, and healthcare services supported individual health. Some interventions also targeted the family level of influence, through improving communication and links between schools and families, although no interventions explicitly targeted family dynamics or culture as a primary aim. There were no interventions that explicitly addressed school level in the interventions, with no direct strategies to influence the school environment. At the community level, there was involvement of community services within several interventions, and a police-school partnership represented an example of collaborative efforts (66). These initiatives still primarily served individuals, whilst recognising the importance of community support in addressing school attendance issues. Finally, at the societal level, one multifaceted approach advocated for creating a supportive societal environment for schools (59). Links to community services represented a potential role for society as a whole, but again, these were mainly focused on supporting individual students.

Given this distribution with a heavy emphasis on individual-level approaches, results are presented according to the eight intervention categories previously outlined. Table 6 provides a summary of outcomes, grouped by these categories. Aspects of the interventions will be applied to the bioecological KiTES framework (38) to enable an understanding of their outcomes, which is further explored in the discussion.

3.3.1 Multifaceted approaches

Two studies examined multifaceted interventions, integrating academic support, mental health services, family engagement, and community partnerships to provide holistic student support, with mixed results on absenteeism.

The first study (59) evaluated Full-Service Community Schools (FSCS), an integrative strategy combining educational, health, social, and community services within schools and the broader community (71). FSCS aligns with multiple system levels of the KiTES framework (38). At the microsystem level, it provided direct support to students and families, including counselling, health services, and academic assistance. The mesosystem level focused on strengthening school-family collaboration through parent engagement programmes and communication initiatives. Community integration was a key component at the exosystem

TABLE 3 Intervention characteristics [using TIDieR (50) guideline].

Study	Intervention name	Intervention rationale	Material, procedures and delivery	Provider(s)	Duration and frequency	Fidelity assessment
Akos et al. (56)	School counselling, Recognized ASCA Model Program (RAMP) designation	RAMP status: recognition of counselling standards. Counselling: To improve student outcomes in academic, career, and social/ emotional development.	Counselling including individual and group sessions, workshops, and informational materials	School counsellors	1–7 years overall. Detail not reported	Not monitored or recorded
Barnet et al. (57)	Prenatal care in school-based health centre (SBHC)	To provide primary and prenatal care on school site	On-site care including primary, prenatal, delivery, and postpartum care for students; family planning services; primary care for infants and children; parenting education; and mental health services	Family physicians, social worker, part-time psychiatrist, medical assistant, health educator, and receptionist	Up to 3 years of care, at least 9 prenatal visits recommended, but detail not stated	Not monitored or recorded
Converse et al. (58)	Mentoring, school personnel as mentors	Improved student outcomes for at-risk students, including behaviour, attendance and attitude	Regular mentor-student meetings at school. The mentor aimed to build trust and develop effective communication with the student. Mentors modelled honest and ethical behaviours and completed session logs.	Faculty and staff members as mentors	18 weeks; at least one mentoring session per week	Mentor logs from meetings were reviewed to establish what activities were done. The number of meetings ranged from 8 to 22 in the 18-week period; 3 student-mentor pairs every week as planned
DeSocio et al. (54)	Multifaceted: School based health centre (SBHC), mentoring, family involvement	To enhance student engagement for students with a high number of previous absences	SBHC provides comprehensive health services to students on site. Mentors build relationships with students through day-to-day check ins, tutoring, advocacy and support at school. A coordinator also provides check ins and liaises with families, develops a school re-entry plan and helps addresses challenges	Teacher mentors, program coordinator, health centre staff	6 months. Daily student check-ins and one-on-one interactions, two after-school tutoring sessions weekly (duration of activities unclear)	Mentors met with each other and the project coordinator to provide support for implementation. No further details reported
Durham et al. (59)	Full Service Community School strategy (FSCS), “comprehensive support”	To enhance school and community service coordination and effectiveness in supporting students	Highly variable. FSCS coordinator identifies needs and potential partners, engages families, conducts outreach, provides opportunities for involvement, and creates a welcoming school environment	School leadership, FSCS coordinator, school staff, Local community service providers	1–10 years overall. Detail not reported	Not monitored or reported
Gottfredson et al. (60)	Cognitive behavioural instruction class (a “social skills curriculum”)	To develop student skills and reduce problem behaviour, including misconduct and disruptive activities	Lessons from a trained instructor as part of a 27-session social skills curriculum, delivered on site to an established class group during regular school day	Trained instructors	1 semester, a lesson 2 days a week. Intervention repeated for a second group in a second semester.	Instructors kept implementation logs including lesson date, material covered and a perception of how well the students received and completed the lesson. 16 of 27 and 20 of 27 classes were completed, 68% of critical activities were covered in each class. 35% completion of activities overall.

(Continued)

TABLE 3 Continued

Study	Intervention name	Intervention rationale	Material, procedures and delivery	Provider(s)	Duration and frequency	Fidelity assessment
Guryan et al. (61)	"Check & Connect" ("C&C") mentoring	To reduce truancy, through social capital	One-to-one mentoring in school. Check: Mentors monitor students' attendance, behaviour, and academic performance. Connect: Mentors establish relationship with students and their families through formal and informal meetings. They intervene to address engagement obstacles. Mentors collaborate with school personnel to achieve outcomes.	C&C mentors and project manager employed by social service agency. Support from research staff	11 months a year for 2 years.	Mentors formally met with students, one-on-one or in small groups, an average of five times a month. More frequent informal check-ins (not detailed). No reports of length/ duration. Home contact through phone calls or visits, twice a month on average but was variable. Variable approaches to mentoring, some acted as tutors from, others acted as case managers, advocates, and counsellors. No further detail described.
Heppen et al. (62)	"Check & Connect" ("C&C") mentoring	To increase student engagement, performance in school, and school persistence. To promote school completion and prevent dropout	One-to-one mentoring in school. Check: Mentors monitor students' attendance, behaviour, and academic performance. Connect: Mentors establish relationship with students and their families through formal and informal meetings. They intervene to address engagement obstacles. Mentors collaborate with school personnel to achieve outcomes.	C&C mentors hired by the district A coordinator who was the existing Dropout Prevention Program Manager in the district. Support from research staff	3 years. Weekly student monitoring checks and student meetings at least twice a month.	Monitoring forms were reviewed for data recorded, meeting frequencies, time spent together and student risk status. Check data was recorded 65% of the time in year 1, 46% in year 2 and 33% in year 3. Meetings were held twice weekly in term time for non-transferring students on average. Students who transferred met once a week on average. The scheme was reported to have been implemented with fidelity, except with students who left district schools.
Johnson & Lampley. (63)	Mentoring scheme	To assist at-risk middle school students with school performance or related issues. To establish relationships between at-risk students and caring adults.	Linking Students To Educational Needs; "LISTEN". Additional support for students outside the regular classroom setting. Emphasis on study habits, interpersonal relationships, problem solving techniques, communication skills, and by encouraging positive behaviours	Mentors included classroom teachers, assistants, counsellors, administrators, custodians, librarians, retired teachers, and cafeteria staff	2 years. Frequency and length of intervention components not reported	Not monitored or reported
Kang-Yi et al. (64)	School-based mental health services	To improve student mental health and academic outcomes	On site mental health services including wraparound services, and outpatient therapy	Health centre staff	2 years. Further detail not reported	Not monitored or reported
Maynard et al. (65)	"Check & Connect" ("C&C") mentoring	To emphasise education for students, families and teachers, and to reduce and prevent absenteeism, suspensions, failing grades and school withdrawal	One-to-one mentoring in school. Check: Mentors monitor students' attendance, behaviour, and academic performance. Connect: Mentors establish relationship with students and their families through formal and informal meetings. They intervene to address engagement obstacles. Mentors collaborate with school personnel to achieve outcomes.	Existing coordinators employed as C&C mentors, "monitors". Support from research staff	6 months. Weekly student meetings, length not reported.	All CIS site coordinators who implemented C&C were trained and monitored to enhance implementation. Not comprehensively monitored or reported

(Continued)

TABLE 3 Continued

Study	Intervention name	Intervention rationale	Material, procedures and delivery	Provider(s)	Duration and frequency	Fidelity assessment
Mazerolle et al. (66)	School engagement programme, police-school partnership	To deter truancy by increasing parental and child awareness of the truancy laws through a collaborative, engaging family group conference (FGC) forum	Coordinated efforts between police officers and the school to engage parents and truanting children. Collaborative meetings were held in schools, community settings or at home. The context of truancy was discussed, including its effects and legal consequences, and an action plan for students was developed and agreed upon	School staff, police officers, trained conference facilitators. Other professionals from mental health services, social workers and family support services	6 months. Average meeting length of 96 min (min = 50, max = 158 min). Follow up contact with families over 6 months, 8.9 contacts were made on average	Staff and the research team monitored treatment fidelity to ensure control participants were not exposed to the intervention. The research team observed meetings, met meeting facilitators and recorded police officer activities on an activity log.
McCord et al. (67)	School-based health centre (SBHC)	To provide adolescent health care and potentially improve academic outcomes such as attendance, suspension rates, withdrawal, and graduation/promotion rates	On site health services provision which included health education, health promotion, screening, and clinical services	Health centre staff, part-time physician, nurse practitioner, clerk, full-time registered nurse, social worker, and clerk.	1 year. No further detail reported	Not monitored or reported
Powers et al. (68)	“Check & Connect” (“C&C”) mentoring	To emphasise education for students, families and teachers, and to reduce and prevent absenteeism, suspensions, failing grades and school withdrawal	One-to-one mentoring in school. Check: Mentors monitor students’ attendance, behaviour, and academic performance. Connect: Mentors establish relationship with students and their families through formal and informal meetings. They intervene to address engagement obstacles. Mentors collaborate with school personnel to achieve outcomes.	Graduate students trained as mentors. Support from research staff.	2.5 years. Once weekly meetings. An average of 20 h meeting time with mentees over 2.5 years (this equates to 13.3 min per week).	Weekly fidelity surveys completed by mentors and biweekly intervention logs provided a basis for feedback from the research team. 19 of 31 students were enrolled for the duration, all treatment participants completed at least one year. Average number of meetings was 46 (range 15–73). The average amount of cumulative “face time” was 20.22 h (range 4–49.5 h). Mentors implemented the intensive intervention 80% of the time when indicated (when a student’s risk status changed).
Sinclair et al. (69)	“Check & Connect” (“C&C”) mentoring	To emphasise education for students, families and teachers, and to reduce and prevent absenteeism, suspensions, failing grades and school withdrawal	One-to-one mentoring in school. Check: Mentors monitor students’ attendance, behaviour, and academic performance. Connect: Mentors establish relationship with students and their families through formal and informal meetings. They intervene to address engagement obstacles. Mentors collaborate with school personnel to achieve outcomes.	Specifically hired C&C mentors, “monitors”, and a project coordinator	4–5 years. Weekly contact with mentees. Contact time outside of the school year was about half of what it was during the academic term.	Procedures were developed to sustain treatment fidelity including coordinator reviews of monitoring sheets. Intervention contacts were recorded to assess engagement. Meetings ranged from a couple of minutes to several hours. On average this was a little less than an hour total a week. Details not reported.
Young et al. (70)	Attendance reward scheme “Perfect Attendance Wins Stuff” (“PAWS”)	To improve the attendance of students who are chronically absent	Daily student check-ins, group activities to promote school bonding, weekly and monthly celebrations and prizes for students. An additional individualised approach for those not improving, to include outreach and education to parents, and referrals to community agencies to address barriers to school attendance.	School staff including social worker, counsellor, psychologist, administrators, nurse	At least 1 month, up to 3 months. Daily check-ins, weekly and monthly perfect attendance celebrations. Duration not reported.	25% of students had additional individualised support. No fidelity monitoring, no further detail reported

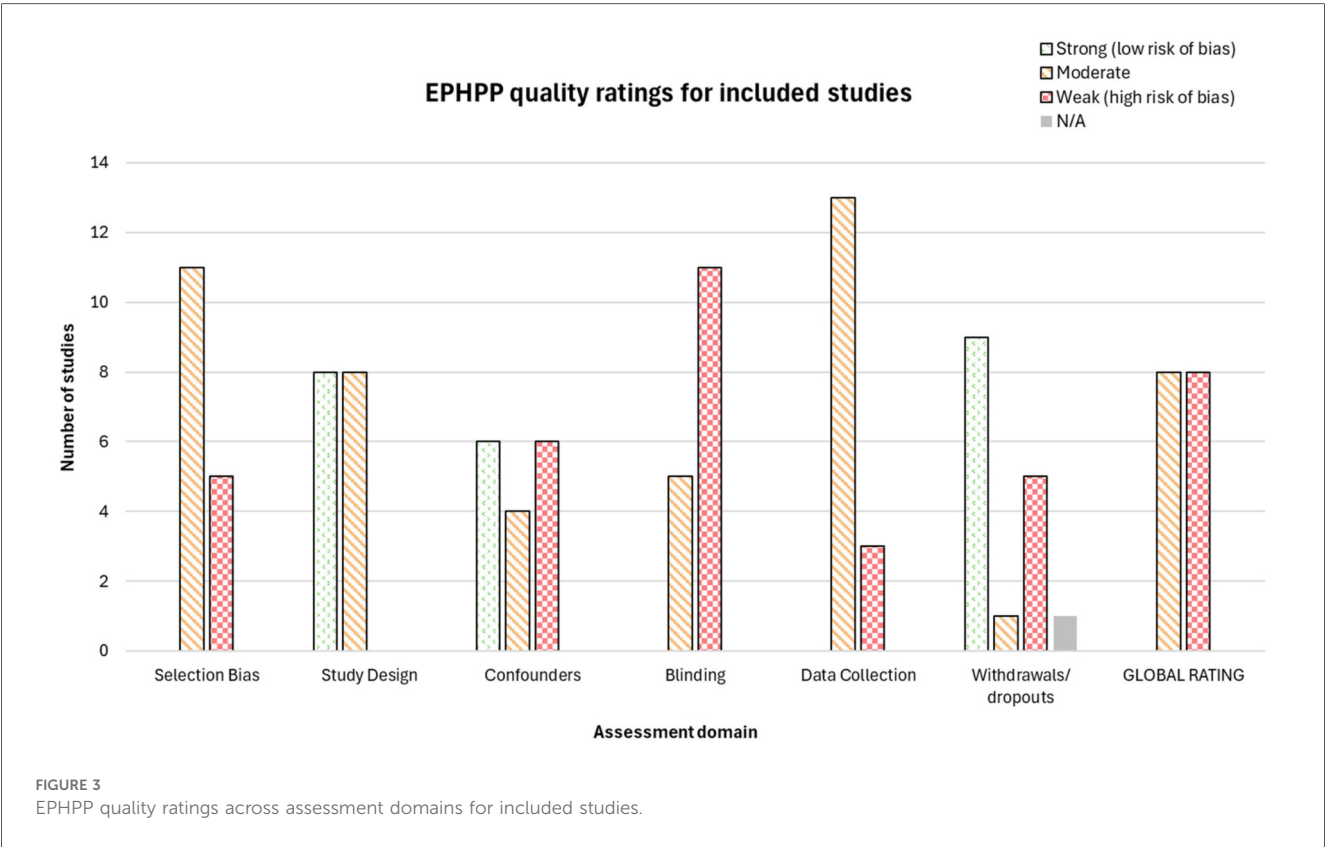


TABLE 4 EPHPP quality ratings.

Study	Selection bias	Study design	Confounders	Blinding	Data collection	Withdrawals/dropouts	Global rating
Akos et al. (56)	M	M	W	M	M	N/A	Moderate
Barnet et al. (57)	M	M	M	M	M	W	Moderate
Converse et al. (58)	M	M	M	W	M	S	Moderate
DeSocio et al. (54)	W	S	S	W	M	S	Weak
Durham et al. (59)	M	M	M	M	M	W	Moderate
Gottfredson et al. (60)	M	S	M	W	M	M	Moderate
Guryan et al. (61)	M	S	S	W	M	S	Moderate
Heppen et al. (62)	W	S	S	W	M	W	Weak
Johnson & Lampley (63)	M	M	W	W	M	S	Weak
Kang-Yi et al. (64)	M	M	W	M	M	S	Moderate
Maynard et al. (65)	M	S	S	W	M	M	Moderate
Mazerolle et al. (66)	W	S	W	W	W	S	Weak
McCord et al. (67)	M	M	W	M	M	W	Weak
Powers et al. (68)	W	S	S	W	M	S	Weak
Sinclair et al. (69)	M	S	S	W	W	S	Weak
Young et al. (70)	W	M	W	W	M	W	Weak

S, strong; M, moderate; W, weak.

TABLE 5 CASP quality ratings.

Study	Validity						Ethics & findings			Relevance
Durham et al. (59)	Y	Y	Y	Y	N	N	N	N	Y	Y
Mazerolle et al. (66)	Y	Y	N	Y	N	N	N	Y	Y	Y
Powers et al. (68)	Y	Y	Y	Y	Y	N	N	Y	Y	Y

level, offering access to local health clinics, social services, and after-school programmes. Finally, at the macrosystem level, FSCS promoted policies aimed at achieving educational equity.

The study compared absenteeism in six FSCS schools and 49 non-FSCS schools, noting that FSCS schools had higher pre-existing levels of persistent absence due to greater economic and educational needs. However, no consistent attendance improvements were observed post-implementation. The study did not conduct statistical tests, limiting its ability to assess the intervention's impact. A mixed linear regression analysis combined primary and secondary school data, making it less applicable to this review's focus. Qualitative findings from high-performing schools highlighted the importance of fostering positive family-school relationships and a welcoming school environment, with existing school staff playing a key role in student support.

The second study (54) tested an intervention combining mentoring, school-based healthcare, and family involvement using a randomised controlled trial (RCT). This can again be applied to system levels of the KiTES framework. At the microsystem level, mentoring helped students engage with their education by fostering personal interests, while coordinators provided direct support to both students and families, including re-entry planning. Access to school-based health centres (SBHCs) ensured students received personal and medical support. At the mesosystem level, collaboration between mentors, coordinators, and school staff created a network of support to address barriers to engagement. The exosystem level involved connecting families to community resources, including transport assistance, to improve accessibility. While the intervention did not implement direct macrosystem-level strategies, it contributed indirectly to broader systemic changes supporting student success.

The intervention aimed to strengthen student-school connections. Recruitment challenges led to analysis across three groups: intervention, “unable to enrol”, and control. Both intention-to-treat and treatment-on-treated analyses assessed its effectiveness. Attendance was analysed by class to capture selective attendance patterns.

Over nine weeks, intention-to-treat analysis showed a near-significant improvement in attendance for classes students least often missed (6.96 vs. 9.4 days absent, $p = 0.08$). Treatment-on-treated analysis revealed significant differences; for classes that students least often missed, the intervention group missed 4.5 days over nine weeks, compared to 9.4 days in the control group (4.5 days fewer, $p = 0.004$). For classes that students most often missed, the intervention group missed 28 days, compared to 34.4 days in the control group (6.4 days fewer, $p = 0.047$). Although percentages were not calculated, these figures suggest attendance improvements of approximately 10.9% and 14.2%; this assumes nine five-day weeks, however, which was not clearly specified, and therefore may not be accurate.

3.3.2 Mentoring

Mentoring aimed to prevent dropout, improve academic performance, reduce truancy, and support at-risk students

through personalised relationships. Some studies also sought to enhance student engagement, with one explicitly aiming to build social capital (61). Of the eight mentoring studies, five evaluated “Check & Connect” (C&C) programs and three evaluated non-C&C programmes. C&C mentoring programs generally had a primary focus on attendance, whereas non-C&C programmes aimed broadly at supporting at-risk students' engagement, behaviour, and attitudes, as well as attendance. Of the eight studies on mentoring, five found a significant positive impact on attendance, while three showed no effect; significant outcomes were not aligned with whether programmes were C&C or non-C&C.

Longer interventions with high participant retention appeared to be more effective; of the studies without significant findings, two had shorter durations of 18 weeks (58) and six months (65), and the third lasted three years (62) but had the highest attrition rate (47.2%). Among the five studies with significant effects, reductions in absenteeism ranged from 2 to 10 days per year, equating to a 1.1%–5.7% attendance increase over a 175-day US school year. The qualitative findings in a mixed-methods study on “C&C” (68) highlighted implementation challenges, including student mobility, missed sessions, and institutional barriers. This provided insight into variable programme delivery. Persistent and proactive mentorship helped mitigate these issues.

As expected given their broader aims, non-C&C programmes show more variable effects on absenteeism, with reductions primarily observed when interventions are intensive or long-term. However, among C&C programs, outcomes were not uniform, reflecting the potential influence of factors such as implementation fidelity, intensity, and contextual conditions.

3.3.3 Family involvement

Family involvement was a component of five mentoring-based interventions (61, 62, 65, 68, 69), typically through mentor communication via phone calls or home visits. Two multifaceted interventions also incorporated family engagement but used broader approaches. For instance, one involved families in “student re-entry plans”, which included restructuring routines and providing practical resources like transport tokens and alarm clocks (54). Another (59) aimed to understand attendance barriers within family life, addressing issues such as nutrition and unstable housing while fostering school-family engagement through volunteering opportunities. Across these studies, family involvement ranged from largely one-way communication from school to home, to more collaborative approaches in which families actively participated in problem-solving. However, because family involvement was rarely evaluated independently, it was not possible to determine whether communication-focused or partnership-based models were more effective. Outcomes should therefore be interpreted in the context of the wider intervention components rather than family involvement alone.

One study (66) placed family involvement at the core of its truancy strategy, using “family group conferences” to align students, families, schools, and police on truancy laws. A survey

TABLE 6 Summary table; study, intervention and outcome synthesis.

Reference	Intervention name	Intervention type(s)	Outcome	Test used Significant effect?*	EPHPP rating
Multifaceted approaches					
DeSocio et al. (54)	Multifaceted: School based health centre (SBHC), mentoring, family involvement	Multifaceted approach Mentoring Family involvement School-based healthcare	Days absent categorised into most- and least- missed classes over 9 weeks Most-missed classes: Control: 34.4 days, Intention to treat (ITT): 31.3 days (−3.1 days) $p = 0.23$, Treatment on the treated (TOT): 28 days (−6.4 days) $p = 0.047$. Least-missed classes: Control: 9.4 days, ITT: 7 days (−2.4 days) $p = 0.08$, TOT: 4.5 days (−4.9 days) $p = 0.004$.	ANOVA Yes, reduced absence	Weak
Durham et al. (59)	Full Service Community School strategy (FSCS), “comprehensive support”	Multifaceted approach Family involvement	Percentage of students chronically absent (missing >20 days in a school year) - no clear patterns of difference between high schools with and without the FSCS strategy over time of study period.	Visual representation and trend observations No	Moderate
Mentoring					
Converse et al. (58)	Mentoring, school personnel mentors	Mentoring	Mentored students had 6.69 unexcused absences over 18 weeks on average, whilst control students had 9.06 (mentoring, −2.37 absences). $p = 0.177$	ANOVA No	Moderate
Guryan et al. (61)	“Check & Connect” (“C&C”) mentoring	Mentoring Family involvement	Cohort 1: ($n = 1,938$). Compared with control: ITT 2.29 fewer days absent per year, TOT 4.22 fewer days absent, $p < 0.01$. Cohort 2: ($n = 1,078$). Compared with control: ITT 1.92 fewer days absent per year, TOT 4 fewer days absent, $p < 0.05$.	Regression analysis Yes, reduced absence	Moderate
Heppen et al. (62)	“Check & Connect” (“C&C”) mentoring	Mentoring Family involvement	Percentage of students attending >90% in a year Control 73.1% ($n = 146$), Treatment 81.6% ($n = 146$) - Estimated difference 8.6% (regression analysis), $p = 0.120$.	Regression analysis No	Weak
Johnson & Lampley (63)	Mentoring, “LISTEN” (Linking Individual Students To Educational Needs)	Mentoring	Mean number of days absent per year: Pre-post: 37.4–27.2 days absent = 10.28 fewer days ($n = 54$), $p < 0.001$.	Paired t -test Yes, reduced absence	Weak
Maynard et al. (65)	“Check & Connect” (“C&C”) mentoring	Mentoring Family involvement	Total number of days missed over 9 weeks, treatment: 0.577 fewer days absent ($n = 189$), $p > 0.1$.	Hierarchical linear modelling No	Moderate
Powers et al. (68)	“Check & Connect” (“C&C”) mentoring	Mentoring Family involvement	Days absent from school per year; $p = 0.037$ Control ($n = 20$): Sixth grade absences (pre) = 14.7, eighth grade absences (post) = 21.6 (+6.9) Treatment ($n = 25$): Sixth grade absences (pre) = 11.08, eighth grade absences (post) = 11.04 (−0.04)	ANCOVA Yes, reduced absence	Weak
Sinclair et al. (69)	“Check & Connect” (“C&C”) mentoring	Mentoring Family involvement	Percentage of students with consistent attendance per year (no periods of “dropout”, defined as 15 absences within 20 school days) Year 3 ($n = 144$): Control 30%, treatment 39% (+9%), $p = 0.037$ Year 4 ($n = 144$): Control 30%, treatment 41% (+11%), $p = 0.001$ Year 5 ($n = 29$): Control 6%, treatment 33% (+27%), $p = 0.031$	Chi-squared Yes, reduced absence	Weak
Counselling					
Akos et al. (56)	School counselling, Recognized ASCA Model Program (RAMP)	Counselling	After RAMP designation: All students: 0.325 fewer days absent in a year, $p < 0.05$. Economically disadvantaged students 1.7 percentage points less likely to be chronically absent, $p < 0.05$. Hispanic students 1.9 percentage points less likely to be chronically absent, $p < 0.05$.	Regression modelling Yes, reduced absence in subgroup analysis	Moderate
School-based healthcare					
Barnet et al. (57)	Prenatal care in school-based health centre (SBHC)	School-based healthcare	Students using SBHC had 12 fewer days absent during year of pregnancy compared with those not (60 vs. 72 days). $p < 0.01$	Independent samples t -test Yes, reduced absence	Moderate

(Continued)

TABLE 6 Continued

Reference	Intervention name	Intervention type(s)	Outcome	Test used Significant effect?*	EPHPP rating
Kang-Yi et al. (64)	School-based mental health services	School-based healthcare	Percentage of unexcused absent days per year, change over 3 years: ongoing clinic use +4.5% (3.6%–8.1%), stopped clinic use + 7% (9.2%–16.2%), never used clinic +5.2% (11.2% to 16.4%), $p < 0.001$.	General linear regression Yes, reduced absence	Moderate
McCord et al. (67)	School-based health centre (SBHC)	School-based healthcare	Percentage absence in school year; those who used SBHC- 35%, those registered who did not use SBHC- 51%, those not registered- 41%, $p < 0.02$.	Chi-squared test Yes, reduced absence	Weak
Social emotional learning					
Gottfredson et al. (60)	Cognitive behavioural instruction class (social skills curriculum)	Social Emotional Learning	Fall semester groups, log adjusted days absent on average: during semester, treatment 1.1, control 1.0 – non-significant. At the end of the year, treatment 0.9, control, 0.8 – significant. Spring semester groups, during semester, treatment 0.9, control 0.8 – non-significant.	ANCOVA No	Moderate
Police partnership					
Mazerolle et al. (66)	School engagement programme, police–school partnership	Police partnership Family involvement	Student willingness to attend from survey data. The intervention significantly increased willingness to attend ($b = 0.645$, $p = 0.002$).	Multiple regression Yes, reduced absence	Weak
Incentive scheme					
Young et al. (70)	Attendance reward scheme “Perfect Attendance Wins Stuff” (“PAWS”)	Incentive scheme Family involvement	Monthly attendance percentage Comparison; no change in attendance across 4 months PAWS; Attendance increased from baseline of 82.4% to 94.6% in first month, (+12.2%) $p < 0.001$. Attendance in the second and third months was 92% and 91.9% respectively.	ANOVA Yes, reduced absence	Weak

*A significant effect is based on an alpha level of $p < 0.05$, regardless of the threshold chosen by individual studies.

assessing student willingness to attend school found a significant treatment effect ($b = 0.645$, $p = 0.002$). The intervention was most effective when parents better understood their legal responsibilities.

Another study (70) integrated family engagement into an incentive programme, using calls, letters, and home visits for targeted support and referrals to community services. Families reported feeling supported by the school, and student attendance increased significantly from 82.4% to 91.9–94.6% over three months ($p < 0.001$), while the control group showed no change. This improvement occurred alongside other intervention components, which are discussed below.

3.3.4 Counselling

One study assessed the effect of counselling by analysing student outcomes based on schools' accreditation with the Recognized ASCA Model Program (RAMP) from the American School Counselor Association (ASCA) (56). RAMP accreditation signifies the implementation of comprehensive counselling services aimed at improving academic, career, and social/emotional development (72). The RAMP program also advocates for a comprehensive approach to support all students, enhancing school culture and contributing to school improvement plans. The study examined the impact of RAMP status on student attendance and achievement.

Results showed that middle school students were absent about one-third (0.325) of a day less per year after RAMP accreditation ($p < 0.05$). The study also assessed the impact on persistent absenteeism, while no significant difference was found across the entire student population, subgroup analysis showed that Hispanic students were 1.9% less likely to be persistently absent, and economically disadvantaged students (eligible for subsidised meals) were 1.7% less likely to be persistently absent post-accreditation ($p < 0.05$ for both).

3.3.5 School-based healthcare

Of the four studies examining provision of health services for students, two were general health clinics. Registration with a school-based health centre (SBHC) was part of a multifaceted intervention (54). An observed reduction in absenteeism (4.9–6.4 fewer missed days a year) cannot be definitively attributed to SBHC involvement without more comprehensive data. The study highlighted a high prevalence of health needs among absent students, and SBHC staff provision was increased to provide support, but data on registration and usage was not captured.

The second study, at an alternative US high school (67), compared students who used the clinic with those who didn't. No overall link was found between clinic registration and absenteeism, but students who used the clinic had 36%

absenteeism, compared to 51% for those who registered but didn't use it, and 41% for non-registrants ($p < 0.02$).

Two other studies focused on specific health services. Pregnant students using school-based prenatal care had 12 fewer days of absence than those using non-school-based care (60 vs. 72 days, $p = 0.001$) (57). In another study, students with a mental health diagnosis who continued to use school mental health services had the smallest increase in absenteeism over three years, with significant differences compared to those who stopped using, or never used the services ($p < 0.001$) (64).

3.3.6 Social emotional learning

One study explored the impact of group cognitive behavioural instruction classes aimed at improving social skills and reducing problem behaviour (60). Classes were held twice weekly for a semester, with a second group receiving them in the following semester. Implementation faced challenges, including frequent absences among students and staff. The first semester saw 68% of critical activities delivered, while only 35% were delivered in the second semester.

In the first semester, there were statistically significant improvements in positive peer associations, victimisation, and rebellious behaviour. However, for attendance, students in the intervention group had more days absent compared to the comparison group by the end of the year (log-transformed data: 0.9 vs. 0.8 days absent respectively), though the analysis was limited due to incomplete data and student dropouts. No significant differences were found between the groups in the second semester and at other measurement points.

3.3.7 Police partnership

A structured police-school partnership intervention aimed at improving understanding of truancy laws in Australia, with family involvement through parental engagement and co-produced solutions with students (66). Post-intervention, students showed increased willingness to attend school, with this effect moderated by increased parental awareness of truancy laws achieved through collaboration.

3.3.8 Incentive scheme

The "Perfect Attendance Wins Stuff program", implemented in a US middle school, targeted students with low attendance through group activities, regular check-ins, and recognition with prizes and celebration meals (70). Ten of the 41 students received additional support, including family involvement and referrals. The programme resulted in a significant increase in attendance, from 82.4% at baseline to 94.6% during participation, which was sustained at 92% for the two months following the intervention, when participation was optional. A breakdown of participation duration was not reported.

3.3.9 Other intervention features

Across all 16 studies, there was no consistent pattern in how additional intervention features influenced effectiveness. The success of mentoring programmes with longer durations was not mirrored in other categories. For instance, a one-month

incentive programme showed a significant effect on attendance (70), while a multifaceted intervention over 2–10 years did not (59). There was no clear link between fidelity monitoring and effectiveness; nine studies without fidelity monitoring showed positive attendance effects, while three that did monitor fidelity found no significant effects. Reporting was not consistent enough to determine if fidelity itself was an influential element for effectiveness.

Similarly, no clear correlation was found between the type or number of staff involved, their roles, or the provision of additional training. Four studies with research staff support had mixed results on attendance. Group-based interventions showed varied results, with one study showing a significant positive effect, while the other did not. The remaining 14 individual interventions also had mixed outcomes. In summary, none of these features consistently influenced intervention success.

Notably, none of the included studies explicitly assessed adverse or unintended effects. While several studies reported behavioural or social adjustment measures, these were framed as indicators of positive change rather than potential harms. As a result, it is unclear whether increased attendance may have had negative consequences for some students, for example where school environments felt unsupportive, or exacerbated stress or anxiety.

4 Discussion

The aim of this study was to systematically review the effectiveness of interventions that address persistent school absenteeism in secondary schools. Sixteen studies were included, which used diverse strategies to address student attendance. Weak to moderate evidence was identified, with no studies providing strong evidence. Levels of influence, from the individual to the broader society, were only covered to a limited extent. No evidence directly addressed the effectiveness of interventions to reduce persistent absenteeism through targeting school culture. While some interventions showed effectiveness, few consistent findings emerged across intervention categories or common features.

4.1 Key findings and existing literature

The effectiveness of multifaceted intervention strategies showed mixed results. These interventions, which align with the bioecological model to target multiple system levels, are gaining attention due to their potential to address the complex and diverse needs of students (34). However, the evidence supporting their effectiveness remains limited and inconsistent, particularly because of short durations, single-site implementation, and lack of detailed reporting of intervention components. While some studies support the use of these approaches (34, 73, 74), others have failed to demonstrate their superiority over simpler interventions (26).

A significant limitation in interpreting findings here is the lack of detail regarding the individual components of the intervention strategies, coupled with insufficient fidelity monitoring and limited efforts to mitigate or document contamination. This issue was particularly evident in the investigation of Full-Service Community Schools (FSCS), where the bespoke nature of each school's approach, based on specific needs, made it difficult to draw definitive conclusions. Although qualitative data from a small sample of schools provided valuable insights into what might make certain strategies effective, the credibility of these findings was compromised by concerns during quality appraisal. The researcher-participant relationship was not explored, and the philosophical stance and positionality of the researchers were not addressed. The analysis was described only as a "qualitative analysis using NVivo software", with no further detail around the approach used (59).

It is unclear which strategies were used by schools with less successful outcomes, making it difficult to confidently attribute positive outcomes solely to the strategies discussed. Without stronger evidence of variation in strategy implementation and its corresponding effects, assessing how FSCS influenced students across the six implementing high schools becomes challenging. This also limits our ability to identify which system levels of the bioecological model were engaged by the intervention. Additionally, non-FSCS schools may have adopted similar strategies, further complicating the understanding of outcomes and the FSCS approach.

A second multifaceted strategy showed some promise in improving attendance, and provided valuable evidence of selective attendance, revealing a wide variation in how a student may attend between different classes (54). It also offered insights into the potential impact of implementation factors, with significant differences detected in the per-protocol analysis but not in the intention-to-treat analysis. However, the study was single-site with a short duration (nine weeks), limiting depth and confidence of conclusions.

Overall, the two multifaceted interventions included in this review showed mixed effects on attendance, highlighting that evidence for this approach remains inconclusive.

This review found weak to moderate evidence supporting mentoring as an effective strategy to improve attendance for at-risk students, with five of the eight mentoring studies demonstrating significant reductions in absenteeism, particularly when programmes were sustained over longer periods. Mentoring provides individualised support to students with poor attendance, fostering personal relationships and guidance in areas like communication and study skills. These interventions primarily operate within the microsystem of the bioecological model, with direct student-mentor interactions. Mentors also influence the mesosystem by connecting students, families, and school personnel. For example, mentors can advocate for students, helping resolve problematic student-teacher relationships, while also working with families to emphasise the importance of education and prioritising school. Such mesosystem interactions contribute to a more supportive learning environment that may help re-engage absent students,

including those experiencing emotionally based school avoidance, where relational trust and reduced anxiety are key to re-engagement.

One study highlighted the importance of mentor-mentee rapport as a key implementation factor in the effectiveness of mentoring (68), with institutional barriers also playing a role. However, a previous meta-analysis of school-based mentoring did not establish a significant effect on attendance (75). The discrepancy may lie in the specific populations targeted in this review, where mentoring was focused on at-risk students, rather than a broad approach. Mentoring may be particularly effective in addressing barriers to attendance, academic struggles, or personal issues. Building trust and rapport with a mentor could provide a positive school relationship for at-risk students, potentially boosting engagement and attendance (76).

While mentoring theoretically could influence a student's exosystem, through mechanisms such as work with policymakers or school administrators, this was rarely discussed in the studies. Similarly, the potential impact on cultural norms or societal values in the macrosystem was not a primary goal of the mentoring programmes described.

In conclusion, mentoring primarily operates at the microsystem and mesosystem levels of the bioecological model and may be an effective intervention for at-risk students when sustained over a long duration. However, the evidence is inconclusive. Barriers such as lack of universal school staff support and institutional policies may hinder its effectiveness. Successful mentoring programmes can foster supportive relationships, increase student engagement, and potentially improve school culture, but there is no conclusive evidence to confirm these effects.

Family involvement was a key feature in five of the mentoring interventions and was also present in other strategies, which showed weak to moderate evidence of effectiveness in reducing absenteeism. Previous research has highlighted the value of family engagement in addressing absenteeism (77), and the evidence in this review supports this. Interventions that facilitated direct contact between schools and families have been found to be particularly effective (78).

Family involvement operates at the microsystem and mesosystem levels of the bioecological model. While mentoring programmes sought to increase communication with families, other studies placed greater emphasis on community links and practical support, contributing to a more comprehensive approach. This model, described as "overlapping spheres of influence", sees the family, school, and community working together to support a student (79). Collaborative efforts from community partners create a support network that can enhance the effectiveness of interventions. A similar approach is seen in Full-Service Community Schools (FSCS), which have shown promise in building community partnerships and reducing persistent absenteeism in elementary school students (79). However, there was no clear pattern of effectiveness based on the extent of family involvement in the studies reviewed here.

The exosystem was less directly engaged, although sharing information between families and external parties could potentially impact factors like workplace policies or community resources (80). This potential was not explored in the included studies, limiting the interpretation of broader societal effects of family involvement.

This review found evidence suggesting that accreditation with national counselling standards in the US may reduce persistent absenteeism in some student groups. One study reported a 1.9% reduction in absenteeism for Hispanic students and a 1.7% reduction for economically disadvantaged students (56).

Counselling interventions likely operate at similar system levels as mentoring and family involvement, aiming to improve engagement through support. However, the accreditation programme also emphasises improving school culture, engaging both the mesosystem and exosystem through broader school policies and environments.

It is unclear whether the observed effects are linked to changes in school culture, as the study did not specify which accreditation components were implemented. The retrospective observational design limits the ability to establish causation, and there are concerns about potential bias from confounding factors. Nevertheless, the reductions in persistent absenteeism for Hispanic and economically disadvantaged students are notable, as these groups are known to be at higher risk of absenteeism (23, 81), making such interventions valuable.

This review found weak to moderate evidence suggesting that students' use of school-based healthcare (SBHC) may be associated with lower absenteeism for at-risk students. However, no clear causation could be established, and differences in healthcare access between the US and UK must be considered.

One study linked healthcare clinic outcomes with other strategies in a multi-faceted approach, while another retrospective observational study had high risks of confounding and attrition bias. Additionally, the second study was conducted over 30 years ago and may reflect outdated practices, such as recommending bedrest, which is a rare approach in modern medical practice. The remaining two studies were both retrospective, focusing on mental health services and prenatal care in school clinics (57, 64). These also faced confounding risks, with different rates of absenteeism and health status between groups at baseline.

In the bioecological model, SBHC impacts a student's microsystem through direct healthcare provision. Convenience and availability of care were considered key factors in included studies, alongside increased social support and positive role models, which reflect changes at the mesosystem level.

Existing literature indicates that the use of SBHCs, rather than simply their presence, can improve academic outcomes (82), and may also enhance school connectedness (83). However, the complexity of the mechanisms involved, including potential exosystem effects through health-positive school policies, requires further investigation.

One study suggested that delivering Social Emotional Learning (SEL) through a cognitive behavioural social skills curriculum may increase absenteeism. However, this finding was not consistently

replicated across all time points, and the study's limitations (single-site, high risk of bias, confounding, and attrition) weaken the evidence (60). In this study, the curriculum was delivered to a class within a school with poor discipline and attendance. Improvements in self-reported behaviour were noted, which can be related to the students' mesosystem through peer relationships, influences in the school environment, and impacts on a students' sense of safety and belonging. The increased absences in the intervention group was unexpected, and is not replicated in other research. A previous meta-analysis evaluated the effect of universal school-based SEL interventions to find positive effects on similar social and emotional outcomes, alongside positive academic effects including improved attendance (84). They understood findings with a focus on environment, indicating the importance of universal implementation. This is in contrast to the intervention in this review, which was delivered to a single class. Delivery to a single class may overlook the benefits of continuity and synergy that can be achieved with wider implementation (85).

The authors identified existing norms and the schools' "expectation climate" as factors that undermined implementation. Despite the study limitations and the uncertainty about the effect on attendance, it is apparent that mesosystem factors, school culture and exosystem factors impacted both the implementation of the intervention and its effects.

A police partnership intervention led to a positive change in students' willingness to attend school, influencing all levels of the bioecological system. The intervention not only affected the microsystem (direct student action) and mesosystem (family and school involvement) but also extended to the exosystem through police presence, signalling legal support for school attendance. Additionally, the use of co-production and a procedurally just approach reflects a macrosystem change, aligning societal values with the need for legal compliance in education. Co-production fosters collaboration and more sustainable outcomes, and has been shown to be effective in tackling attendance issues (86). A multi-agency approach, including councils, healthcare providers, social workers, and community organisations, is key to overcoming barriers and improving support for at-risk students (87).

The final category of intervention studied was an incentive scheme, which resulted in an improvement in attendance from 82.4% to 92% (70). Students who did not receive family involvement participated in daily check-ins, celebrations, and rewards, applying behaviourist principles at the microsystem level through positive reinforcement (88). In this context, students with persistent absenteeism receive rewards for attending, which can create a motivating and encouraging environment. This approach contrasts with previous punitive measures they may have experienced due to absences, which can worsen attendance (89).

Additionally, group celebrations, viewed through social learning theory (90), encourage students to emulate positive behaviour observed in peers. While incentive schemes have had mixed results (30), they are valued for fostering a positive

culture (91) and play a key role in absence prevention in multi-tiered strategies (34). However, the short study period and single-site design require caution in generalising outcomes and assessing long-term effectiveness.

4.2 Synthesis

The interventions across included studies were widely varied, and understanding links to outcomes is complex. Mapping interventions in the context of the KiTES bioecological framework (38) provides a basis to explore differences in direction and size of effects further. The included studies provide examples of interventions with influence across the bioecological system. Figure 4 provides an overview of results with application to the framework.

This summary highlights the lack of definitive conclusions regarding the application of these findings to a bioecological framework. There is no clear evidence that interventions must focus on one level of the system to be effective, nor a consistent correlation between engagement at multiple levels and effectiveness. While some multi-level interventions showed positive outcomes, others did not. Similarly, both comprehensive and targeted interventions have had mixed results, with some showing significant improvements in attendance and others having little or no effect. The effectiveness of strategies seems to depend on various factors, some within the scope of the

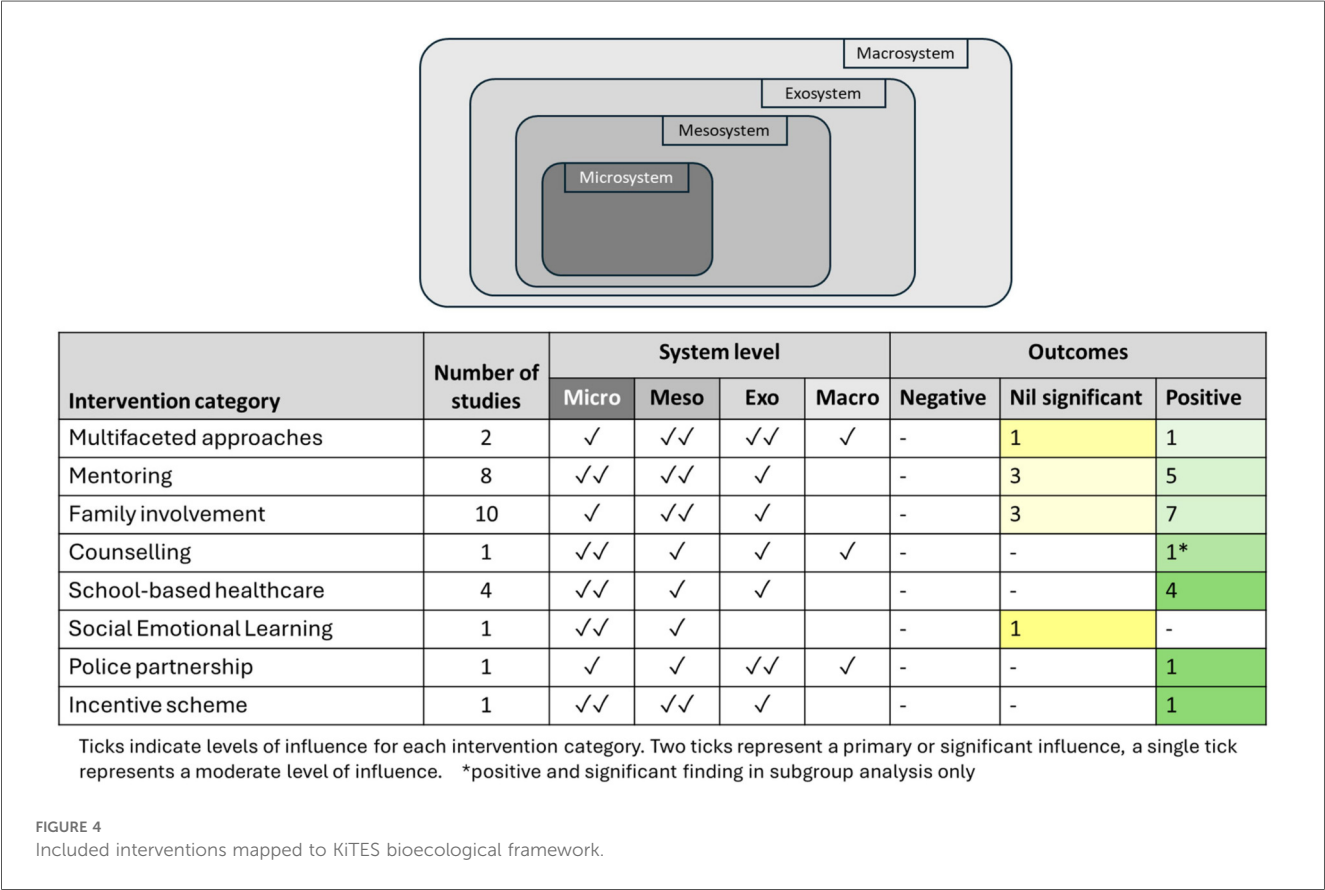
interventions and others beyond it. What works in one context may not be effective in another.

4.3 Strengths

This review applied a systematic methodology, enhancing the reliability and validity of findings. The use of transparent reporting and adherence to established frameworks provides clarity in decision-making and allows for reproducibility. A narrow focus on secondary school students, particularly those at risk of persistent absenteeism, ensured that the findings were relevant and specific. This targeted approach allowed for more precise insights applicable to real-world educational settings.

The search strategy spanned both health and education databases, with expert input to ensure coverage of relevant literature. This breadth allowed identification of studies across multiple intervention types and school settings. Incorporating a bioecological framework for analysis provided a structured lens, helping to interpret the findings more coherently. Additionally, the narrative approach allowed for capturing nuances in the interventions that quantitative methods might have missed, offering policymakers valuable context.

The inclusion of various study designs, from randomised controlled trials (RCTs) to observational studies, helped strengthen the overall evaluation. Combining study type provided insight into both effectiveness and real-world implementation.



While RCTs offered stronger internal validity, their findings were mixed: several mentoring trials showed only small improvements in attendance, and in some cases no statistically significant effect. In contrast, quasi-experimental and observational studies more frequently reported larger reductions in absence, particularly where interventions were embedded in broader school environments (e.g., school-based health centres or counselling programmes). However, these designs are more vulnerable to bias, making it difficult to determine whether improvements were due to the intervention or to other contextual factors. Bringing these approaches together allowed the review to balance certainty in effect estimates with understanding of how interventions operate in diverse educational settings, and highlighted that outcomes may depend heavily on local implementation, student needs, and school context.

4.4 Limitations

One of the main limitations of this review is the small evidence base, with most studies originating from the US and one from Australia. This limits generalisability to the UK context, especially considering cultural and policy differences. Absenteeism is recognised as a concern across Europe and other comparable education systems, but evidence remains limited internationally, as well as specifically in the UK. While a mix of study designs was used, the total number of studies (16) is insufficient to provide comprehensive insights into all intervention strategies within the bioecological framework.

There are also methodological limitations relating to the review process itself. The search strategy focused on school-based terms combined with “absen*” and related concepts. While this approach captured a wide range of studies addressing absenteeism, it may have missed interventions described solely using terms such as “persistent absence” without explicit reference to “school”. Additionally, terms such as “truancy” were not separately included, which may have limited retrieval of studies using older or justice-focused terminology. This is only partly mitigated with citation and reference searching.

Inclusion criteria required a measure of attendance for inclusion in this review; although there was no limitation on data type, a quantitative approach was usually adopted. Limited qualitative data may have overlooked deeper insights into the mechanisms behind interventions. Some studies failed to report key details on intervention integrity, such as frequency and duration, making comparisons difficult. The lack of detail in reporting limited the understanding of inconsistent findings, for example as seen with the implementation of Check & Connect (C&C) mentoring.

The heterogeneity of interventions presented a challenge in synthesis. Many programmes operated across more than one level of the bioecological model and contained multiple components spanning different intervention categories. As a result, some interventions were represented in more than one category. This reflects the inherently multi-component nature of attendance interventions rather than duplication of findings.

However, it does mean the boundaries between categories should be interpreted as indicative rather than discrete. In some cases, separating components for categorisation risked oversimplifying how interventions functioned in practice, while retaining multi-level programmes within single categories could obscure important mechanisms of action. Although the synthesis aimed to balance capturing nuance with drawing out broader patterns, categories with only one or two interventions limit the strength of conclusions. A larger evidence base would allow more confident comparison within and across categories.

It is also important to note that the 10% threshold commonly used to define “persistent absenteeism” represents an administrative boundary rather than a distinct behavioural category. Interventions act both preventively, targeting pupils at risk of reaching this threshold, and responsively, supporting those already classified as persistently absent. Consequently, the included studies span a continuum of need, and effectiveness is likely to vary within that context.

Another concern is the risk of bias, which was moderate to high in several studies. This was mainly due to non-representative samples and significant dropout rates, common in populations at risk of absenteeism. Inconsistent attendance data and selective reporting further compounded the challenges in establishing the effectiveness of interventions. Additionally, conducting interventions in real-world settings introduced challenges such as recruitment and variable implementation, which further limits the generalisability of findings. Many studies also lacked detailed demographic reporting, such as ethnicity and socioeconomic status, which are known risk factors for absenteeism and can introduce bias into outcomes when unmatched.

As outlined in the introduction, similar quality findings have been reported in other reviews of school-based interventions using a range of quality appraisal tools. Reviews applying the EPHPP in comparable contexts have also found few studies rated as strong (92, 93). This suggests that the lack of high-quality studies reflects broader methodological constraints in evaluating real-world school-based interventions, particularly those involving at-risk or hard-to-engage populations, rather than an artefact of specific appraisal tools.

The process of study screening and appraisal also introduced potential bias. While quality appraisal was carried out systematically, only a small proportion of studies (3 out of 16, 18.8%) were independently assessed by a second reviewer. This falls short of gold-standard systematic review practice and may have influenced judgements of study quality.

Finally, where descriptions of interventions and their implementation was not reported in detail there was a need for interpretation. Conclusions are inherently shaped by judgements, which were in turn influenced by biases from author positionality.

4.5 Clinical & policy implications

This review offers valuable insights for policymakers in planning interventions to address persistent absenteeism in

secondary school students. Several interventions showed positive impacts on attendance, with four studies improving attendance by over 5%, equivalent to more than 8 extra days in school over an academic year (54, 57, 62, 63). Additionally, two other studies showed improvements of over 2%, approximately 4 extra days (61, 68). These findings suggest that targeted interventions can make a difference, although the practical significance requires careful interpretation.

The meaning of any attendance change is highly context dependent. For some students, a few additional days in school may have limited academic impact, particularly where disengagement is deep-rooted. For others, such as those returning from emotionally based school avoidance or prolonged absence; small, incremental gains can reflect important steps toward re-engagement, trust-building, and reduced anxiety. Attendance outcomes should therefore be considered alongside baseline attendance, reasons for absence, level of need, and the nature of support provided.

Students at risk of persistent absenteeism often face challenges that also impact their ability to participate in interventions, which are in turn reflected in enrolment and attrition issues in research. Effective implementation planning should address these challenges to ensure interventions are accessible and have maximal impact. It's crucial to consider specific subgroups of students, including those with economic disadvantage, minority ethnic groups, and those with special educational needs. Interventions need to be tailored to address the unique barriers faced by these students.

Differential findings between intent-to-treat and treatment-on-treated groups emphasise the importance of implementation fidelity. Ensuring high-quality, consistent implementation is key to achieving programme success. Policy planning should include strategies for ensuring realistic yet ambitious implementation levels, including co-production, clear guidelines, robust training, and ongoing support.

4.6 Future research directions

This review highlighted the limited evidence on effective strategies for addressing persistent absenteeism in secondary schools. The scarcity of eligible studies and the lack of UK-based research underscore the need for more robust studies in this area. Persistent absenteeism continues to be a pressing educational and public health issue, presenting an opportunity to further investigate interventions with well-designed, high-quality research. Cost-effectiveness research will also be vital to guide resource allocation and ensure interventions benefit vulnerable populations.

There was limited evidence to understand the relationship between school culture, interventions that impact it, and their effect on student attendance. This reflects that many interventions may focus on broader objectives such as school culture, rather than directly addressing persistent absenteeism. In the full-text review, almost 30% of the studies (41 out of 138) were excluded due to not focusing specifically on persistent

absenteeism or at-risk students. Future reviews could benefit from broader inclusion criteria to capture the full scope of cultural interventions, especially given the UK's focus on promoting a safe, supportive learning environment in schools. More primary research is needed to explore how interventions that aim to improve school culture specifically impact students with persistent absenteeism.

Future research should incorporate longer follow-up periods and consider outcomes beyond attendance alone, including attainment, wellbeing, and post-16 transitions. Understanding whether any change is maintained, and under what conditions, is essential for informing long-term policy and resource planning.

Evaluations should account for baseline attendance, reasons for absence, level of need, and demographic and contextual factors, including culturally specific barriers, accessibility, and economic influences. Demographic subgroups should be recorded, and qualitative research could provide valuable insights into designing more tailored interventions. This would include understanding culturally specific barriers, improving accessibility, and addressing economic factors that influence attendance.

The involvement of students experiencing persistent absenteeism in the development and refinement of interventions was also largely absent from the studies reviewed. Given the complex and individual nature of school avoidance, co-design approaches involving young people, families, and school staff could help ensure that interventions are acceptable, relevant, and responsive to lived experience. Future research and programme design including participatory or co-production methods can support more tailored and impactful interventions.

The application of the bioecological framework in this synthesis provided a useful basis for exploration of intervention efficacy and underlying mechanisms, although limited. Adopting this approach with a larger evidence base in future research can establish a deeper understanding of how interventions interact with different levels of the bioecological model to influence persistent absenteeism.

Finally, future research should focus on the quality, depth, and role of intervention components, rather than trying to separate them artificially, as students' needs are interconnected and require multifaceted responses. In particular, examining how specific components function would strengthen understanding of how interventions work in practice, for example, the way family involvement ranges from one-way communication to genuine partnership. Realist evaluation approaches could support this by exploring what works, for whom, and in what contexts, helping to clarify mechanisms and inform more tailored, impactful interventions.

5 Conclusion

This review provides limited evidence for the effectiveness of interventions aimed at reducing persistent absenteeism in secondary school students. While mentoring schemes, family involvement, school counselling, and other approaches show

potential, their success is not guaranteed, and the findings are compromised by methodological issues and inadequate reporting. The evidence is further limited by a small number of studies, all from the US or Australia, which may not be directly applicable to a UK context.

Given the low quality of evidence and significant risks of bias, further research is necessary to assess the effectiveness of these interventions, particularly in the UK. Future studies should focus on robust designs, clearer reporting, and a better understanding of how different intervention levels (individual, family, school, community, societal) compare in terms of impact. There is also a need to explore the role of school culture more deeply.

In conclusion, while some interventions show promise for students with persistent absenteeism, including those experiencing emotionally based school avoidance, further rigorous, context-specific research is needed to develop strategies that can be confidently recommended.

Data availability statement

The original contributions presented in the study are included in the article/[Supplementary Material](#), further inquiries can be directed to the corresponding author.

Author contributions

AM: Conceptualization, Methodology, Investigation, Writing – original draft, Supervision. MW: Investigation, Formal analysis, Writing – review & editing. JA: Conceptualization, Investigation, Supervision, Writing – review & editing.

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Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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The author(s) declared that generative AI was not used in the creation of this manuscript.

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Supplementary material

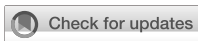
The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/frcha.2025.1603680/full#supplementary-material>

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EDITED BY

Carolina González,
University of Alicante, Spain

REVIEWED BY

Joanna Anderson,
University of Cambridge, United Kingdom
Rosanna Fennessy,
University of Cambridge, United Kingdom

*CORRESPONDENCE

Jess Whitley
✉ jwhitley@uottawa.ca

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Predictors and patterns of absenteeism among students with disabilities: implications for inclusive education

Jess Whitley^{1*}, Shawn Pegg² and Mina Ozturk¹

¹Faculty of Education, University of Ottawa, Ottawa, ON, Canada, ²Community Living Ontario, Toronto, ON, Canada

Introduction: Inclusive education requires that students with disabilities are present and supported to participate meaningfully, yet many continue to experience limited access to schooling. School absenteeism—including partial-day schedules and informal exclusions—remains an overlooked barrier to inclusive education.

Methods: Parents/caregivers of 540 Ontario students with disabilities completed a survey about attendance patterns, school belonging, and reasons for absences. Analyses included descriptive statistics, linear regression, and content analysis of open-ended responses.

Results: Twenty-one percent of students attended school on a part-time or modified schedule, most commonly 2–3 h per day, and about 40% met criteria for chronic absenteeism. The most frequent reasons for absences included emotionally based school avoidance, parents keeping children home due to unmet needs, and school-initiated exclusion tied to behavior or insufficient staffing. Students reporting lower school belonging, who attended school on a part-time or modified schedule, and from families with lower income had significantly higher levels of absenteeism.

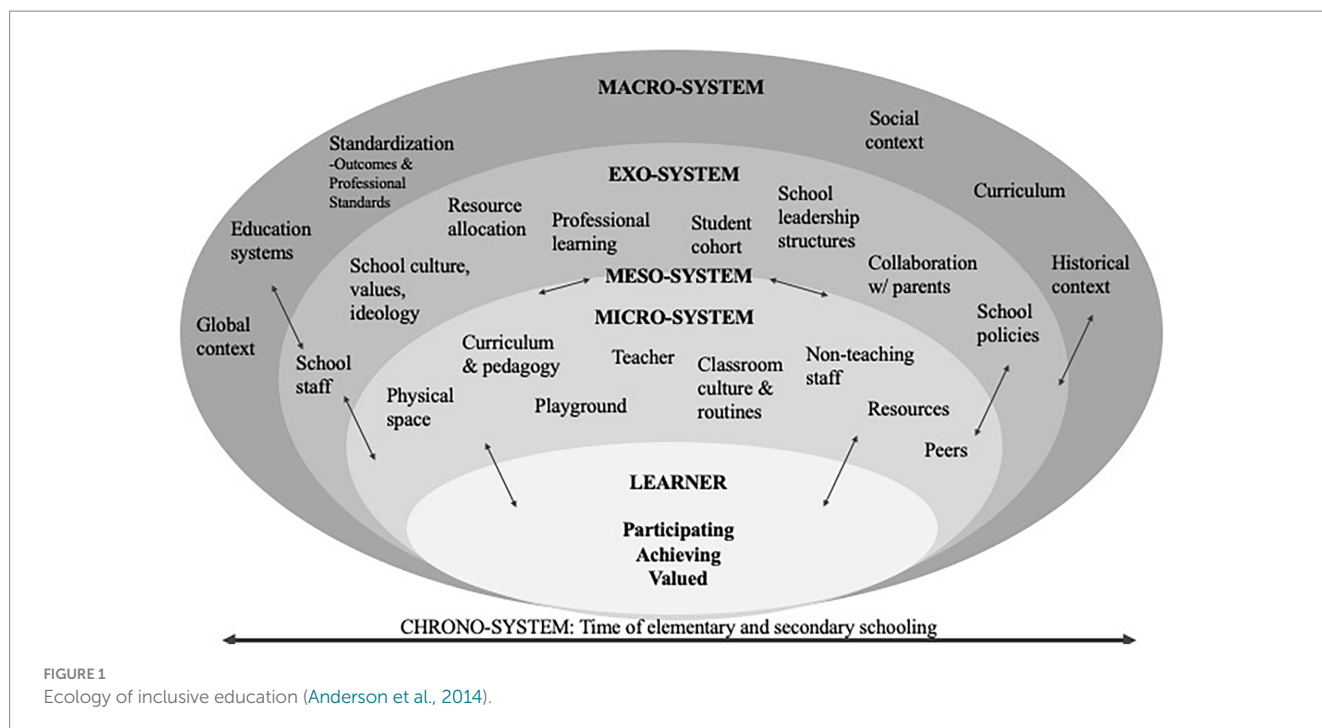
Discussion: High levels of absenteeism and part-time attendance represent systemic forms of exclusion that undermine participation and achievement in inclusive education. Findings point to the critical role of school belonging, adequate supports, and socioeconomic context in promoting regular attendance and advancing inclusive education.

KEYWORDS

inclusive education, school absenteeism, school attendance, school belonging, school exclusion, students with disabilities

1 Introduction

Inclusive education has long been advanced as the most equitable and effective approach to educating students with and without disabilities. Internationally, imperatives such as the Salamanca Statement (UNESCO, 1994) and the UN Convention on the Rights of Persons with Disabilities (United Nations, 2006) have advanced this view, as have many individual countries and education systems to varying degrees (e.g., Ianes et al., 2020; Government of New Brunswick, 2013; UK Department for Education, 2015). The benefits of inclusive education



are typically touted as being broader than the academic advancement of individual children, as is evidenced within Salamanca:

Regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system (p. 3).

While definitions of inclusive education vary, most include the education of children in their local neighborhood school, spending all or most of their time in regular classrooms alongside same-age peers, with the instructional approaches and services necessary for them to access the general curriculum (Schuelka, 2018; U.S. Department of Education, 2025). Inclusive education means that children are supported to participate fully in their environment, to have their needs met, and to experience academic and social benefits.

Despite the decades of efforts dedicated to translating high level inclusive education policies and guidelines into on-the-ground reality for children, there is currently scattered evidence of their realization. While most children with disabilities spend most of their day in general education classes in Canada, the United States, and several other countries, they continue to experience poorer outcomes on a range of measures than their non-disabled peers (e.g., OECD, 2022). Currently, research literature focuses on the practices necessary within inclusive education (e.g., attitudes and beliefs, differentiated instruction, inclusive leadership), and on the quality of the education provided rather than simply the physical access of the child to the learning space (e.g., Fairbrother et al., 2025; Whitley et al., 2019).

Alongside efforts to improve meaningful access to education for students with disabilities, is a growing awareness of the many

students with disabilities who are chronically absent from school (Anderson, 2020). While limited research has been conducted on the topic, available data from certain jurisdictions confirm disproportionate rates of absenteeism, including suspensions and expulsions as well as absences motivated by a range of health, family and educational factors (Gee, 2018; Gottfried et al., 2019; Klan et al., 2024). Better understanding absenteeism among students with disabilities is an important step in efforts toward truly inclusive education where physical presence is a necessary if insufficient condition. The current study explores the absenteeism of a sample of students with a range of disabilities in relation to key demographic and educational variables. We adopt the definition developed by Ontario Ministry of Education (2017) where students with disabilities¹ include those behavioral, communicational, intellectual, physical, and multiple needs which affect a student's ability to learn.

1.1 Ecology of inclusive education

In exploring absenteeism in relation to inclusive education, we draw on an application of Bronfenbrenner's bioecological model of human development put forward by Anderson et al. (2014; see Figure 1). In their ecology of inclusive education framework, these authors situate the learner in the center of the model, with the three determinants of inclusive education: participation, achievement, and value. Participation "requires the learner to be actively engaged in all aspects of schooling, both academically and socially"; achievement necessitates "access to learning goals and meaningful assessment, and value includes

¹ The Ontario Ministry of Education uses the term 'exceptionality.' We use the term 'disabilities' to allow for ease of interpretation internationally.

recognizing learners “for who they are and what they have to offer, to others and to the school itself” (p. 29). School attendance is an insufficient but necessary condition of participation, achievement, and value. Within the ecological framework, the learner and the three determinants, which include their access to and engagement with formal schooling, are affected by multiple systems, as depicted in [Figure 1](#). The more proximal systems have the strongest influence on learner’s experience of inclusive education. In exploring absenteeism as one aspect of inclusive education, we draw on this ecological model and consider the dynamic, interacting roles of layered systems as both facilitating and hampering student’s attendance at school.

1.2 School absenteeism

In most countries, school attendance, at least at the primary level, is legally mandated. As a social determinant, absenteeism has been found to be negatively correlated with academic achievement, school completion, mental health, and long-term economic and psychological outcomes ([Gottfried, 2014](#); [Krause et al., 2025](#); [Rocque et al., 2017](#)). In the UK, the government estimates that each day of absence for the typical student is associated with a decrease of £750 (\$875USD) in future earnings (2025). Many studies have confirmed increasing rates of school absenteeism for students with and without disabilities ([Gottfried et al., 2019](#)).

Students may miss school for a range of reasons that are often categorized as ‘excused’ or authorized by school and home, such as illness or medical appointments; they may also miss school for a range of reasons that are not seen as legitimate by school or home ([Kearney et al., 2019](#)). [Heyne et al. \(2019\)](#) have reviewed existing research literature exploring school attendance problems and have identified four typologies of (1) school refusal (emotional/anxiety-based absenteeism), (2) truancy (unexcused absences, student-motivated), (3) school withdrawal (parent-motivated), and (4) school exclusion (school-motivated). These types of school attendance may operate dynamically or in tandem—for example in the case of an adolescent skipping class to work extra hours with the support of their family or a student with a learning disability receiving insufficient support at school who experiences anxiety at the thought of going to school and whose parent keeps them home if they seem highly distressed. There is some evidence from the US and the UK that absences that are not sanctioned by home and/or school are more predictive of later academic difficulties compared to authorized although both play a role in long-term educational outcomes for the general student population ([Dräger et al., 2024](#); [Henderson and Fantuzzo, 2023](#); [Pyne et al., 2023](#)).

1.3 Absenteeism and students with disabilities

While most research has focused on population-level analyses without disaggregation, several studies have explored rates of absenteeism for students with and without disabilities. For example, [Gottfried et al. \(2019\)](#) drew on data from 653,736 elementary-aged students in New York City public schools. They found that chronic absenteeism, defined as missing 10% or more school days and the

most used cutoff worldwide, was significantly more common among students with disabilities (29.2%) than those without (17.6%). Using U.S. disability classifications, differences were highest for students with ‘Emotional Disturbance,’ followed by those with ‘Learning Disability and Speech Impairment.’ Students with disabilities educated in classes where they are in the minority experienced less absenteeism compared to those in classes where the proportion of students with disabilities was higher. In the UK, absenteeism statistics from spring 2025 revealed a similar phenomenon. Prevalence rates for students with profound and multiple learning difficulty (49.4%), social emotional and mental health disabilities (38.5%), and physical disabilities (37%), were the highest reported, in comparison to an average of 20.1% for those not identified as having a disability ([Centre for Social Justice, 2025](#)).

Other studies have confirmed the significantly higher rates of absenteeism among students with disabilities ([Cortiella and Boundy, 2018](#); [Gee, 2018](#); [Melvin et al., 2023](#); [Nordin et al., 2024](#); [Yoder and Cantrell, 2019](#)). Students with a wide range of disabilities have been implicated (i.e., physical disabilities, intellectual disabilities, Autism, ADHD; [Emerson et al., 2015](#); [Black and Zablotsky, 2018](#); [Stromberg et al., 2022](#)) and as with general populations, older students (secondary or high school) experience higher absenteeism than younger students ([Redmond and Hosp, 2008](#); [Sasso and Sansour, 2024](#); [Stromberg et al., 2022](#)). In most of the research literature, absenteeism is measured dichotomously as either chronic (10% or more absences) or not chronic, or on a continuous scale of days or classes missed in a given period of time, normally a school year (e.g., [Gee, 2018](#); [Sasso and Sansour, 2024](#)). Absenteeism data is drawn from a range of sources, including national databases, school records, and parent and student reports ([Whitley et al., 2025](#)).

Beyond studies exploring disproportionality, there have been some efforts to focus in on the types of or reasons for the absenteeism among students with disabilities. Disciplinary absences, as one example, are far more common for students with disabilities than for those without ([Cortiella and Boundy, 2018](#); [Leung-Gagné et al., 2022](#); [U.S. Department of Education, 2019](#)). Physical symptoms and a need for medical appointments and therapies can explain some proportion of absences ([Emerson et al., 2015](#); [Mattson et al., 2022](#)). Children with disabilities are also more likely to experience bullying at school, have fewer socioeconomic resources, display school-related anxiety and aversion, have poor relationships with teachers, have a parent in poor health, have academic difficulties, and require supports to physically attend and/or participate fully at school—all of which significantly impact the likelihood of school attendance ([Bonnetty, 2025](#); [Doren et al., 2014](#); [Gee et al., 2024](#); [Niemi et al., 2022](#); [Stucki, 2025](#)). The same student, family and school factors that influence school attendance for all students (e.g., age/grade, socioeconomic status, school belonging) likely affect those with disabilities in similar ways, although limited research has yet been conducted to support this.

One type of absenteeism which has not received much attention in published literature is often referred to as ‘partial,’ ‘shortened’ or ‘modified’ days, basically the pre-planned or reactive part-time attendance of students with disabilities at school. Students may be asked or directed to attend for a shorter period each day or week or may be told to stay home for a period of time but not subject to suspension or expulsion. News outlets and advocacy groups, primarily those seeking inclusive education for students, have led the way in

shining a spotlight on this practice, particularly in Canada and the UK (BC Ombudsperson, 2025; Chang, 2025; Inclusion Canada and Inclusive Education Canada, 2025; New Brunswick Child and Youth Advocate, 2024). While largely unexamined in research literature, a few studies and government reports have explored partial day attendance within the umbrella of school exclusions (Martin-Denham, 2022; Demie, 2022; Timpson, 2019). These exclusions may be permanent or temporary, full-time or part-time, and may be official or unofficial (ARCH Disability Law, 2019). For example, a section of the Ontario Education Act describes a special provision (Government of Ontario, 2025; s. 265):²

It is the duty of a principal of a school, in addition to the principal's duties as a teacher, subject to an appeal to the board, to refuse to admit to the school or classroom a person whose presence in the school or classroom would in the principal's judgment be detrimental to the physical or mental wellbeing of the pupils.

While exclusions are not intended for students with disabilities specifically, these students are far overrepresented among those who are excluded (Timpson, 2019). Guidelines and regulations for exclusions describe safety as a primary consideration or rationale and the most common reasons that have been officially reported include persistent disruptive behavior or physical or verbal assault against other students or adults (Timpson, 2019). Exclusions in some jurisdictions such as Canada are distinct from suspensions or expulsions and are not considered disciplinary practices. In the United States and the UK, the term 'exclusion' is used most often to describe disciplinary sanctions (Valdebenito et al., 2018). While the UK reports at least their permanent exclusions publicly, Canadian provinces where exclusions are regulated do not have similar practices and so rates and reasons are unknown.

Alongside formal exclusion processes, whether disciplinary or not, are policies and practices that describe alternatives to full day attendance specifically for students with disabilities. These are framed not as exclusions or as absenteeism, but as flexible approaches to meeting student needs, as is described in by Michigan Department of Education Office of Special Education (2022), "The only time it is appropriate to shorten the school day for a student with a disability is when the student's IEP Team determines a shortened day is required to address the student's unique disability-related needs" (p. 2). Similar legislation exists in Canada (Government of Ontario, 2025) where "...a board may reduce the length of the instructional program on each school day to less than five hours a day for an exceptional pupil in a special education program" (Regulation 298(3.3)). These shortened days are intended to be temporary and decided on in consultation with parents. An explanation as to what benefit the reduced schedule provides to the child and their progress, as well as a plan for a return to full-time schooling is typically required. Data on the use of non-disciplinary exclusions and modified, partial or shortened days are not publicly shared and so rates of their use are so far unknown and their role in understanding and intervening in school absenteeism among this vulnerable group is largely unexplored.

One recent qualitative survey conducted by Inclusion Canada and Inclusive Education Canada (2025) heard from 164 parents of elementary and secondary students with a broad range of disabilities (Autism, ADHD, learning disabilities, mental health-related disability, etc.). They reported the most common reasons for partial day attendance as student externalizing behaviors and the lack of understanding by the school regarding the unmet need associated with the behaviors and/or the insufficient staff and resources available at schools to support the student. Families described the negative impact that being excluded from school via partial day attendance had on their child's social wellbeing and on their family's financial and emotional wellbeing. Autism Advocacy Ontario similarly surveyed 568 parents/caregivers of students with Autism in 2019 regarding their needs in relation to the public school system. Exclusions were one of the five main areas of need that emerged, with 24% of students attending on a partial day schedule and 29% reporting a range of exclusions which were primarily informal and undocumented. As with the Inclusion Canada study, impacts on student and family wellbeing were reported, with 9% of families reporting removing their child to home school or attend private schools.

While literature has consistently documented the disproportionate absenteeism experiences of students with disabilities, further research to uncover the underlying explanations for the absences, as well as contributing factors is necessary to better inform interventions and improve access to inclusive education. It is also important to adopt a comprehensive view of absenteeism, including various forms of exclusion, given that literature tends to focus primarily on school refusal and truancy. Accordingly, the current survey-based study explores the following questions, drawing on parent reports: (a) How often are students absent from school? (b) What are the most common reasons for students being absent? (c) What proportion of students are attending school on a part-time or modified basis?, and (d) Is the overall frequency of school absence predicted by school belonging, the existence of a part-time or modified schedule, type of placement, gender or socioeconomic status? Students' overall absenteeism is considered separately from a part-time or modified schedule so that students who follow their modified schedule are considered to have attended. In this way we can disentangle part-time attendance from the broad range of reasons why students are not attending school and shed light on both pathways of absenteeism. Findings from this study will provide insight into the intersection of school attendance and inclusive education for students with disabilities and will inform research and practice in the area.

2 Methods

2.1 Recruitment

We recruited parents/guardians/caregivers of school-aged students with disabilities or special educational needs across the province of Ontario to take part in the survey. Ontario is the most populous province in Canada, with a population of around 16.2 million. Participants were recruited through a combination of advertisement on social media and information shared through a range of organizations who support those with disabilities (e.g., Community Living Ontario). Those who were interested in learning more about the study could click on a link that led to them to a webpage where full information was provided as well as a link to the survey itself.

² [https://www.ontario.ca/laws/statute/90e02#BK451\(1\)\(m\)](https://www.ontario.ca/laws/statute/90e02#BK451(1)(m))

Ethical approval was obtained through the university research ethics board and participants who chose to begin the survey were first presented with a consent form where they were informed about confidentiality and anonymity, data security and the voluntary nature of participation. Those who indicated that they agreed to take part were provided with the full survey to complete. Participants who began the survey could enter a draw for Amazon gift cards via a process that was separate from the survey in order to ensure anonymity.

2.2 Participants

We received over 800 responses to the survey. However, once we removed those that who did not provide consent or which were clearly false (e.g., survey completed in 2 min, inconsistent age/grade/school level) or mostly incomplete, we were left with 540 responses.

Most parents had English as a first language (92%). About 3% had French as a first language and the remainder listed a range of other languages. Most parents identified as White (86%), First Nations, Métis or Inuit (4%), Black (2%), and less than 1% East Asian, South Asian, Middle Eastern, Latin American, and Southeast Asian. Approximately 6% of parent/caregivers identified as having mixed ethnicity.

About 40% of the parents had a university degree, about 40% had a college diploma or apprenticeship certificate and the remainder had most or all of a high school diploma. About 37% of parents had an income of \$60,000 or less, 20% had an income of between \$60,000 and \$90,000 and about 34% had a family income of over \$90,000 Canadian dollars.

2.3 Measure

The survey had four sections: Demographics, Exclusion, Seclusion and Restraint. The community partner collaborated on survey development in several ways. Firstly, they shared a list of similar surveys and studies that had been conducted by organizations across Canada (e.g., [Autism Advocacy Ontario, 2019](#); [Bartlett and Ellis, 2019](#); [Coalition des parents d'enfants à besoins particuliers, the Fédération québécoise de l'autisme, and the Société québécoise de la déficience intellectuelle, 2023](#)). We drew from these heavily in creating the draft of those portions of the survey. We also received detailed feedback on the draft from members of the organization and their advisory board, some of whom were deeply involved in the school system and all who had extensive experience supporting children and families with disabilities. This feedback was provided via a virtual meeting as well as through several written submissions. Specific suggestions included sending the survey at the end of the school year to try to capture the full year, adjusting demographic questions to include fewer categories for ease of completion, including two questions for disability identification, one aligning with Ontario categories of exceptionality and one open-ended focusing in diagnosis, providing placement options that align with Ontario-required options, and adding questions about the schedule and length of time of exclusions. Many suggestions were made to adjust specific wording of multiple items to ensure clarity and relevance. We integrated the vast majority of the suggestions and omitted only those related to knowledge of school board policy which we felt were not appropriate for a general parent audience. Given our current focus on exclusion and absenteeism, the seclusion and restraint sections of the survey will not be detailed in this article.

In the first section, demographic items asked about the respondent (e.g., relationship with the child, level of education, first language, ethnicity, family income) and about the child (e.g., age, grade, gender, ethnicity, identifications/diagnoses, school placement).

Items related to exclusion and inclusion (e.g., modified days, frequency of and reasons for absenteeism) were created for the purposes of the study, guided by existing surveys (e.g., [Autism Advocacy Ontario, 2019](#); [Heyne et al., 2019](#)). Questions related to modified or partial day attendance asked if the child attended school on a part-time or modified basis (dichotomous) and if so, for how many hours (scale from 1–2 h/day to 5–6 h/day) and why (open-ended response). Finally, parents provided estimates of how often their child had missed school that year (regardless of whether or not they were on a modified/part-time schedule) and selected the most common reasons for these absences. In determining the options that would be provided for absences, we drew on several sources, including 3 of Heyne's categories of absenteeism (exclusion, withdrawal, refusal) as well as existing literature and input from our partners to determine common reasons for students with disabilities to miss school that aligned with our interest in exclusion. Most existing measures have very lengthy lists of potential options which were not feasible for our multi-purpose survey and so we relied on the 'other' option for respondents to provide the breadth of possible reasons. The survey concluded with two open-ended questions that asked parents to provide any additional insight into exclusion, restraints or seclusion in 2022/2023 or in any other year.

We also created a 5-item scale that measured School Belonging (e.g., How often does your child enjoy attending their school?). Each item was completed using a 5-point scale from 0 (never) to 5 (always). We considered several measures of school belonging before constructing our survey. We were constrained in several ways in terms of this choice. First, the goal of the community partner was to document the experiences of children related to seclusion and restraint. Our mutual interest in exclusion and absenteeism emerged early in the partnership but it was important that we not reduce the items related to seclusion and restraint while adding on the 'exclusion' section. As well, respondent attrition and the load on caregiver respondents was a top concern for the community partner and the need to keep the survey to the minimum number of questions was paramount. Validated scales of school belonging that we reviewed, which included important aspects of inclusion and exclusion that were essential to our project, typically included 10 questions and/or very few of them had been created to capture a parent/caregiver perspective. They also varied in the dimensions of school belonging being assessed, including acceptance, connectedness, rejection, exclusion, joy, satisfaction, adjustment, and wellbeing (e.g., [Abubakar et al., 2015](#); [Akar-Vural et al., 2013](#); [Arslan and Duru, 2017](#); [Goodenow, 1993](#); [Whiting et al., 2018](#)). In reviewing existing surveys and items, we created items that contained similar wording to existing measures, and that captured three aspects of importance to the study team and participant group, namely acceptance, exclusion and enjoyment at school. We had in mind as well indicators of school belonging that might be more evident to parents, in their conversations with their child(ren) but also in their interactions with the school. Our scale, then, captures the parent/caregiver view of their child's school belonging, via a sense they have developed via various information and experiences. We conducted exploratory factor analysis with principal component analysis for extraction using the 5 items we created. The analysis identified a single factor, explaining 52.2% of the variance, with factor loadings ranging

from 0.64 to 0.77. The internal reliability of the scale showed good reliability (Cronbach's $\alpha = 0.79$). While these analyses demonstrate that the scale is acceptable for our analysis, we acknowledge the limitations of failing to use a scale that has established psychometric properties and of combining multiple facets of school belonging in a single measure.

The original draft of the full survey was reviewed by members of the partner organization, including parents of children with disabilities, and recommendations were made about reducing the overall length of the survey, while increasing clarity of items and response options. The survey was also translated into French by the research team and reviewed by the partner organization. Participants were told that they could reach out to the team if they needed help of any kind to complete the survey. The final survey contained 56 questions in total and took on average of 15 min to complete.

2.4 Analyses

Student demographics, frequency and duration of modified days and frequency and reasons for absenteeism were first analyzed descriptively. Next, a linear regression was conducted with frequency of school absence as the dependent variable and school belonging (mean score), modified/part-time schedule (yes/no), type of placement (mostly inclusive vs. mostly segregated) child gender, age and family socioeconomic status (scaled level of education and income). Finally, content analysis was conducted for one open-ended question, describing explanations or reasons for their child attending school on a part-time/modified basis.

3 Results

3.1 Student demographics

The students ranged in age from 4 to 21 years with an average age of 11 ($SD = 3.85$). They ranged in grade from kindergarten to Grade 12 and a slight majority were in elementary (K-6) grades (60%). About

34% of the students were identified as female, 62% were male, 2% were gender non-conforming, and 1% were transgendered. As with the parents, about 96% of the students spoke English as a first language with 2.2% speaking French and the rest speaking a range of first languages, including American Sign Language/Langue des Signes Québécoise (0.4%). About 97% of students were born in Canada with 77% identifying as White, 6% as First Nations, Métis or Inuit (Indigenous), 2% as Black and less than 1% East Asian, South Asian, Middle Eastern, Latin American and Southeast Asian. Approximately 15% of the sample identified as having mixed ethnicity.

In terms of exceptionality or disability, Autism or a Learning Disability were the most common (see [Figure 2](#)). Our options for this question were drawn from the Ontario Ministry of Education categories of exceptionality ([Ontario Ministry of Education, 2017](#)), which is the term used in Ontario for students with disabilities or special education needs. Many parents chose multiple identifications for their child(ren), so the numbers indicated on the chart reflect approximately 1,100 identifications for 540 students. Of the total sample, about 13% of students ($n = 69$) had only an Autism identification/diagnosis with an additional 30% ($n = 164$) having Autism plus one or several other identifications (e.g., Developmental or Mild Intellectual Disability, Behavior Difficulty). Similarly, about 5% of students ($n = 31$) had an identification of only a Learning Disability, while 25% of the sample had an LD along with one or several other identifications (e.g., Behavior, Giftedness). In the 2022/2023 school year, the majority of students (60%) in the study spent all their school day in a regular class, with varying types and degrees of support. Over 87% attended a publicly funded school (8.8% attended a private school and 3.5% attended an on reserve/First Nations school). One student was being homeschooled, and one was reported as at home full time due to exclusion.

3.2 School belonging

Parents responded to 5 questions related to school belonging (see [Table 1](#)). The mean score for the scale was 3.29 out of 5.00 ($SD = 0.84$)

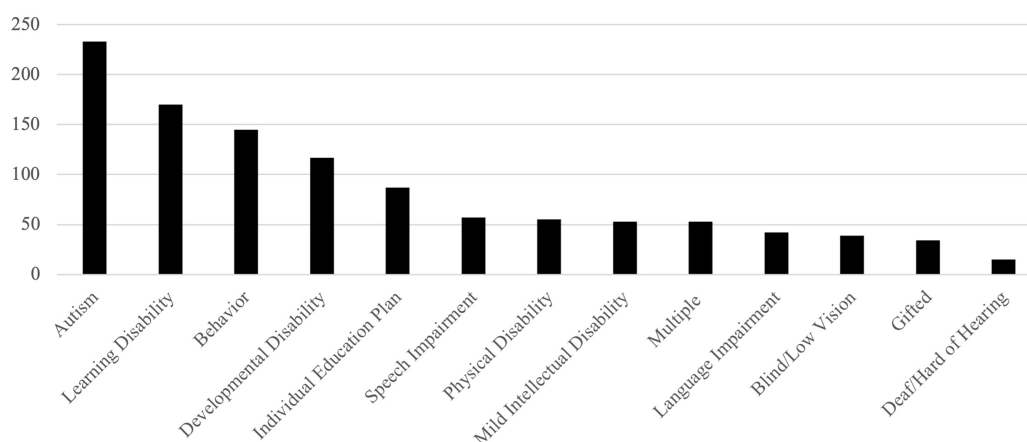


FIGURE 2
Frequency of exceptionality identification or diagnosis.

TABLE 1 School belonging items.

Item	Mean score (standard deviation)
How often does your child enjoy attending their school?	3.26 (1.19)
How often does your child feel like they are valued by school staff at school?	3.24 (1.10)
How often does your child feel like they are accepted by their peers at school?	3.01 (1.00)
How often has your child been excluded from academic events or opportunities at school this year? ^a	2.53 (1.22)
How often has your child been excluded from extracurricular or social events at school this year? ^a	2.52 (1.25)

^aThese items have been reverse coded so that a high score reflects a positive assessment with less exclusion.

reflecting a neutral to slightly positive overall report. Parents were least positive about peer acceptance at school and most positive about general enjoyment at school. According to parents, approximately 25% of students ‘rarely’ or ‘never’ enjoy school or feel valued or accepted; a similar percentage feel excluded from academics or extracurricular often or always.

3.3 Partial and modified school days

According to parents, 21% of students attended school on a part-time or modified basis in 2022/2023 with the most common schedule (25% of respondents) being 2–3 h per day. Ninety-two parents also provided a response to the open-ended question asking why their child was attending on a part-time or modified basis. Based on the results of our analysis, reasons clustered into five main areas: Student mental health and wellbeing ($n = 31$; anxiety, school refusal, bullying), a lack of resources at school ($n = 25$; no available Educational Assistant), student externalizing behaviors ($n = 20$; aggression, meltdowns), therapeutic services or alternative programs that took place during school hours ($n = 13$; applied behavior analysis), and physical health limitations ($n = 8$; fatigue, pain). Four responses could not be categorized as it was not possible to determine the explanation (e.g., “The school determined near the end of the school year that our son should be placed on modified schedule”) and five described that a full day of school was “too long” or “too much.” While categorized, many participants identified a combination of these explanations for a part-time schedule and many, as can be seen in Table 2, are interconnected with, for example, a lack of resources serving to increase anxiety. Some indicated whether the day was modified at the request of the family or school or was a requirement imposed by the school, but most did not provide this level of detail. Example verbatim quotes for each of the categories are provided in Table 2.

3.4 School absenteeism

Parents were asked to estimate how often their child was absent from school, regardless of whether they were attending on a full-time or part-time/modified schedule. As can be seen in Figure 3, approximately 32% of students missed 1 or fewer days/month, 30% of students missed 2 days per month and the remaining 38% missed 3 or more days per month (30+ days over the school year). Parent responses indicate that approximately 40% of our sample meet the well-established criteria for chronic absenteeism (10% missed days).

In terms of reasons for school absences (Table 3), parents were provided with six options as well as an ‘other’ option where they could

write in a response. 119 participants chose to write a response. Our research team coded these, first determining whether they fit with existing options, and then identifying one new category “I kept my child home for medical or health reasons.” Three families listed suspension as the reason for their child’s absences, seven entries were deemed un-codable (e.g., “would rather not explain—it was traumatic for him”) and 5 wrote in ‘N/A.’ Other single-entry items included transportation, sports, arts events, being demitted, and attending an alternative program. The final set of reasons provided in Table 3 reflect a combination of our original 6 items with the 119 open-ended responses.

3.5 Regression analyses

Before conducting the regression analysis, bivariate correlations were calculated between key variables to explore relationships and establish suitability for the linear regression analyses (see Table 4). For the gender variable, 96.3% of the sample chose either female or male and the remaining participants chose gender non-conforming, transgender, or prefer not to say. Given the small number of participants who selected options other than female or male, our analysis is unfortunately and necessarily restricted to those two categories. While many significant associations emerged, correlations were not at a level that risked multicollinearity. The strongest relationships were between absences and school belonging, the presence of a modified/part-time schedule, and family income.

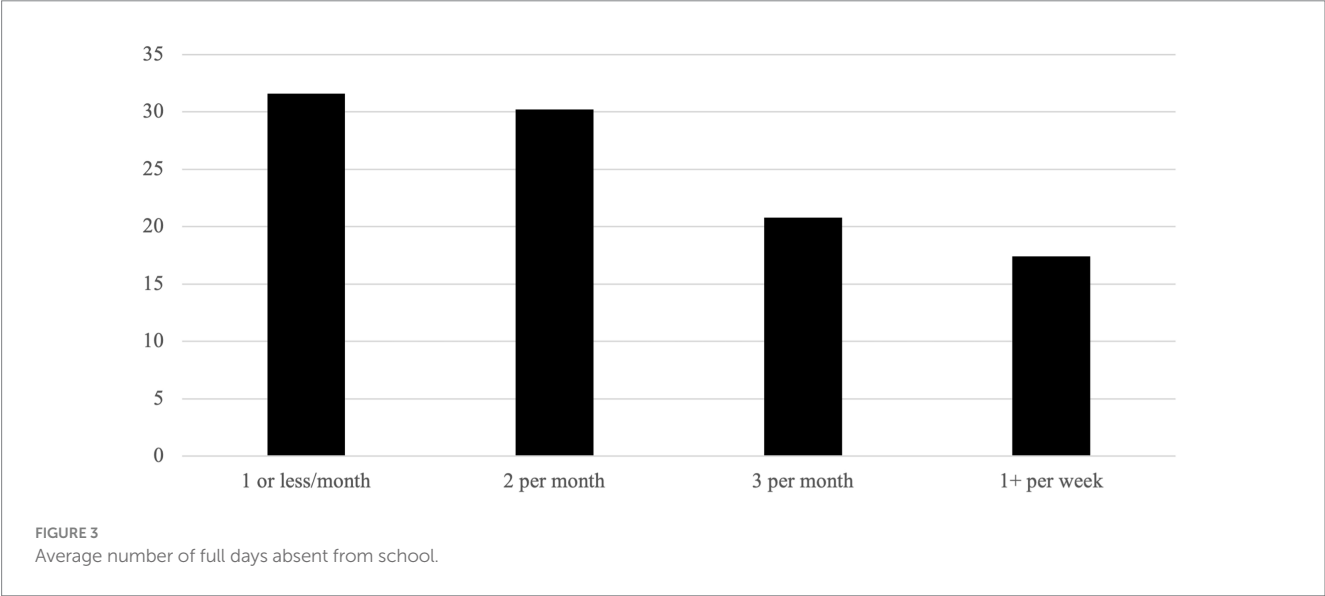
Linear regression was next conducted with frequency of school absence as the dependent variable and school belonging, type of placement, child gender, child age, and family socioeconomic status. Missing data was treated with pairwise deletion. The regression analysis revealed a statistically significant model ($F(7,463) = 26.41$, $p < 0.001$) with an adjusted R^2 of 0.28. Variables that added significantly to the prediction included school belonging ($p < 0.001$), modified/part-time schedule ($p < 0.001$), and family income ($p = 0.004$). The type of class placement approached but did not meet significance ($p = 0.065$). Child age and gender as well as parent education were not related to the frequency of absences. Students who felt a greater sense of belonging at school, who did not attend school on a modified/part-time schedule, and whose family had higher income were more likely to attend school regularly.

4 Discussion

Our survey of over 500 parents/caregivers of Ontario students with disabilities revealed several novel findings. Approximately 20% of the sample attended school on a part-time or modified basis, most

TABLE 2 Example responses for reasons for part-time/modified schedule.

Category	Examples (direct quotes)
Student mental health and wellbeing	<ul style="list-style-type: none">• Because the principal and teachers felt like it was too much for him to stay the full day.• Due to increased anxiety and bullying schedule was modified for mental health and her ADHD.• Severe anxiety attending school. PTSD-like symptoms.• In order to get him to go to the school in the morning, I agree to pick him up early (after lunch).
A lack of resources at school	<ul style="list-style-type: none">• No EA support leading to school anxiety and refusal.• Leaves school and comes home during second nutrition break because there is no supervision for him.• They said the school has no funding to keep him full day.
Student externalizing behaviors	<ul style="list-style-type: none">• Behavioral outbursts—hitting kicking swearing spitting. The school will not allow my son to attend full days unless he can behave what they consider properly for an entire 2-week period.
Therapeutic services or alternative programs	<ul style="list-style-type: none">• Needed to attend therapy—applied behavior analysis, speech language pathology, occupational therapy.• Attends a forest school program 1/5 of the week because public school is too stressful and he needs the break (also more opportunities to have his sensory needs and social relationship needs met in this alternative program).• We enrolled him in education therapy (National Institute for Learning Development) 2x afternoons per week.
Physical health limitations	<ul style="list-style-type: none">• Went part time and progressed to full time at beginning of year at our request and Occupational Therapist's recommendation, some push back from Learning Support Teacher, but we advocated for this.• We have to bring him home for eating as he will not eat at school and to change his pull ups as he is not toilet trained due to his fragile sensory system.• Due to having Juvenile Rheumatoid Arthritis and struggles with pain.



often 2–3 or 3–4 h/day. While previous studies are sparse, one survey conducted previously in Ontario (Autism Advocacy Ontario, 2019) reported a similar percentage of students attending part-time (24%).

Reasons for part-time schedules included student mental and physical health and wellbeing, a lack of resources at school, student externalizing behaviors, attending therapy or alternative programming. In terms of absenteeism generally, 40% of the sample met the criteria for chronic absenteeism (10% missed days), regardless of their schedule. Students missed schools for a variety of reasons, the most common being reluctance or school avoidance (24%), parents choosing to keep them home to give them a break or because the school wasn't meeting their needs (36%) and in almost 30% of cases, students were told to stay home from school or were sent home. While these reflected the one most common reason chosen by the parent, respondents typically listed several reasons

which reflected an interactive combination of children feeling worried about or struggling with the transition to school, parents keeping them home to protect their mental health, concerns about the supports that was being provided by school and schools asking or telling parents to keep their children home because of their unmet needs.

Overall, our results showed that many students with disabilities are missing school, with a combination of partial and modified days, typically 2–3 h/day, and chronic, full-day absences. These students are statistically among those most likely to experience academic and social difficulties in and out of school, and to experience financial and health challenges into adulthood (Arnold et al., 2020; Foreman-Murray et al., 2022; Statistics Canada, 2025; Yoder and Cantrell, 2019). That they are missing such a significant amount of school is of major concern in relation to their short- and long-term wellbeing in

TABLE 3 Most common reason for school absence (N = 494).

Reason	Frequency (percentage)
My child was reluctant or avoided school.	117 (23.8%)
I gave my child a day off/I decided to keep my child home because of their emotional needs.	111 (22.6%)
I decided to keep my child home because I feel as though the school is not meeting my child's needs.	66 (13.4%)
The school sent my child home due to their behavior.	62 (12.6%)
I kept my child home for medical or health reasons.	56 (11.4%)
The school asked my child to stay away from school.	32 (6.5%)
The school sent my child home because of a lack of sufficient staff or resources.	47 (9.6%)

TABLE 4 Descriptive statistics and correlations for regression analysis variables.

Variable	n	M (SD)	1	2	3	4	5	6	7
1. Frequency of school absence	540	2.24 (1.08)	–						
2. School belonging	539	3.29 (0.83)	–0.41**	–					
3. Type of placement	540	4.31 (1.60)	0.01	0.15**	–				
4. Modified/part-time schedule ^a	540	1.79 (0.41)	–0.42**	0.29**	0.03	–			
5. Child gender ^b	517	1.65 (0.48)	0.04	–0.22**	0.02	–0.06	–		
6. Child age	536	10.98 (3.85)	0.02	–0.12**	–0.05	0.02	0.02	–	
7. Parent level of education	538	2.65 (0.95)	0.11*	0.12**	–0.09	–0.02	0.04	0.01*	–
8. Family income	491	2.81 (1.09)	–0.21**	0.15**	0.09	0.01	0.10*	0.14**	0.34**

^a1 = yes and 2 = no.
^b1 = female and 2 = male.
* $p < 0.05$. ** $p < 0.01$.

multiple domains. As well, although our study did not focus on family experiences, previous studies have shown that absences of all types, including part-time and modified days, can impact families in a multitude of negative and reciprocal ways (Demie, 2022; Filce and LaVergne, 2015).

The reasons provided by caregivers, for students missing school reflect a range of student-, parent-, and school-influences. The high proportion of parents reporting student reluctance or avoidance is reflected in the extant literature where school refusal, anxiety, phobia and emotionally based school avoidance features predominantly (Klan et al., 2024; Leduc et al., 2024; Munkhaugen et al., 2017; Sasso and Sansour, 2024). The push-pull interactions between schools restricting access and parents withdrawing students likely operate in a dynamic fashion with student school avoidance. If a student displays anxiety and expresses refusal to attend, parents may then choose to keep them home—some may not see this as a ‘choice’ but more of a necessity based on not being able to get their child to school. Several studies have documented the negative schooling experiences that many students with disability have at school with peers and bullying in particular, which affects their willingness to attend school and ultimately their school absenteeism (Klan et al., 2024; Ochi et al., 2020; Sasso and Sansour, 2024).

Parents also reported concerns about a lack of supports available at school as a motivating factor to keeping their child home as well as a reason why schools directed parents to keep their child home. The challenges faced by school systems in meeting the needs of students with disabilities has also been well-documented, particularly via parent perspectives (e.g., Anderson, 2020). Parents often report insufficient understanding on the part of the school with respect to

specific disability needs, a lack of qualified staff who can provide necessary supports, and difficulties accessing appropriate accommodations and inclusive pedagogical approaches (Kurth et al., 2020; Murphy and Risser, 2022). These challenges within the school system can result in insufficient or inappropriate responses to student needs and lagging skills, resulting in escalating student behaviors and exclusions, possibly contributing to emotionally based school avoidance going forward (Andersen et al., 2025; Brede et al., 2017).

As is demonstrated in Anderson et al. (2014) framework, the elements of the micro- and meso-system, which includes the classroom culture, the school culture, the staff, resources, interact with one another and with the determinants of inclusion experienced by the learner—in this case, to affect the willingness of a child to attend school, the likelihood that a parent/caregiver will facilitate or require their attendance, and direction from the school as to whether students are welcome. A deeper focus on understanding the role of parents in keeping students home is one important direction for future research. This insight is necessary to guide the development of approaches or interventions that address the underlying needs that motivates parents’ choices and decision-making in regard to school attendance.

Finally, a model of school and family variables predicted approximately 30% of the variance in school attendance—students whose parents reported them having a high sense of school belonging, being on a full-time vs. a partial attendance schedule and having greater financial resources in the family were all significantly more likely to attend school more often. School belonging, a key determinant of inclusive education, has long been shown to be related to student engagement and academic achievement and

absenteeism for students with and without disabilities (Anderson, 2020; Korpershoek et al., 2020; Pampati et al., 2018; Williams et al., 2020). That it is the strongest predictor of rates of attendance is not surprising. Students who feel valued by staff and their peers, who are included in academic and extracurricular events at school, are likely more positive about being at school and are less reluctant to attend. The theoretical connection between inclusive education and absenteeism is confirmed by this finding. The connection with socioeconomic status is also well-confirmed by many decades of research in relation to absenteeism (Gee, 2018; Sosu et al., 2021). While mediating studies are scarce, it is likely families who have greater financial resources may be able to promote attendance for their children by providing basics such as food, stable housing and appropriate clothing, harnessing more social supports, navigating the school system to elicit more services, providing alternative modes of transportation if busses are missed due to child reluctance, and securing physical and mental health care for themselves and their children (Coughenour et al., 2021; Klein et al., 2020; Shaw and Shelleby, 2014). Interestingly, the age of the students did not significantly impact their overall attendance, in contrast to existing studies which have found that older students are far more likely to miss classes or days of school than younger students (Redmond and Hosp, 2008; Sasso and Sansour, 2024; Stromberg et al., 2022). The fact that data was reported by parents may have had an impact on this result, given that more adolescent absenteeism stems from skipping or what is called truancy, which parents may not be aware of. This sample of students with disabilities may also be more closely monitored in comparison to a group of students without disabilities—families who completed the survey shared many examples of being very involved in the lives and schooling of their students and students missing school in older grades may be less common.

4.1 Limitations and future research

Several limitations of the study are important to consider. First, the demographics reported by the participants do not reflect the cultural or ethnic diversity of Ontario, the province in which the study took place. Future research should prioritize recruitment of underrepresented communities, considering partnerships with organizations and offering languages beyond English and French. One group of students who we were not able to capture in analyses due to few responses are those who identify as gender diverse. Smaller qualitative studies exploring the experiences of these students in detail or larger, population-level surveys are recommended.

Our survey focused on parent perspectives, which is valuable and key to understanding the experiences of students. They typically know their children best and are the ones receiving calls from school to report issues or to pick up their child. However, their reports of exclusion and absenteeism are based on their own recollections and may not be entirely accurate. Future research could include in-the-moment data collection, perhaps via an app or similar technology that could capture the frequency and reasons for non-attendance, including exclusionary practices. Many Ontario school boards do use similar approaches for parents to report absences but the provided

reasons for these absences are extremely limited (e.g., sickness, appointment) and instances where parents are called to pick up their child early or a parent choosing to keep their child home because of worry about exclusions are not captured. Comparing parent reports with school-collected data would be of value to the field as we do not yet know how ‘accurate’ each is in relation to the other. For young students in particular, parents have a significant role to play in whether or not their child attends school and future qualitative research, which could explore decision-making on the part of the parent (e.g., What factors are they considering and weighing? What previous experiences or anticipated outcomes are influencing their decision?) would be of significant value to the field.

Parent views of school belonging also capture what they have heard from their child and observed at school but may not reflect fully the child’s experience or feelings about school. The voices of students themselves will be key to better understanding relationships between school belonging and absenteeism in future research. Additionally, school staff, who are also experiencing student absenteeism and exclusions in multiple ways, should be included to provide a fuller picture of the processes involved as well as potential impacts.

One final limitation was with respect to disability identity and identifications. We had originally intended to explore analyses focused on specific disabilities in relation to absenteeism and exclusion but were faced with the majority of respondents indicating that their child had multiple disabilities making straightforward and ethical groupings by disability impossible. Multiple diagnoses are the reality for many families and students, and this issue needs to be further explored in future studies in order to allow for possible disaggregation and identification of disability-specific experiences.

5 Conclusion

This study highlights absenteeism—including chronic absence and part-time or modified schedules—as a significant and often hidden barrier to inclusive education for students with disabilities. Parent reports reveal that many absences are linked to unmet needs, emotionally based school avoidance, behavioral challenges, and school-initiated exclusions, underscoring systemic gaps in supports required to ensure students can attend and participate meaningfully. School belonging emerged as a key predictor of attendance, reinforcing the importance of fostering environments where students, and their families, feel valued, included, and supported. Additionally, socioeconomic disparities contributed to unequal access to education, pointing to broader policy and resource implications. Sufficient and appropriate resources, including skilled, well-supported staff who have opportunities to work collaboratively, strong school leadership, and a positive and inclusive climate, are necessary to address student needs and to prevent escalations of behavior that often result in school-initiated exclusions.

Luckily, strategies to build inclusive schools where students feel a strong sense of belonging are also key to improving attendance. Tiered models for addressing chronic absenteeism typically include the development of a school-based team and analysis of *why* students are missing school, with the first tier focusing deeply on engaging with families, building relationships between students and teachers, making sure that all basic needs are met (e.g., nutrition), and

employing restorative disciplinary approaches (Attendance Works, 2025). Including attendance as an IEP goal is one suggested strategy, as well as home visits and providing medical and mental health services within a community school model (Jordan, 2023). Our findings demonstrate that improving inclusive education must include consideration of the barrier of absenteeism in all of its forms and complexities to advance consistent access, belonging, and meaningful participation for all students with disabilities.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors without undue reservation.

Ethics statement

The studies involving humans were approved by University of Ottawa Research Ethics Board. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

JW: Writing – original draft, Writing – review & editing. SP: Formal analysis, Investigation, Conceptualization, Writing – review & editing. MO: Project administration, Writing – review & editing, Formal analysis.

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EDITED BY

Trude Havik,
University of Stavanger, Norway

REVIEWED BY

Lok Sang Ho,
Lingnan University, Hong Kong SAR, China
Mingfeng Xue,
University of North Carolina at Greensboro,
United States

*CORRESPONDENCE

Hang Chen
✉ chenhang@eurasia.edu

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What drives EBSA across contexts? evidence from China using BERTopic

Hang Chen*

School of General Education, Xi'an Eurasia University, Xi'an, China

Emotionally based school avoidance (EBSA) has been extensively studied in Western contexts, yet little is known about its manifestation in non-Western settings. This study applies BERTopic and semantic network analysis to 60,000 counseling-based narratives from Chinese adolescents to examine the psychological, familial, school, and systemic factors underlying EBSA. The analysis identified seven thematic domains: anxiety-driven symptoms, sensory overload, family conflict, peer and teacher difficulties, post-COVID adjustment, systemic barriers, and loss of belonging. These results validate the cross-contextual relevance of established EBSA constructs while also revealing institutional challenges unique to the Chinese context. Methodologically, the study demonstrates how computational text analysis can extend qualitative inquiry to large-scale, culturally grounded data. Substantively, it advances EBSA research by integrating individual, relational, and systemic dimensions, offering both cross-cultural insights and practical implications. The findings suggest that Chinese schools should strengthen teacher–student trust, foster collaborative family–school partnerships, and adopt systemic, preventive strategies to reduce EBSA and promote student well-being.

KEYWORDS

BERTopic, Chinese adolescents, cross-context validation, emotionally based school avoidance (EBSA), school well-being, text mining

1 Introduction

Emotionally based school avoidance (EBSA) has attracted growing scholarly attention due to its profound implications for students' educational trajectories, psychosocial wellbeing, and long-term life chances. Research consistently indicates that EBSA is multidimensional, with risk and protective factors emerging across individual, family, school, and broader contextual domains.

From the perspective of the individual, child anxiety is the most consistent predictor of EBSA, with longitudinal studies showing that higher anxiety significantly predicts persistent absenteeism years later (1). Emotional and sensory processing difficulties, together with behavioral challenges, have also been linked to increased vulnerability (1). Neurodivergent populations, particularly autistic girls, face heightened risks; qualitative evidence highlights the role of internalized anxiety and the importance of trusting adult relationships for successful re-engagement in school (2).

Turning to the family context, EBSA places heavy burdens on parents and caregivers. Parents of children experiencing school distress report significantly elevated daily anxiety, lower mood, and often the onset of new mental health conditions (3). Qualitative accounts emphasize how parents frequently feel blamed or disbelieved by professionals,

facing threats of fines or legal action, which compounds stress and isolates families further (3, 35). Conversely, when parents are included in school-based strategies, their engagement can play a protective role in supporting children's return to education.

Within the school environment, the relational climate is pivotal. Studies show that re-engagement is most effective when students establish trusting and supportive relationships with a key adult, which then becomes the foundation for emotional and social interventions (2). Broader educational psychology perspectives highlight that resilience-building frameworks—emphasizing supportive teacher–student relationships and systemic consultation—are essential for improving outcomes and reducing EBSA risk (36). Nevertheless, reviews of UK local authority guidance reveal wide variation in the principles, evidence base, and practical strategies provided to schools, suggesting a need for more coherent, evidence-informed frameworks (4).

Looking at the wider socio-educational landscape, contextual stressors also shape EBSA trajectories. The COVID-19 pandemic not only exacerbated children's psychological vulnerabilities but also disrupted access to support services, creating what has been described as a “perfect storm” of risk factors (5). Post-pandemic studies report rising rates of persistent absenteeism and emotionally driven avoidance, alongside widening inequalities in mental health and educational participation (6). These findings underscore the importance of multi-system approaches that integrate education, health, and social care sectors in addressing EBSA.

In response, a small but growing body of research has begun to test intervention models. For example, the ISAAC program, a parent-focused online intervention, demonstrated early feasibility and acceptability in reducing child anxiety and school avoidance behaviors (7). Such initiatives illustrate the potential of scalable, context-sensitive, and family-centered interventions, though evidence of effectiveness outside Western contexts remains limited.

While the existing literature has substantially advanced our understanding of EBSA by identifying a range of psychological, familial, school-based, and contextual factors, most of this research has been situated within Western primary and secondary school contexts. These studies, though methodologically diverse and conceptually rich, remain largely limited to culturally specific settings and samples. As such, it is unclear whether the mechanisms and thematic structures associated with EBSA—such as anxiety, parent–school conflict, or key adult relationships—are contextually bound or generalizable across educational systems and cultural environments.

This lack of cross-context validation represents a critical gap in the field, particularly as EBSA emerges as a global concern in the wake of the COVID-19 pandemic and rising youth mental health challenges. There is an urgent need to test whether existing conceptual models of EBSA hold in non-Western settings, and to explore how local educational, familial, and socio-emotional dynamics may reshape the contours of school avoidance behaviors.

To address this limitation, the present study applies BERTopic, a transformer-based topic modeling method, to a large corpus of qualitative interview narratives collected from Chinese adolescents.

This computational approach enables the identification of latent themes and semantic structures that underpin EBSA experiences in a culturally distinct context, thereby contributing to the broader goal of building a globally relevant and context-sensitive evidence base.

Accordingly, this study is guided by the following overarching research question: What are the key psychological, familial, school, and contextual factors underlying EBSA among Chinese adolescents, and how do these factors interact to form a coherent semantic and thematic structure?

In addressing this question, the study seeks to test the cross-contextual applicability of existing EBSA constructs within a non-Western setting. By applying BERTopic—a transformer-based topic modeling technique—to a large corpus of adolescent interview narratives, the research uncovers latent thematic structures that may converge with or diverge from those found in Western literature. Through a series of computational analyses, including keyword weightings, topic distributions, semantic proximity mapping, network visualization, and hierarchical clustering, the study aims to reveal both the distinct thematic patterns and their interrelationships. In doing so, it contributes to the urgently needed cross-cultural evidence base for understanding and addressing EBSA globally.

2 Method

2.1 Data collection and preprocessing

The corpus comprised 60,000 textual narratives collected between March and April 2025 from two complementary sources: anonymized counseling transcripts from the Learning Support Center of a comprehensive university and publicly available narratives from Xiaohongshu (Red), a widely used Chinese social media platform (31, 32). While user identities on Red are anonymous, posts were included only when they contained explicit self-referential indicators of current school attendance (e.g., references to class schedules, homework, teachers, examinations, or parental supervision), which are widely used in prior adolescent-focused social media research.

The final corpus consisted of 60,000 narrative units drawn from two sources. Of these, 51,268 narratives (85.4%) originated from Xiaohongshu (RED), while 8,732 narratives (14.6%) were anonymized counseling transcripts obtained from an institutional learning support center.

Regarding narrative length, the average length of Red-based narratives was 86.3 Chinese characters ($SD = 41.7$), reflecting short, experience-focused self-disclosures typical of social media platforms. Counseling transcripts were substantially longer, with a mean length of 312.6 characters ($SD = 128.4$), as they were based on semi-structured counseling records.

For the counseling subsample, available demographic metadata indicated that students were predominantly adolescents enrolled in middle and high schools. Specifically, approximately 53% identified as female and 47% as male. The majority were aged between 13 and 17 years, corresponding to junior and senior secondary

education levels. Grade distribution showed that 58% were junior secondary students and 42% were senior secondary students. No personally identifiable information was retained or accessible during analysis.

For the Red dataset, we employed the professional web-scraping tool Octopus Data (8, 9). A systematic keyword search was conducted using the terms “逃学” (school avoidance), “焦虑” (anxiety), “家庭压力” (family stress), and “不愿上学” (school refusal). The initial query returned 84,327 posts. After removing duplicates (7.8%), advertisements or irrelevant entries (6.4%), and extremely short posts with fewer than 10 characters (2.9%), 71,268 valid posts remained. These were merged into narrative units and combined with 8,732 anonymized counseling transcripts, resulting in a final dataset of 60,000 narratives.

All narratives were collected between March and April 2025, representing a post-COVID context in which references to the pandemic reflect retrospective experiences and their ongoing influence on school adjustment, rather than contemporaneous pandemic conditions.

This dual-source strategy ensured both ecological validity and discursive diversity (10–12). To mitigate the demographic skew of Red users (primarily urban adolescents), institutional transcripts were deliberately included to provide balance (13, 14).

Preprocessing was conducted in Python 3.10 and included: (1) Chinese word segmentation using Jieba with a domain-specific custom dictionary, (2) stopword removal with a merged stopword list (CNKI standard list plus manually expanded EBSA-related terms), (3) conversion of traditional to simplified characters, (4) removal of emojis, hyperlinks, and non-Chinese characters, (5) exclusion of duplicate entries and narratives shorter than 10 tokens, and (6) filtering out words occurring fewer than five times to reduce noise (15, 16). Code availability is described in the Data and Code Availability section.

Ethical approval for this study was obtained from the Institutional Research Ethics Committee of [University name blinded for review] (approval number: 2025-EDU-041). All procedures complied with institutional guidelines and the terms of service of Xiaohongshu (RED) (17, 18).

2.2 Semantic associations: heatmaps and social network analysis

To explore structural associations among salient terms, we constructed word co-occurrence matrices using Python (pandas 2.0, NetworkX 3.2). Pairwise associations were quantified using normalized pointwise mutual information (NPMI), which better captures semantic proximity than raw frequency. To reduce noise, only word pairs with $NPMI > 0.1$ and a minimum joint frequency of 15 were retained. Analysis was restricted to the top 100 most frequent content keywords after preprocessing, with joint-frequency and normalized pointwise mutual information (NPMI) thresholds applied to ensure robustness.

For visualization, we adopted a two-pronged approach. First, the top 200 word pairs were displayed as a heatmap (seaborn, matplotlib), providing an interpretable overview of associative

strength across terms. Second, a semantic co-occurrence network was generated, where nodes represented keywords and weighted edges indicated co-occurrence strength. NetworkX was used for graph construction, while VOSviewer supported community detection and visualization of cluster densities.

To characterize structural properties, degree centrality and betweenness centrality were calculated to identify influential lexical nodes. Community boundaries were validated using modularity-based clustering in VOSviewer, complementing Python-based results. This integrative approach has been applied in educational and bibliometric contexts to capture semantic proximities beyond raw co-occurrence (18, 19). Code availability is described in the Data and Code Availability section.

2.3 Topic modeling and visualization with BERTopic

The core analytic technique employed was BERTopic (20), which integrates transformer-based embeddings with density-based clustering and class-based TF-IDF (c-TF-IDF) for topic representation. Compared to frequency-driven approaches such as Latent Dirichlet Allocation (LDA), BERTopic achieves higher semantic coherence and interpretability, particularly in short, emotionally expressive narratives (21, 22, 29).

In this study, we adopted the multilingual MiniLM-L12-v2 embedding model from the Sentence-BERT family to capture both Chinese and English lexical semantics. The preprocessing pipeline included an n-gram range of (1–3). Topics were generated using HDBSCAN ($\text{min_cluster_size} = 60$, $\text{min_samples} = 15$), with c-TF-IDF applied to extract the top 10 keywords per cluster as representative descriptors (30).

To ensure methodological transparency, topic coherence was assessed using the C_v metric, which yielded a score of 0.56, consistent with moderate-to-strong clustering quality reported in recent BERTopic applications (11, 23). Outlier texts (3.8%) that could not be reliably assigned to clusters were excluded. Theme labeling was performed through iterative review by two coders, with disagreements resolved through discussion.

Visualization outputs included hierarchical dendrograms, topic-term bar plots, bubble charts, and intertopic distance maps, all generated directly from model outputs without manual modification (24, 37). To guarantee reproducibility, a fixed random seed ($\text{seed} = 42$) was applied, and the full BERTopic output—including top 20 keywords per topic, cluster size distributions, and coherence scores—Code availability is described in the Data and Code Availability section.

2.4 Validation analyses

To ensure methodological rigor, we adopted a multi-step validation strategy integrating qualitative and computational checks. First, a 10% random subsample of the corpus ($n \approx 6,000$ narratives) was independently coded in NVivo 14 by two trained researchers following Braun and Clarke's (25) six-step thematic

analysis framework. Randomization was conducted with a fixed seed to guarantee reproducibility. Inter-coder reliability achieved a Cohen's κ of 0.81, exceeding the conventional 0.70 threshold for acceptable reliability (11, 26). Divergent codes were adjudicated in review sessions until consensus was reached, and the final coding tree comprised three hierarchical levels (themes, subthemes, representative codes).

Second, to assess representativeness and mitigate potential platform bias, emergent themes from Red narratives (largely reflecting urban youth voices) were systematically compared against those from institutional counseling transcripts (covering a broader range of academic and socio-economic contexts). Convergent patterns—such as anxiety-related avoidance, parent-school conflict, punitive attendance threats, and loss of school belonging—were observed across both data sources, suggesting that recurrent EBSA-related experiences were captured across counseling narratives and social media posts despite platform differences.

Third, to enhance transparency and reproducibility, all preprocessing pipelines, Python scripts, segmentation dictionaries, stopword lists, and BERTopic parameters were documented and archived. Code availability is described in the Data and Code Availability section, ensuring that both computational modeling and qualitative validation steps can be independently replicated (10, 27).

To enhance transparency and reproducibility, Code availability is described in the Data and Code Availability section. Due to ethical and privacy considerations, the raw textual data cannot be publicly shared; however, all analytical procedures and parameter settings are fully documented to enable replication.

3 Results

3.1 Co-occurrence heatmap and network analysis

To examine how EBSA is structured within adolescents' narratives, we first analyzed patterns of keyword co-occurrence and semantic association. Specifically, we constructed a co-occurrence heatmap and a semantic network graph to reveal the relational architecture underlying EBSA experiences.

Figure 1 depicts co-occurrence frequencies among the top keywords. Strong pairings are evident between “anxiety” and “depression,” “parent stress” and “family conflict,” and “teacher conflict” and “poor communication”. These clusters underscore that psychological distress is not isolated but embedded within family systems and school relational dynamics, consistent with Adams et al. (1), who identified both child anxiety and parental stress as predictors of persistent school non-attendance.

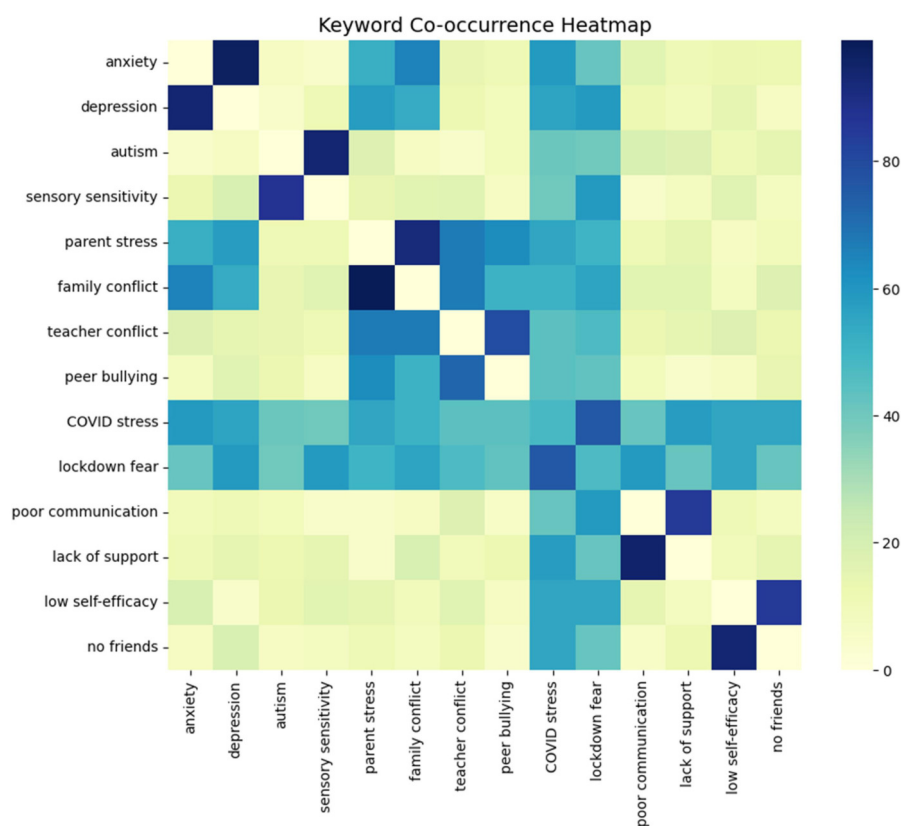


FIGURE 1
Heatmap of keyword co-occurrence patterns.

Similarly, the tight linkage of “COVID stress” and “lockdown fear” illustrates the pandemic’s amplifying role in exacerbating both individual and systemic vulnerabilities (5).

Figure 2 offers a complementary visualization in the style of VOSviewer, where nodes represent keywords and edges represent co-occurrence strength. Several distinct communities emerge.

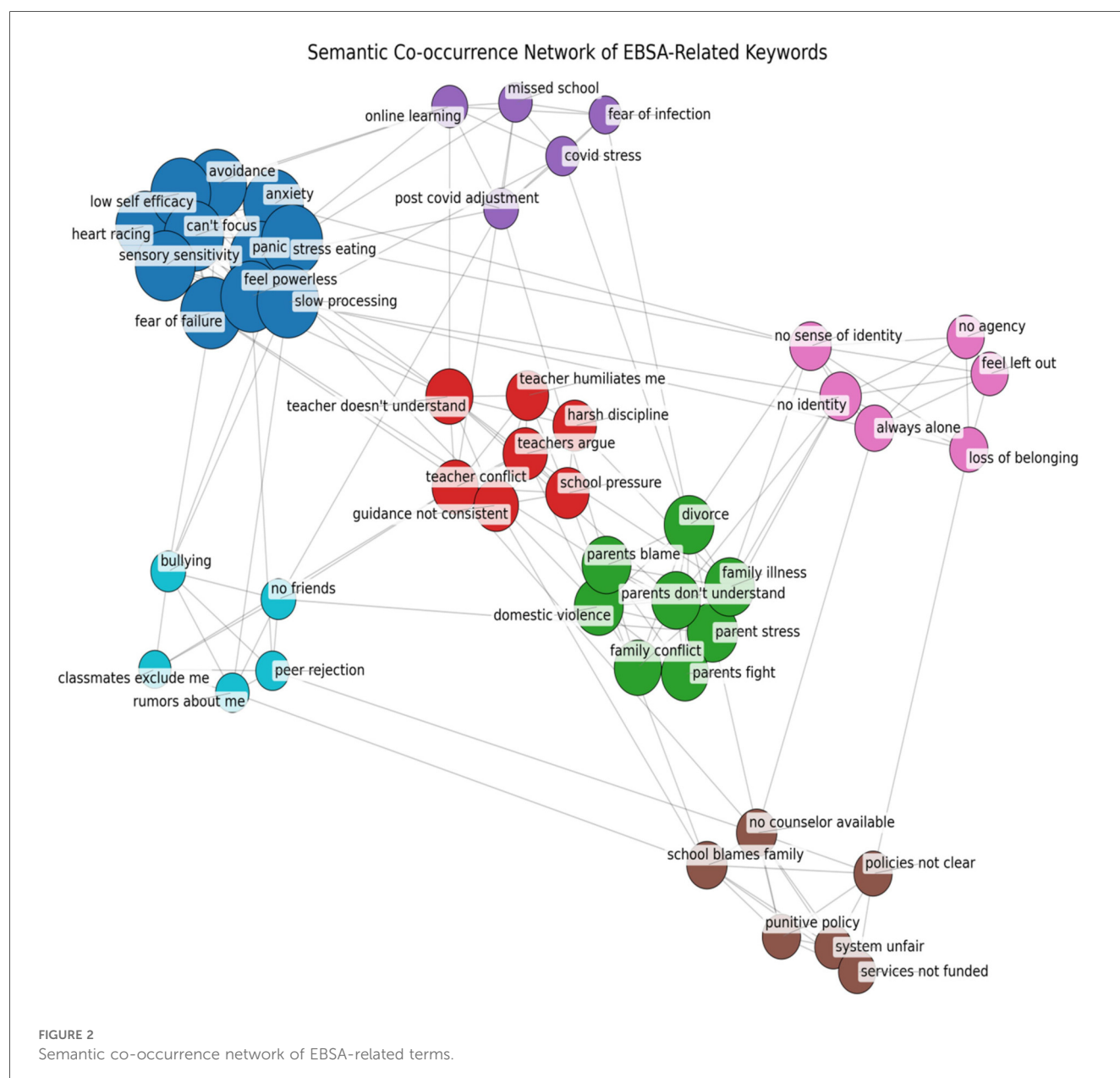
A psychological distress cluster (blue), dominated by “anxiety,” “depression,” “low self-efficacy,” and “I feel hopeless”. This resonates with Ribeiro et al. (28), who showed that low self-efficacy and ambivalent school engagement predict avoidance behaviors.

A family conflict cluster (green), linking “parents always argue,” “domestic violence,” and “divorce pressure”. Mullally and Connolly (3) reported that over half of parents in EBSA contexts develop new mental health conditions due to precisely these strains.

A school climate cluster (red), centered on “teacher doesn’t listen,” “teacher conflict,” and “peer rejection”. This aligns with O’Hagan et al. (2), who emphasized the critical importance of trust-based student–adult relationships for successful re-engagement.

A COVID/systemic cluster (purple and brown), containing “COVID stress,” “missed school,” “services not funded,” and “system unfair”. This reflects Hamilton’s (6) findings that post-pandemic inequities eroded belongingness and intensified EBSA risk, as well as Hammond-Price et al. (4) on inconsistencies in institutional guidance.

Taken together, these results indicate that adolescents experience EBSA through interconnected constellations of psychological distress, family conflict, and school relational difficulties rather than isolated risk factors. This co-occurrence analysis provides



evidence that EBSA is best understood as a multi-layered phenomenon in which personal anxiety, family stress, and school conflict interact and reinforce one another (1, 6).

Together, the co-occurrence and network analyses indicate that psychological distress, family conflict, and school relational difficulties form interconnected clusters rather than isolated factors in adolescents' EBSA narratives.

3.2 Topic modeling with BERTopic

Figure 3 displays the word scores of the seven extracted topics. Each cluster is characterized by its most heavily weighted expressions, revealing seven distinct but interrelated domains of EBSA.

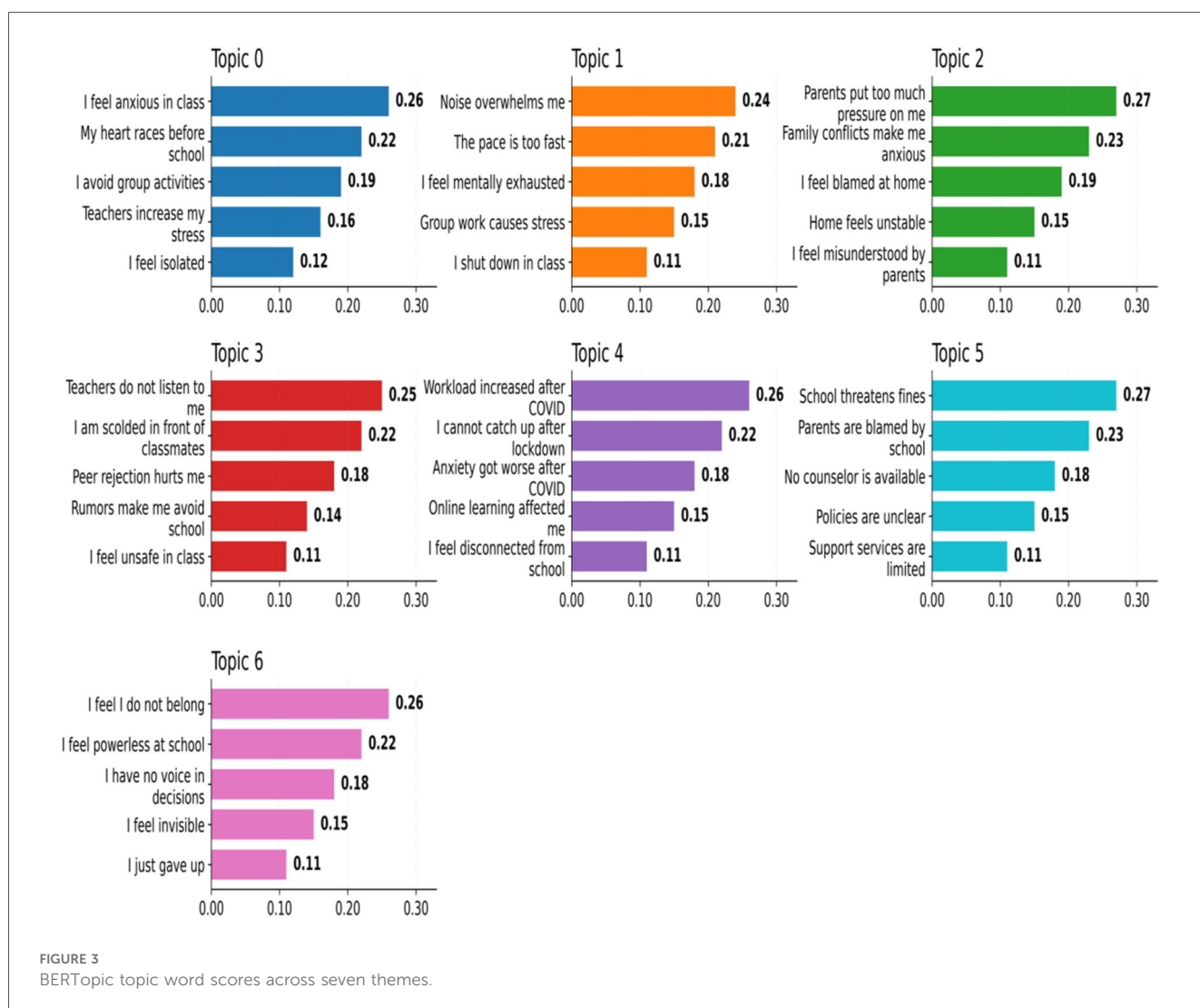
The x-axis represents the normalized topic relevance score, indicating the relative importance of each phrase within a given topic, rather than raw frequency counts. Scores are normalized independently for each topic; therefore, comparisons should be made within topics rather than across topics.

Topic 0 (Anxiety-driven physiological symptoms): Expressions such as “my heart racing gets worse at school” and “generalized anxiety makes me avoid class” underscore the role of anxiety, echoing findings that anxiety is the strongest predictor of persistent absenteeism (1, 33).

Topic 1 (Sensory overload and group stress): Statements like “the pace is too fast” and “fluorescent lights bother me” highlight the role of sensory sensitivities, consistent with O'Hagan et al. (2), who emphasized the risks for neurodivergent students in overstimulating school settings.

Topic 2 (Family conflict and parental pressure): Phrases including “unstable family schedule triggers my anxiety” and “dad is too strict” reflect the centrality of family dynamics, aligning with Mullally and Connolly's (3) account of heightened parental stress and blame in EBSA cases.

Topic 3 (Peer exclusion and teacher conflict): Items such as “rumors about me make me avoid class” and “teacher doesn't listen” reveal the combined pressures of peer rejection and teacher invalidation, echoing Ribeiro et al. (28) on low emotional engagement and Hamilton (6) on hostile school environments.



Topic 4 (Post-COVID adjustment difficulties): Entries like “sudden workload shock” and “anxiety got worse after COVID” highlight pandemic-related stressors, confirming Lester and Michelson’s (5) claim that COVID-19 exacerbated vulnerabilities in school attendance.

Topic 5 (Systemic and institutional barriers): Terms such as “lack of communication” and “threats of fines” emphasize systemic blame and ineffective school–parent coordination, mirroring Hammond-Price et al.’s (4) analysis of inconsistent EBSA policy guidance.

Topic 6 (Loss of belonging and agency): Phrases including “I feel powerless in groups” and “I decided not to go” capture diminished belonging and agency, consistent with Hamilton’s (6) emphasis on perceived exclusion and reduced agency in post-pandemic schooling.

Figure 4 illustrates the semantic distribution of these seven topics via a bubble chart. The relatively distinct spatial separation between clusters confirms that adolescents’ narratives converge around seven coherent domains. Differences in bubble size reflect topic prevalence, with anxiety-related symptoms (Topic 0) and systemic barriers (Topic 5) being particularly dominant.

These results reveal distinct thematic patterns across the analyzed narratives, indicating that Chinese adolescents’ EBSA narratives can be organized into seven thematically distinct clusters, some of which correspond to patterns reported in prior EBSA research, while others reflect systemic and institutional barriers (4, 7).

Taken together, these results demonstrate that EBSA among Chinese adolescents is structured around seven thematically distinct yet interrelated domains. This not only corroborates prior findings from Western contexts—such as the centrality of anxiety (1) and the protective role of supportive teacher–student relationships (2)—but also foregrounds systemic and institutional barriers (4) that have been less emphasized in earlier studies.

3.3 Validation results

The NVivo-based thematic analysis generated seven higher-order themes, corresponding closely to the seven clusters identified by BERTopic. As summarized in Table 1, the manual coding confirmed the prominence of anxiety-driven symptoms, family conflict and pressure, teacher–student relations, peer exclusion, post-COVID adjustment challenges, systemic barriers, and diminished belonging and agency. Subthemes and representative codes closely mirrored those extracted computationally. For instance, “my heart races before class” and “I panic when thinking of homework” were categorized under Anxiety-driven symptoms, echoing Topic 0 in the BERTopic model. Similarly, parental strictness (“Dad is too strict”) and divorce-related stress (“Home feels unstable”) were captured under Family conflict and pressure, consistent with Topic 2.

Specifically, all seven BERTopic-derived themes showed direct correspondence with NVivo higher-order themes at the thematic level. Observed differences were confined to the level of thematic granularity rather than thematic presence. While the BERTopic model integrated teacher-related disciplinary experiences within broader relational difficulty clusters, NVivo coding further differentiated harsh disciplinary practices as a distinct subtheme under Teacher–student relations. Overall, substantial thematic overlap was observed between the BERTopic-derived themes and the manually coded NVivo themes, with minor differences reflecting differences in analytical resolution across methods.

4 Discussion

This study contributes to the expanding literature on EBSA by addressing three critical areas of innovation: research context, methodological approach, and substantive findings.

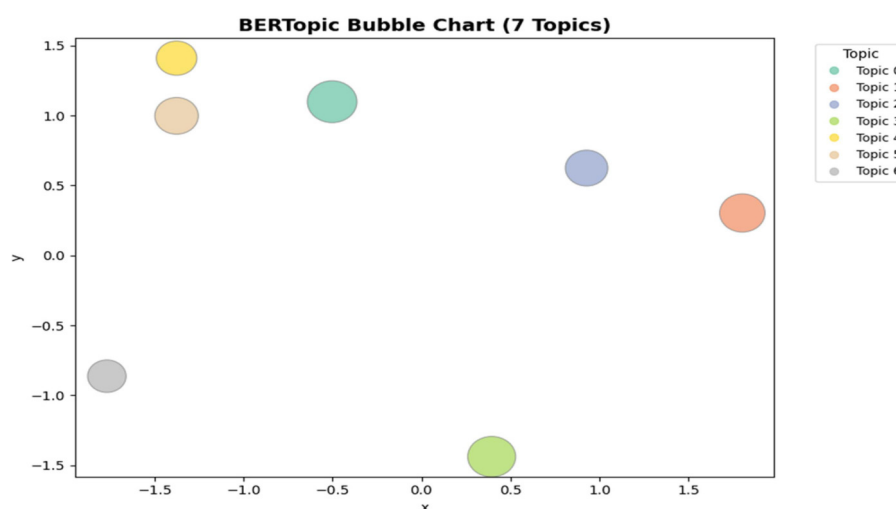


FIGURE 4
BERTopic bubble chart of seven thematic domains.

TABLE 1 Validation of BERTopic-derived themes through NVivo manual coding ($N = 6,000$ narratives).

Theme	Subtheme	Representative Codes
Anxiety-driven symptoms	Physiological responses	"My heart races before class"; "I feel dizzy at school"
	Emotional overwhelm	"I cry every morning"; "I panic when thinking of homework"
Family conflict & pressure	Parental strictness	"Dad is too strict"; "Mom sets unrealistic rules"
	Divorce & instability	"Parents divorced last year"; "Home feels unstable"
Teacher-student relations	Lack of support	"Teacher doesn't listen"; "I feel ignored in class"
	Harsh discipline	"Scolded in front of classmates"; "Teacher humiliates me"
Peer exclusion	Bullying/rumors	"Rumors about me"; "Friends isolate me at lunch"
Post-COVID difficulties	Workload shock	"Too much homework after reopening"; "I cannot catch up"
	Health-related anxiety	"Afraid of getting sick again"; "COVID made my anxiety worse"
Systemic barriers	Punitive policies	"School threatened fines"; "Parents blamed by school"
	Lack of resources	"No counselor available"; "Services not funded"
Loss of belonging & agency	Social isolation	"I feel like an outsider"; "Nobody cares if I attend"
	Powerlessness	"I have no say in class decisions"; "I just gave up"

4.1 Cross-contextual validation through a novel research setting

A central contribution lies in the cross-context validation of EBSA constructs within a non-Western context. While the majority of EBSA studies to date have focused on Western primary and secondary school populations (1–3), the present study systematically examined the phenomenon among Chinese adolescents, drawing on 60,000 counseling-based narratives. By situating EBSA in China's unique socio-educational environment—characterized by high academic pressure, evolving family structures, and post-pandemic systemic challenges—this research provides empirical evidence on whether core mechanisms such as anxiety, family conflict, and teacher-student relationships are universal or contextually specific. The findings suggest substantial convergence with Western literature in highlighting anxiety and relational dynamics, while also identifying systemic and institutional barriers (e.g., inconsistent school-parent communication and punitive policies) as particularly salient in the Chinese context. This demonstrates the necessity of cross-cultural research for building a globally valid framework of EBSA.

Importantly, these convergences do not imply contextual equivalence. Rather, they indicate that similar psychological vulnerabilities are expressed and managed through distinct institutional arrangements in non-Western educational systems.

4.2 Methodological innovation with computational text analysis

Equally important, the study advances EBSA research by employing BERTopic combined with semantic network analysis

to examine large-scale qualitative data. Traditional EBSA studies often rely on small sample interviews or surveys, limiting both generalizability and analytical depth (7). By contrast, this study applied transformer-based topic modeling to tens of thousands of adolescent narratives, enabling the detection of fine-grained semantic structures beyond simple frequency counts. Integrating co-occurrence heatmaps, semantic network analysis, and BERTopic modeling. This computational approach demonstrates how natural language processing can extend the reach of qualitative inquiry, making it possible to preserve cultural nuance while achieving scale and methodological rigor.

4.3 Substantive innovation in EBSA findings

The analysis uncovered seven distinct thematic domains—anxiety-driven physiological symptoms, sensory overload, family conflict, peer exclusion and teacher conflict, post-COVID adjustment difficulties, systemic barriers, and loss of belonging and agency. This typology makes several new contributions to EBSA research. First, it validates the cross-context relevance of established predictors such as anxiety (1) and relational support (2). Second, it foregrounds systemic and institutional barriers (4), which have received limited attention in prior Western-centered studies. Third, it highlights how pandemic disruptions have left lasting effects on adolescents' school engagement, consistent with but extending beyond recent post-COVID analyses (5). Together, these results broaden the conceptualization of EBSA by integrating individual, familial, school-based, and systemic levels within a culturally grounded thematic map (34).

By integrating manual NVivo coding with computational topic modeling, this study demonstrated methodological triangulation. The substantial convergence across both approaches reinforces the robustness of the thematic structures identified, while minor discrepancies provide additional nuance. This validation step addresses concerns about model-specific bias and strengthens confidence in the cross-contextual relevance of the findings.

Unlike much of the Western EBSA literature, which emphasizes therapeutic access and individualized support, the present findings foreground punitive governance practices, administrative surveillance, and asymmetric power relations between schools and families as salient features shaping EBSA experiences in the Chinese context.

4.4 Limitations and future directions

Despite its contributions, this study has several limitations. First, although the corpus of 60,000 narratives is unprecedented in scale, it was derived from a single national context. While the inclusion of NVivo-based manual thematic coding provided an important cross-method validation of the BERTopic results, the dataset itself remains limited to China. Future studies should incorporate multi-site or cross-cultural corpora to determine whether the thematic structures identified here are globally robust or shaped by local socio-educational systems.

Second, although the triangulation of computational and manual methods strengthened the robustness of the findings, both approaches relied on the same textual dataset. Future research could therefore extend validation by testing the thematic structure against independent corpora from other digital platforms (e.g., Weibo, Zhihu) or complementary data sources (e.g., classroom observations, parental interviews). Such cross-platform and multi-source validation would provide stronger evidence that the themes identified are not artifacts of a single dataset but represent stable dimensions of EBSA across contexts.

Third, although publicly available Xiaohongshu (RED) narratives provided valuable access to adolescents' spontaneous expressions of school distress, important limitations should be acknowledged. Student status on social media cannot be independently verified, and inclusion relied on explicit self-referential indicators (e.g., references to school schedules, homework, teachers, or examinations). Even among verified student-like posts, these narratives likely represent a selective subgroup of adolescents who are willing and able to articulate their experiences publicly online.

Consequently, the voices captured from RED may underrepresent students who are more withdrawn, digitally excluded, or reluctant to disclose distress in public or semi-public spaces. This introduces a potential visibility bias, whereby certain forms of EBSA experiences remain unheard. While the inclusion of institutional counseling transcripts partially mitigates this limitation, future research should integrate additional data sources—such as school-based interviews, parental reports, or longitudinal surveys—to more comprehensively capture the full spectrum of EBSA experiences.

Finally, while this study emphasizes thematic structures, it cannot establish causal pathways among identified factors. Longitudinal and intervention-based designs are needed to trace developmental trajectories and evaluate the effectiveness of targeted supports.

5 Conclusion

This study provides the first large-scale, computationally driven examination of EBSA among Chinese adolescents, offering both cross-context validation and culturally specific insights. By identifying seven thematic domains—spanning anxiety, sensory overload, family conflict, peer and teacher relations, post-COVID adjustment, systemic barriers, and loss of belonging—the findings highlight that EBSA is not only an individual or familial issue but also embedded within broader institutional and policy environments.

For Chinese schools, these results suggest the urgent need to strengthen multi-level support systems and to reconsider prevailing attendance governance practices. First, at the classroom level, fostering trust-based teacher–student relationships and creating emotionally safe learning environments can reduce the sense of isolation and anxiety that drives avoidance. Second, at the family–school interface, more collaborative communication channels should be established to replace punitive and blame-oriented

approaches, ensuring that parents are engaged as partners rather than positioned as targets of administrative pressure or sanctions. Third, at the systemic level, schools and local education authorities should move toward integrated, cross-sector frameworks that coordinate psychological services, social support, and educational planning, particularly in addressing the long-term institutional consequences of COVID-19 disruptions.

In sum, the study underscores that reducing EBSA in China requires a shift from reactive, punitive responses to preventive, relational, and systemic strategies. By embedding emotional well-being into the core of educational practice, Chinese schools can not only mitigate school avoidance but also promote a culture of belonging and resilience that benefits all students.

Data availability statement

The original contributions presented in the study are included in the article/Supplementary Material, further inquiries can be directed to the corresponding author.

Ethics statement

Ethical approval for this study was obtained from the Institutional Research Ethics Committee of Xi'an Eurasia University (approval number: 2025-EDU-041). All procedures complied with institutional guidelines and the terms of service of Xiaohongshu (RED).

Author contributions

HC: Conceptualization, Data curation, Methodology, Formal analysis, Writing – original draft, Writing – review & editing.

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Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The author(s) declared that generative AI was not used in the creation of this manuscript.

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EDITED BY

Trude Havik,
University of Stavanger, Norway

REVIEWED BY

Carolyn Gentle-Genitty,
Butler University, United States
Flavia Cirimele,
Roma Tre University, Italy

*CORRESPONDENCE

Tracy Vaillancourt
✉ tracy.vaillancourt@uottawa.ca

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School attendance matters: co- occurring trajectories of school attendance and academic achievement from elementary to secondary school in a Canadian context

Heather Brittain¹ and Tracy Vaillancourt^{1,2*}

¹Brain and Behaviour Laboratory, Counselling Psychology, Faculty of Education, University of Ottawa, Ottawa, ON, Canada, ²School of Psychology, Faculty of Social Sciences, University of Ottawa, Ottawa, ON, Canada

Introduction: School attendance and academic achievement are central indicators of student engagement and success, and relations between constructs are typically framed as predictors and outcomes, not as co-developing intertwined trajectories across multiple years of schooling. In Canada, where national attendance data are scarce, little is known about how absences and grades co-evolve through critical educational transitions. We examined heterogeneous joint trajectories of school absences and grade point averages (GPAs) from mid-elementary through secondary school (Grade 5 to Grade 12) and examined the transition to secondary school (Grade 8 to Grade 9) as a developmental turning point. We also assessed correlates of academic functioning classes including demographic factors, elementary school type (K-8 vs. middle school), bullying victimization, and depression and anxiety symptoms.

Methods: Data were drawn from 701 students (53% girls; $M_{\text{age}} = 10.9$ years) participating in an eight-year longitudinal study spanning Grades 5–12 in southern Ontario, Canada. Official school-record data on annual absences and GPAs were analyzed using parallel-process piecewise latent growth curve modelling and multi-trajectory (latent class) analysis to identify distinct patterns of co-development and discontinuities at the secondary school transition.

Results: On average, absences increased, and GPAs remained relatively stable across Grade 5 to Grade 12, with a significant increase of 2.76% percent days absent at the secondary school transition. Six joint trajectories were identified: three stable groups showed minimal, developmentally appropriate absences with high, moderate, and mid-range GPA and three risk groups showed increasing or chronic absences paired with declining grades (high increasing absences with moderate declining GPA; low-elementary high-secondary absences with low mid-range declining GPA; chronic absences with mid-range declining GPA). Lower socioeconomic status, male gender, and higher depressive symptoms characterized at-risk trajectories.

Discussion: Findings indicate that school attendance and achievement are dynamically linked, and for some, change sharply during the secondary school transition. Results underscore the need for early, targeted monitoring of both domains and for additional research to guide intervention and policy in the Canadian education context.

KEYWORDS

academic achievement, adolescence, grade point average (GPA), school absenteeism, school attendance, school transitions, longitudinal study

1 Introduction

Positive academic functioning is a cornerstone of prosperous development. School attendance and academic achievement (grades, exams, and standardized test scores) are two aspects of academic functioning that are consistently associated [e.g., (1–5)]. Difficulties in either area signal risk for poorer educational outcomes: students with frequent school absences or low academic achievement are less likely to graduate on time (5, 6), more likely to drop out of high school (7), and less likely to pursue or complete higher education (3, 8, 9). These academic challenges also forecast a range of later adverse outcomes [see (10, 11)], including teen pregnancy (12), adult depression (13), substance use (14–16), incarceration (17), and suicidality (18–20). Given the lifelong implications of problematic academic functioning, understanding how school attendance and academic achievement evolve across development is essential for identifying when and for whom support is most needed.

Although several terms are used to characterize school absences, school attendance typically refers to students' physical presence in compulsory schooling, and absenteeism includes excusable and inexcusable absences from compulsory schooling (10, 11). Student absences at or above 10% of instructional days is commonly referred to as chronic absenteeism (21, 22). Academic achievement refers to students' performance on school-based evaluations such as course grades, cumulative grade point averages (GPAs), and standardized test scores (23). These two domains are conceptually distinct yet empirically intertwined indicators of academic functioning.

One context in which academic functioning may be vulnerable is during school transitions, which occur in education systems worldwide (23). In Canada, some students experience a middle school transition in Grade 6 or Grade 7, and most students transition to secondary school between Grade 7 and Grade 10, depending on the province. Compared to elementary school, which offers consistent structure and support, the transition to secondary school can feel unfamiliar and unpredictable. Students must navigate larger environments, shifting schedules, greater academic demands, increased autonomy, and changes in peer groups, often with less adult oversight (24–27). These challenges can heighten students' concerns and stress as they enter a new phase of schooling (28, 29).

Cross-sectional and short-term longitudinal studies indicate that students often show increased absences and declines in grades or test scores immediately following the transition to

secondary school (6, 30–32). However, little is known about how these short-term disruptions fit within students' long-term developmental trajectories. Although many countries have prioritized monitoring student attendance [e.g. (33, 34)], Canadian data are limited. As outlined by Whitley et al. (35), there are several contributing factors, including (1) lack of federal oversight; (2) limitations of national cross-sectional research studies that include only single age groups (e.g., PISA; Grade 8 students (36); (3) prior national longitudinal studies included single items on days skipped [e.g., NLSCY (37)]; and days attended of the last 7 days [e.g., CHSCY, 2023 (38)], with ongoing surveys [e.g., CHSCY, 2025 (39)] omitting school attendance; and (4) until recently, absenteeism has not been a research focus of Canadian education scholars (40).

In the current study, we jointly modeled school absences and academic achievement in a large Canadian cohort followed annually from Grades 5 through 12. This design allowed us to examine how attendance and grades co-developed across elementary and secondary school, whether the transition to secondary school marked a discontinuity in these trajectories, and which individual and contextual factors differentiated adaptive vs. maladaptive pathways.

1.1 School absences over time and across school transitions

School absences are typically characterized by a 'U' pattern, with high absences in pre-school/early elementary years, generally low and stable rates in elementary grades, and rise sharply in secondary school, largely driven by increasing unexcused absences (1), a pattern documented in cross-sectional reports from national governments (41), school boards (42), and research organizations (43). Longitudinal analyses replicate these trends, showing either stable (30) or slight declines in attendance and increases in unexcused absences across mid-elementary grades (44, 45), and steeper increases during secondary school (1, 30, 45).

Although these reports provide population averages, researchers have used person-centered analytic approaches, like latent class growth analysis and growth mixture modeling, to study heterogeneity in school absenteeism longitudinally over time to classify students into subgroups based on similar patterns of attendance. This approach has been done with data from American, Finnish, and British students examining

different periods of compulsory schooling including early elementary school (46, 47), middle-school (48), across full elementary [K-8; (49)], middle through secondary school [Grades 6-12; (50)], and one study across full compulsory education [England, Years 1-11; (1)].

Across studies, researchers have consistently identified between three and six trajectory classes of school absences, with notable developmental shifts from elementary into secondary school. In the elementary and middle school years (46–50), most students (46%–90%) follow a low-stable absence trajectory (i.e., few absences), while smaller groups (5%–30%) show moderate-stable, decreasing, or gradually increasing absences, and a minority (1%–8%) demonstrate chronic high or early-onset high absences. By secondary school, however, heterogeneity becomes more pronounced. Benner and Wang (50)¹ reported that approximately one-third of students maintained low absences, while the remainder showed moderate-to-high and increasing absences, and Dräger et al. (1) identified five distinct classes spanning compulsory education, with two large groups showing consistently low (66%) or moderate authorised absences (28%), and smaller groups following increasing unauthorised or authorised absences (6% combined). These findings suggest that although most students experience consistently low levels of school absenteeism, risk for moderate and chronic absences grows during the upper schooling years, particularly in subgroups whose absences escalate over time.

These developmental shifts are evident, yet few studies have modeled the transition point itself. Benner and Graham (30) demonstrated marked increases in absences across the first two years of secondary school compared to the average slope across two years of middle school; however, they focused on demographic and school structural aspects and did not look at unaccounted-for heterogeneity in patterns. Dräger et al. (1) charted trajectories of absences across elementary and secondary school but did not statistically account for the impact of transition. Benner and Wang (50) did address the transition in overall curves through a piecewise model, allowing different slopes in elementary and secondary school; however, the approach was not carried through in the class analysis where separate middle- and secondary-school models were estimated and the odds of moving class to class were assessed. These approaches prevent a unified test of continuity and create difficulties in testing whether slope changes at Grade 8 to Grade 9 are statistically significant for subgroups of students, and as a result, subtle patterns that unfold across the secondary school transition may be overlooked. Beyond documenting trajectories, absence classes are also differentially associated with academic outcomes.

Students with moderate or increasing school absences show poorer performance across multiple indicators, including standardized test scores in elementary and middle school (46, 47), GPA and graduation in secondary school (50), higher

dropout risk (49), and lower performance in General Certificate of Secondary Education, particularly for increasing unauthorized absences (1). In predicting school absences classes, most studies have focused on school-level correlates (e.g., teacher experience, school size) and demographics (e.g., gender, SES) and have not considered individual-level processes, such as bullying victimization or mental health problems, that may shape trajectories. Moreover, even though Benner and Wang (50) adjusted for Grade 8 GPA, they did not model the time-varying interplay between absences and GPA. Considering that GPA and absences are more strongly correlated when measured proximally (5, 8), greater variability in post-transition grades may have been overlooked, and accounting for this interdependence could have altered study conclusions. These limitations highlight the need for models that span elementary through secondary school and explicitly capture how school absences and academic performance co-develop across transitions.

1.2 Grades, test scores, and GPA over time and across school transitions

Like absences, researchers have examined average trajectories of academic achievement across compulsory schooling. In elementary years, students display steady gains in reading, math, and core skills (51–54), with middle school students experiencing a temporary disruption (55). The secondary school transition has been shown to be an inflection point; GPAs are stable through middle school but drop sharply at the secondary school transition, after which they level off or decline (30, 32, 53). However, there is variation in students' academic achievement over time.

Across studies, researchers have typically identified three to four latent classes of academic achievement, with patterns differing across schooling periods. In the elementary years, while most students (50%–75%) follow stable or improving trajectories, patterns among lower-performing students vary by study (52, 54). Fu et al. (52) identified a class with declining achievement (26%) and another class that remained persistently low-achieving (24%), whereas Lu (54) found that the lowest-performing math skills group was characterized by slower, but still positive, growth over time. In a two-year study of Chinese middle (Grade 7) and secondary school (Grade 10) students (56), observed four classes ranging from high-positive (20%), mid-negative (38%), and two low-stable groups (33%, 9%). In a study of upper-year elementary Canadian students, Duchesne et al. (57) identified three academic functioning classes: stable-high (63%), stable-low (23%), and declining (14%). At the start of secondary school, three and four distinct trajectory classes are consistently identified. In the U.S., Bowers and Spratt (58) reported four classes across the first three semesters of secondary school, with the largest groups comprising roughly 19% (high-achieving stable) and 57% each (mid-achieving stable) and two smaller groups (mid-decreasing 11%; low-increasing 14%). In China, Liu and Lu (45) found three classes

¹Benner and Wang [13] modeled attendance rates (days present), not absences. For consistency, their classes are described here in terms of the absence equivalents (e.g., decreasing attendance=increasing absences).

during the first year of senior secondary school, with a high declining group making up nearly 80% of the sample and the remaining students divided across increasing or normative (moderate-stable) groups. Over a long span across secondary school, researchers have identified three profiles including high (stable or slightly-increasing), moderate declining grades, and low-increasing classes (59, 60).

The inconsistency in trajectory study findings may be due to differences in achievement assessments which are confounded by nation. Most studies of Chinese youth rely on outcomes of standardized exams in Chinese, English, and math (45, 52, 56), whereas studies of American students rely on GPA (58, 59) or single-subject scores [e.g., math; (54)], or subjects analyzed separately in Taiwan (60), and the Canadian study included a 2-item parent-reported composite of academic motivation and achievement (57). Moreover, studies did not consistently span the same academic period and were isolated to elementary (52, 54) or secondary school (58, 59). When middle school and secondary school samples were included in a single study, they were analyzed as one sample (45), precluding an analysis of differences in trajectories of middle and secondary school students. Many studies also span only 1.5–2 years (45, 58), which means we know little about long term patterns. These findings show that while person-centered analyses highlight clear heterogeneity in academic achievement, especially in secondary school, these studies do not explicitly assess how different groups of students change academically across school transitions.

School transitions frequently represent inflection points in academic achievement. Temporary interruptions or declines in grades have been observed following entry into both middle school (55) and secondary school (26, 30). Reyes et al. (31) documented that although students had similar grades pre-transition, the amount of decline immediately following the transition (i.e., minimal, moderate, or major) was associated with their grades and absences across the remainder of secondary school, but the low sample size precluded statistical tests of these hypotheses. In a statewide longitudinal study, Schwerdt and West (61) found that students transitioning to middle school in Grade 6 or 7 experienced sustained achievement declines through Grade 10, whereas those remaining in K–8 schools were more stable. Students entering secondary school in Grade 9 also showed a GPA drop, followed by partial recovery. Vasquez-Salgado and Chavira (32) reported similar findings in Latino youth, noting steep GPA declines across the Grade 8–9 transition, particularly among higher-achieving students, with gender differences in post-transition slopes (girls declining, boys rising). Although informative, most studies rely on averages (assuming a single path for all students) or short-term comparisons (with limited assessments on either side of the transition). Few have used trajectory models with statistical discontinuities across a long span accounting for heterogeneity, leaving unclear whether observed declines reflect developmental changes or transition-linked turning points, and whether subsets of students respond differently.

1.3 Grades and absences

Dräger et al. (62) recently found that school absences in the year before secondary school transition and in the 4 years after were most strongly associated with final secondary exam scores and highlighted the importance of the secondary school transition period. Although Benner and Graham (30) examined the impact of school transition on academic functioning using attendance and GPA, these highly correlated areas were looked at separately, and a joint trajectory was not examined, leaving readers to infer associations between the rate of change in increasing absences and declining GPA in secondary school. Grades and school absences are studied separately, but these domains are strongly interconnected. Indeed, national cohort studies consistently show that students who miss more school earn lower grades and test scores and are less likely to pursue postsecondary education (63, 64). This association holds across developmental stages and national contexts, suggesting that achievement and engagement are mutually reinforcing. As discussed above, both absences and grades display various pathways, and students following problematic trajectories often have lower achievement and higher dropout risk (1, 47, 49, 50).

Despite these parallels, to our knowledge, no published study has modeled grades and absences jointly to capture how they co-develop or whether transitions alter their association. Instead, absences are usually treated as predictors or outcomes of achievement [e.g., (1, 5, 62)]. This segmented approach does not address whether subgroups of students experience coupled trajectories. For example, it is unclear if chronic absenteeism predominantly occurs among those on declining GPA pathways, or whether stable attendance buffers grade declines at school transitions. In the current study, we addressed this knowledge gap by applying multi-trajectory modeling to identify co-occurring patterns of grades and absences across Grades 5–12 and tested whether the secondary school transition (Grade 8–9) marked a discontinuity in these joint pathways.

1.4 Correlates

A range of individual and contextual factors shape students' academic trajectories, especially during school transitions. The earlier move to middle school can either foster resilience or act as a sensitizing event that heightens vulnerability to later adjustment difficulties (65, 66). Gender may moderate how students respond to school transition. For example, boys often struggle more with adapting to new expectations than girls (29, 67). On the other hand, Vasquez-Salgado and Chavira (32) found that although both genders showed declines in GPA during the secondary transition, girls' grades tended to continue declining while boys' GPA tended to increase across the first two years of secondary school. Socioeconomic status also matters, with achievement gaps between low- and high-SES youth widening after entry into secondary school (68). Transitions coincide with changes in peer relations, including

bullying involvement (69), and shifts in internalizing problems such as depression and anxiety (26, 70, 71); these areas of psychosocial functioning are also associated with school absenteeism and poorer achievement (7, 72–75).

1.5 Current study

In the present study, we build on prior research by jointly modeling school absences and grades across adolescence (i.e., Grades 5–12) in a large, longitudinal cohort of Canadian students. Although most prior studies have examined these domains separately, our unified approach identified heterogeneous multi-trajectory groups that reflect how absences and grades fluctuate together across adolescence. We also examined whether these joint pathways showed discontinuities at the secondary school transition, addressing a critical gap in the literature where transitions have rarely been modeled as potential turning points. Finally, we examined whether joint trajectory group membership was associated with individual and contextual correlates, including gender, socioeconomic background, bullying victimization, depression and anxiety symptoms, and elementary school structure (i.e., K-8 vs. middle school).

Existing academic studies typically describe pre- and post-transition patterns or identify trajectories across schooling but do not statistically model the transition itself as a discontinuity, leaving it unclear whether observed changes reflect general developmental trends or true transition-linked turning points [see (69), for an example in bullying]. Although multi-trajectory modeling has been increasingly applied in areas such as mental health (71), it has rarely been used to study academic functioning, and no prior work has examined absences and grades in a single model across school transitions. Accordingly, we identified joint trajectories of grades and absences from Grades 5 through 12. Specifically, we tested whether these trajectories demonstrated discontinuities at the secondary school transition and examined if individual and contextual factors differentiated membership in distinct joint trajectory groups.

We predicted that we would identify four to six distinct joint trajectories reflecting different combinations of absences and GPA. Specifically, we anticipated low-stable, moderate-increasing, and high-chronic patterns of absences, with faster increases during secondary school, combined with at least three GPA trajectories (high-stable, moderate-declining, and low-stable). We further predicted overlapping trajectories, such that students with consistently low absences would correspond to high-stable GPA trajectories, whereas those with chronic or escalating absences would cluster in low or declining GPA groups. To support validity, classes were compared on parent-reported absences and standardized achievement test scores with the expectation that at-risk classes would display higher parent-reported days absent and lower standardized achievement scores.

Consistent with prior work, we also predicted that gender and socioeconomic background would differentiate trajectory group membership. Beyond demographic factors, we predicted that

poorer psychosocial functioning (i.e., higher bullying victimization and higher depression and anxiety symptoms), examined as averages within elementary and secondary school for parsimony, would be found in academic functioning classes characterized by chronic or increasing absences and low and declining achievement. We also predicted that students experiencing middle school would have a higher likelihood of belonging to at risk groups compared to those in full elementary (K-8) schools (61).

2 Materials and methods

2.1 Participants

Data were drawn from the McMaster Teen Study, a comprehensive multi-informant, multi-method, longitudinal study of students with a focus on interpersonal relationships, mental health, and academic achievement. In Time 1 of the study (spring 2008), Grade 5 students were recruited from 51 randomly selected schools from one large southern Ontario Public School Board. A total of 1023 students took part in the first year and 875 families agreed to take part in the longitudinal study; 703 participants took part in at least one follow-up between Time 2 and Time 8 (Grade 12), with 701 having data on grades and absences. In the first year of the study, students were on average 10.91 years old ($SD = 0.36$), half were girls (53%), and most were White (76%; 16% racially/ethnically-diverse; 8% missing). Most parents had completed postsecondary education (69.6%), and the reported median household income fell between \$70,000–\$80,000 CAD, comparable to both the municipal and provincial medians at the time of recruitment (www.statcan.gc.ca).

2.2 Procedure

University research ethics and parental consent and student assent were obtained annually. In the first year of the study, survey data were collected from students in schools and in subsequent years at participants' homes (paper/pencil or online) and parents/guardians completed a telephone interview. Official school records were obtained from the participating school board (Grades 5–12). See Vaillancourt et al. (69) for details.

2.3 Measures

2.3.1 Academic functioning

Teacher-reported grades and school absences from Grades 5–12 were obtained from the participating school boards.

2.3.1.1 Days absent

In elementary school, the total number of days absent from school were obtained from school records. In secondary school, the number of classes missed per class were provided from school records; days absent per term was computed by an

average of class absences and term absences were summed for a total score. Days absent per year were converted to a percentage score of the total instructional days absent, which were correlated across time, $r_s = .22-.83$.

2.3.1.2 Grades

In elementary school, letter grades were obtained for each term (T1–T3, 3 terms; T4, 2 terms²) for courses in English, French, math, science (T1–T4), social studies (T1 and T2), and history (T3 and T4). When participants had more than one grade within a subject (e.g., English reading, writing, and oral), grades were averaged prior to computing term averages. In secondary school, percentage scores were obtained for each course and converted to letter grades for consistency with elementary school data. Secondary school courses were diverse in the type of classes students could take and the academic stream. All available course grades were averaged. Grades ranged from <D- = 0 to A+ = 12 (D- = 50%–52%; D = 53%–56%; D+ = 57%–59%; C- = 60%–62%; C = 63%–66%; C+ = 67%–69%; B- = 70%–72%; B = 73%–75%; B+ = 76%–79%; A- = 80%–84%; A = 85%–89%; A+ = 90%–100%). Correlations between term GPAs within a given year (Grades 5–8) were high, $r_s = .86-.93$, as were GPA across years, $r_s = .65-.88$. Because of the varied courses that students could take in secondary school, a traditional reliability coefficient could not be computed. Secondary school GPAs from Grades 9–12 were highly correlated, $r_s = .63-.89$.

2.3.2 Latent class validation items

2.3.2.1 Parent-reported days absent

In Grades 6 to 12, parents reported the approximate number of days during the school year that their child was absent from school for any reason using a 6-point scale (0 = zero; 1 = 1–3 days; 2 = 4–6 days; 3 = 7–10 days; 4 = 11–20 days; 5 = more than 20 days).

2.3.2.2 Standardized test scores

In Grade 6, students completed Ontario's Education Quality and Accountability Office (EQAO) assessments in reading, writing, and mathematics and in Grade 9 completed a standardized math assessment. These province-wide standardized tests evaluate student achievement against Ontario curriculum expectations (76). EQAO results were obtained from the participating school board. The possible values for EQAO scores were 0.1 (below provincial expectations) to 4.9 (above provincial expectations).

²During Time 4 (Grade 8) of data collection the Ministry of Education of Ontario changed provincial report card requirements. Instead of three term reports students received a preliminary report and two official term assessments. The school board provided the research team with the two official reports in Time 4 data collection.

2.3.3 Latent class correlates

2.3.3.1 Demographics

In the first year of the study, student participants reported their gender (coded as: girl = 1; boy = 0). Participants and their parents reported their racial/ethnic background in Time 1 and Time 2 (i.e., White, Middle Eastern-Canadian, African/West-Indian-Canadian, South-Asian-Canadian, Asian-Canadian, Native-Canadian, South/Latin-American-Canadian, and Other). Although the racial/ethnic diversity is representative of the population from which participants were sampled, due to the low frequencies of racially/ethnically diverse groups, race/ethnic background was re-coded as White (coded 0) and racially/ethnically-diverse (coded 1). Household income and parental education were reported by parents in the parent interview in Time 1 (and Time 2 if not reported in Year 1). Income was reported using 8 categories (1 < \$20,000, 2 = 20,000–30,000, 3 = 30,000–40,000, 4 = 40,000–50,000, 5 = 50,000–60,000, 6 = 60,000–70,000, 7 = 70,000–80,000, 8 > 80,000) and the highest level of education attained was reported using 5 categories (1 = Did not complete secondary school, 2 = Completed secondary school, 3 = College diploma or trades certificate, 4 = University undergraduate degree, 5 = University graduate degree).

2.3.3.2 Elementary school type

In elementary school, some students were enrolled in a kindergarten to Grade 8 school (coded 0), and others experienced a middle school transition in Grade 6 or Grade 7 (coded 1).

2.3.3.3 Mental health symptoms

Depression and anxiety symptoms were measured from Grade 5 to Grade 12 using the Behavior Assessment System for Children-2 [BASC-2 (77)], with the child version administered in Grades 5 and 6 and the adolescent version in Grades 7–12. Items were rated on a 4-point scale (0 = *never* to 3 = *almost always*) or dichotomously (0 = *false*, 2 = *true*). Items that were common to both versions were used in the present study, following procedures by Krygsman and Vaillancourt (78). Subscales included symptoms of depression (12 items) and anxiety (10 items). Scales demonstrated excellent internal consistency (depression $\alpha = .87-.91$; anxiety $\alpha = .85-.91$). Items within subscales were summed within year and then averaged over schooling period to create composite scores for elementary and secondary school.

2.3.3.4 Bullying victimization

In Grade 5 to Grade 12 participants completed the Vaillancourt and Hymel Bullying Involvement Scale that assessed bullying victimization and perpetration (79, 80). Participants read a definition of bullying before reporting how often in the last 3 months that they have experienced being bullied. Five items were asked including a general question, physical, verbal, social, and cyber bullying, with several examples of what the targeted behaviour entailed. Youth responded using a 5-point frequency scale (0 = *never*, 1 = *only once or twice*, 2 = *2 or 3 times a month*, 3 = *once a week*, 4 = *several times a week*).

Items were averaged to create annual composite scores and had good internal consistency ($\alpha = .79-.82$). Elementary school (Grade 5 to Grade 8) and secondary school (Grade 9 to Grade 12) scores were averaged, respectively.

2.4 Statistical analysis

2.4.1 Descriptive statistics and missingness

Participants in the analytic sample were compared to non-participants based on Grade 5 demographic variables (i.e., gender, ethnicity, household income, parent education) and Grade 5 days absent and GPA. Group comparisons were conducted using two-tailed independent-samples *t*-tests and chi-square tests of independence. Little's MCAR test was applied to assess the randomness of missing data in the analytic sample. Mplus was used to derive estimated means and correlations for absences and GPA using full information maximum likelihood estimation with robust standard errors to account for missing data and non-normality.

2.4.2 Average growth curves

Mplus version 8.11 (Muthén and Muthén, 2017) was used to estimate parallel-process piecewise latent growth curve models for GPA and absences, applying full information maximum likelihood to address missing data, with robust standard errors (i.e., maximum likelihood robust estimation; MLR) to account for deviations from normality. Consistent with Rioux et al. (113), the models incorporated level and slope discontinuities, enabling trajectories to shift around a specified event. The transition to secondary school was modeled as this event. Growth parameters for grades and absences were correlated. Each outcome included two segments: Grades 5–8 (pre-transition) and Grades 9–12 (post-transition), both specified with linear and quadratic parameters to capture potential nonlinear change. A level discontinuity at Grade 9 allowed for a level change in trajectories between Grades 8 and 9. Models included covariance terms between latent curve factors. Model adequacy was assessed using conventional fit statistics, with criteria of $CFI \geq 0.95$, $RMSEA \leq 0.06$, $SRMR \leq 0.08$, and a nonsignificant χ^2 test indicating acceptable fit (81).

We further examined if elementary and secondary school curves had a similar shape by setting slope and quadratic parameter estimates equal and testing equality using the Wald chi-square test. We also examined if there was a marked change in absences and grades immediately before and after the secondary school transition by computing estimated scores in Grade 8 and Grade 9 and testing for equality using the Wald chi-square test.

2.4.3 Heterogeneous classes

Parallel-process Latent Class Growth Analysis [LCGA; also referred to as Group-Based Multi Trajectory Modeling, GBMTM

(82)] was applied to identify unobserved subgroups of students who shared similar developmental patterns in absences and grades. Model fit was evaluated using the Bayesian Information Criterion (BIC), the Lo–Mendell–Rubin Likelihood Ratio Test (LMR-LRT), and the Bootstrapped Likelihood Ratio Test (BLRT), with classification quality supported by posterior probabilities greater than 0.70. Final models were selected based on statistical fit, theoretical clarity, and adequate group size ($\geq 2\%$ of the sample) with trajectory shapes consistent with the existing literature. Models with up to nine classes were estimated. Trajectory estimates at Grade 8 and Grade 9 were compared to evaluate changes around the transition to secondary school.

2.4.4 Class validation

To substantiate class configuration, we examined differences in parent-reported absences across time from Grade 6 to Grade 12 and standardized test scores in Grade 6 (i.e., reading, writing, math) and Grade 9 (i.e., math) using ANOVA and *post hoc* pairwise comparisons.

2.4.5 Class correlates

After identifying trajectory classes, we examined whether they were differentially associated with hypothesized correlates, including gender, socioeconomic background, and mental health functioning in elementary and secondary school. Preliminary chi-square tests and ANOVAs were conducted, and only correlates that were statistically significant at $p < .05$ were probed, using Fisher's Least Significant Difference test where homogeneity of variance tests were not rejected, and Dunnett's T3 where the test of homogeneity of variance was rejected. The Benjamini–Hochberg correction was applied to omnibus and *post hoc* tests to control for multiple comparisons (83).

2.4.6 Sensitivity analysis

A sensitivity analysis was conducted to examine whether the class structure could be replicated using a subset of participants that had data in both elementary school and in secondary school ($n = 573$).

3 Results

3.1 Participants

Of the 875 participants enrolled, 701 had data on absences/grades and comprised the analytic sample. Compared to participants not retained for longitudinal analyses, the analytic sample had higher parental education [$t(805) = -6.261$, $p < .001$], household income [$t(770) = -6.060$, $p < .001$] and were more likely to be White [82.4% vs. 64.3%; $\chi^2(1, N = 787) = 22.785$, $p < .001$]. No significant differences emerged between included and excluded participants on sex [$\chi^2(1, N = 875) = 0.037$,

$p = .848$]. Those in the analytic sample differed on Grade 5 absences [$t(801) = 3.997$, $p < .001$] and GPA [$t(829) = -6.303$, $p < .001$]. Little's MCAR test suggested that data in the analytic sample were not missing completely at random [$\chi^2(880) = 1658.006$, $p < .001$]. Missingness on absences and grades in later waves was associated with earlier observed higher absences and lower grades. Consistent with standard practice (84), data were treated as missing at random using full information maximum likelihood (FIML) estimation in analyses.

3.2 Descriptive statistics and correlations

Table 1 includes the descriptive statistics for school absences and grades across time, as well as for correlates. Within-time correlations between absences and grades ($r_s = -.619$ to $-.126$, $p_s < .001$) and across-time associations were statistically significant, ranging from low to moderate ($r_s = -.573$ to $-.102$, $p_s < .05$). Stability across adjacent time points was high for absences ($r_s = .542$ to $.831$, $p_s < .001$) and grades ($r_s = .773$ to $.887$, $p_s < .001$).

3.3 Average trajectories—parallel-process piecewise latent growth curve models

3.3.1 Model fit

Parameter estimates for the discontinuity level and curve parallel-process latent growth models for grades and absences are presented in Table 2. The preliminary model yielded a non-positive definite residual covariance matrix. To remedy this, the quadratic variance components were successively constrained to 0 until the model ran without error (variance of elementary and secondary school quadratic parameters for absences and GPA constrained to 0). The resulting model fit was acceptable, $\chi^2(88) = 312.010$, $p < .001$, CFI = .950, RMSEA = .060 (90% CI = .053–.068), SRMR = .075 (see Figure 1). The intercept, slope, and level parameters had statistically significant variance estimates. In this model, the intercepts of percent days absent and GPA were negatively correlated, $r = -.203$, $p < .001$, as were slope factors in elementary, $r = -.465$, $p < .001$, and secondary school, $r = -.637$, $p < .001$. The secondary school level change factors for absences and GPA were also correlated, $r = -.661$, $p < .001$, with larger increases in absences associated with larger decreases in GPA.

3.3.2 Secondary school transition

The elementary and secondary school portions of the absences trajectory were not equal, $\chi^2(2) = 101.329$, $p < .001$, and there was an increase of 2.76% of instructional days between Grade 8 and Grade 9, $\chi^2(1) = 65.918$, $p < .001$. In elementary school, the average absences curve was slightly increasing, with a statistically significant increase across the secondary school transition, and

the secondary school average curve increased at a higher rate than in elementary school.

The elementary and secondary school portions of the GPA trajectory were not equal, $\chi^2(2) = 68.687$, $p < .001$. In elementary school, the average GPA curve was flat, whereas in secondary school, the average GPA curve was decreasing with a slight rebound in Grade 12. The Grade 8 and Grade 9 average estimated GPA scores were not different, $\chi^2(1) = 2.262$, $p = .133$.

3.4 Heterogeneous classes: parallel-process latent class growth models

The seven, eight, and nine-class models did not replicate the best log-likelihood, even with increased random starts. These higher-order models consistently identified a class of three individuals. To aid in model identification, these cases were then excluded from analysis and all solutions were re-run. Fit indices are shown in Table 3. The lowest log-likelihood was not replicated for the nine-class solution and was not considered a viable solution. BIC declined steadily from the two- through eight-class solutions. All models produced posterior probabilities above .70, entropy between .884 and .901, and significant BLRT values. The seven- and eight-class solutions did not add conceptual clarity beyond the six-class solution. The six-class model had adequate group sizes and yielded conceptually meaningful distinctions. Starting values from this model were used to test a model with twice the random starts to ensure the lowest loglikelihood value was replicated. For reasons of model fit, parsimony, and interpretability, the six-class solution was selected as the final latent class growth model (see Figure 2; Table 4).

Three classes demonstrated stable absences in elementary school with slightly increasing absences in secondary school that were paired with relatively stable trajectories of GPA, while another three classes had chronically increasing absences over elementary and secondary school, which were paired with variable trajectories of GPA. One third of students followed a high-achieving increasing trajectory for GPA ("As") across Grades 5–12 ($n = 225$; 32.2%) with low absences in elementary school that slightly increased across secondary school. Over one quarter of students showed a similar pattern (slight increase and relatively stable secondary school) with slightly lower intercept ("Bs") ($n = 203$; 29.1%). The absences trajectory for this class was similar to the "As" class. Class 3 ($n = 123$; 17.6%; "B/Cs") displayed stable elementary grades, starting at a 6.81 GPA (C+/B-) intercept, that remained stable over secondary school. Students in this class also followed a low trajectory of absences that increased over secondary school, and exceeded the chronically absent cutoff (i.e., 10%) by Grade 12.

The remaining three classes demonstrated more variable trajectories. Class 4 showed an increasing elementary absences trend with steeply increasing absences across secondary school, reaching an estimated 27% days absent by Grade 12. This pattern of absences was coupled with stable B-level GPA through elementary school and into Grade 9 which declined

TABLE 1 Descriptive statistics and correlations among annual scores for percent days absent from school and GPA in grades 5 through 12.

Variable	<i>M</i> <i>SD</i>		Correlations													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Percent days absent																
1. Grade 5	3.77	3.57	1													
2. Grade 6	3.99	3.57	.589	1												
3. Grade 7	5.03	4.46	.461	.542	1											
4. Grade 8	5.57	5.13	.436	.509	.641	1										
5. Grade 9	8.51	8.48	.281	.375	.455	.564	1									
6. Grade 10	7.83	7.85	.270	.332	.403	.484	.831	1								
7. Grade 11	13.59	11.75	.243	.306	.303	.410	.625	.690	1							
8. Grade 12	15.96	13.39	.221	.254	.247	.382	.593	.651	.777	1						
Grade point average																
9. Grade 5	8.11	1.58	-.126	-.152	-.133	-.145	-.259	-.297	-.336	-.294	1					
10. Grade 6	8.29	1.49	-.112	-.185	-.124	-.134	-.240	-.274	-.297	-.286	.827	1				
11. Grade 7	8.16	1.93	-.119	-.213	-.168	-.181	-.304	-.327	-.339	-.318	.767	.827	1			
12. Grade 8	8.49	2.16	-.102	-.200	-.222	-.261	-.350	-.378	-.378	-.378	.726	.792	.875	1		
13. Grade 9	8.55	2.55	-.118	-.184	-.242	-.255	-.560	-.534	-.516	-.501	.654	.661	.721	.773	1	
14. Grade 10	8.25	2.95	-.136	-.204	-.253	-.249	-.573	-.619	-.562	-.545	.652	.642	.713	.755	.887	1
15. Grade 11	7.83	3.04	-.117	-.185	-.181	-.212	-.469	-.504	-.596	-.579	.629	.622	.664	.692	.821	.835
16. Grade 12	8.14	3.02	-.108	-.142	-.171	-.180	-.394	-.420	-.505	-.583	.553	.559	.586	.622	.735	.763
															.836	1

Estimated means, standard deviations, and correlations from Mplus (using full information maximum likelihood estimation). Correlations in italics significant at $p < .05$. All other correlations significant at $p \leq .001$.

TABLE 2 Parameter estimates for absences and GPA parallel-process discontinuity latent growth curves.

Parameter	Estimate	s.e.	p
% days absent			
Intercept	3.800	0.139	<.001
Slope 1	0.452	0.181	.013
Quadratic 1	0.071	0.060	.233
Slope 2 ^a	−1.261	0.340	<.001
Quadratic 2	1.303	0.133	<.001
Event—secondary school	4.763	0.375	<.001
GPA			
Intercept	8.128	0.060	<.001
Slope 1	0.030	0.042	.474
Quadratic 1	0.024	0.014	.079
Slope 2	−0.499	0.074	<.001
Quadratic 2	0.106	0.026	<.001
Event—secondary school	0.419	0.084	<.001

GPA, grade point average. Level and slope discontinuity latent growth curve models. Slope 1 and quadratic 1 are parameter estimates representing the average elementary school (Grades 5–8) curve and slope 2 and quadratic 2 are parameter estimates representing the average secondary school (Grades 9–12) curve. Event is for the additional level change associated with secondary school. Covariance terms between latent curve factors also estimated in the models. Statistically significant parameter estimates are bolded.

^aThe negative slope reflects the initial rate of change at Grade 9, whereas the quadratic term dominates the overall trajectory shape; linear and quadratic parameters should be interpreted jointly.

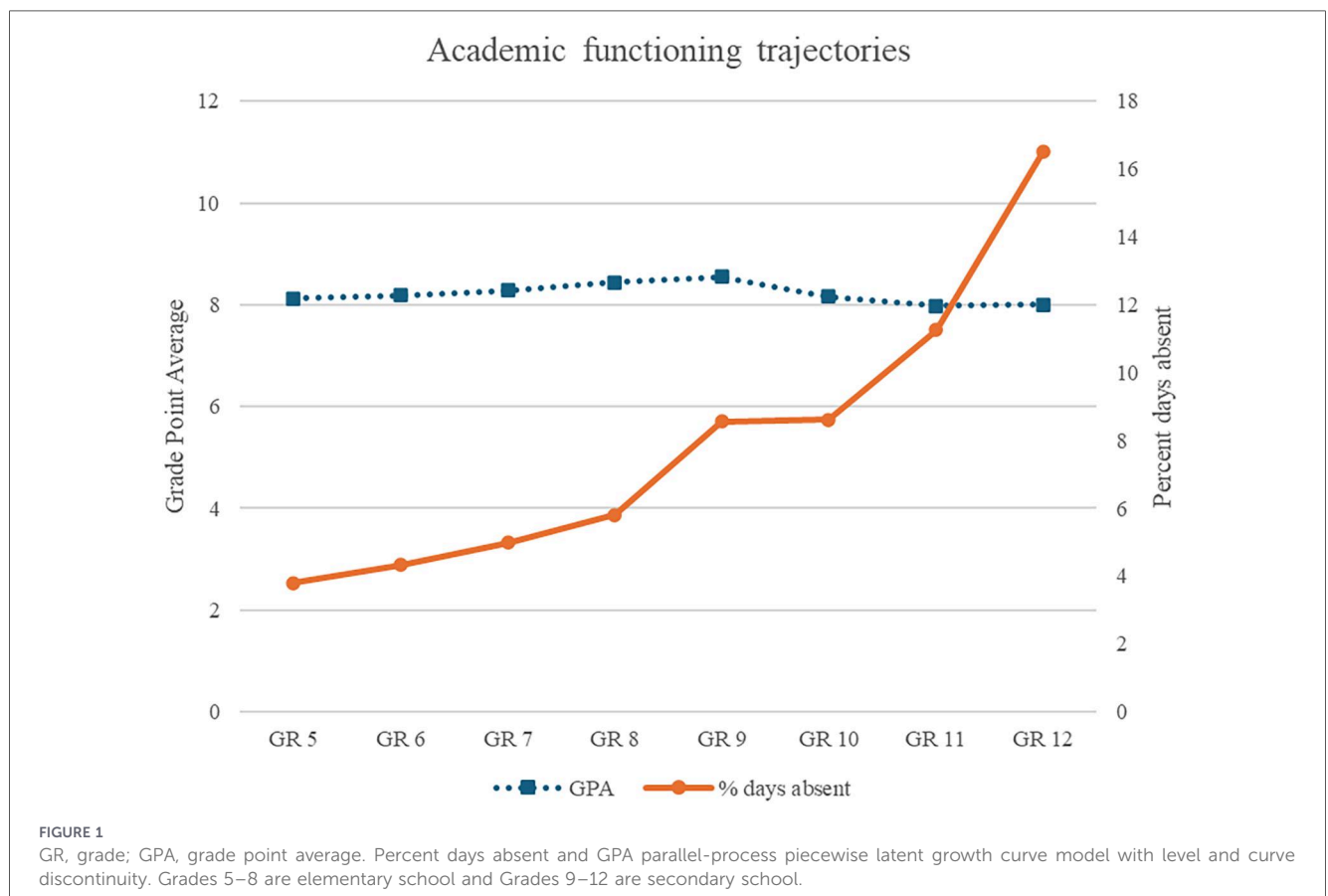
TABLE 3 Fit indices for latent class for absences and GPA.

No. of Groups	BIC	LMR-LRT	BLRT	Entropy
Co-occurring depression and anxiety symptoms				
1 Class	48,192.902		–	–
2 Class	45,256.548	<.001	<.001	0.901
3 Class	44,211.088	.014	<.001	0.895
4 Class	43,713.629	.256	<.001	0.897
5 Class	43,248.892	.437	<.001	0.906
6 Class	42,948.251	.121	<.001	0.886
7 Class	42,741.257	.569	<.001	0.884
8 Class ^a	42,533.737	.746	<.001	0.889
9 Class ^a	Best loglikelihood not replicated			

BIC, bayesian information criterion; LMR-LRT, Lo-Mendell-Rubin likelihood ratio test; BLRT, bootstrapped likelihood ratio test. Bold are the final selected class solutions.

^aBest log likelihood not replicated.

across the remainder of secondary school ($n = 57$; 8.2%; “increasing absences/elementary Bs, secondary school decline”). Class 5 showed low-stable elementary school absences, increasing significantly over the transition, with quadratic growth in secondary school, reaching 40% days absent by Grade 12. This was paired with declining C-level grades in elementary school that continued through Grade 11, increasing slightly in Grade 12 ($n = 67$; 9.6%; “increasing absences/declining Cs”).



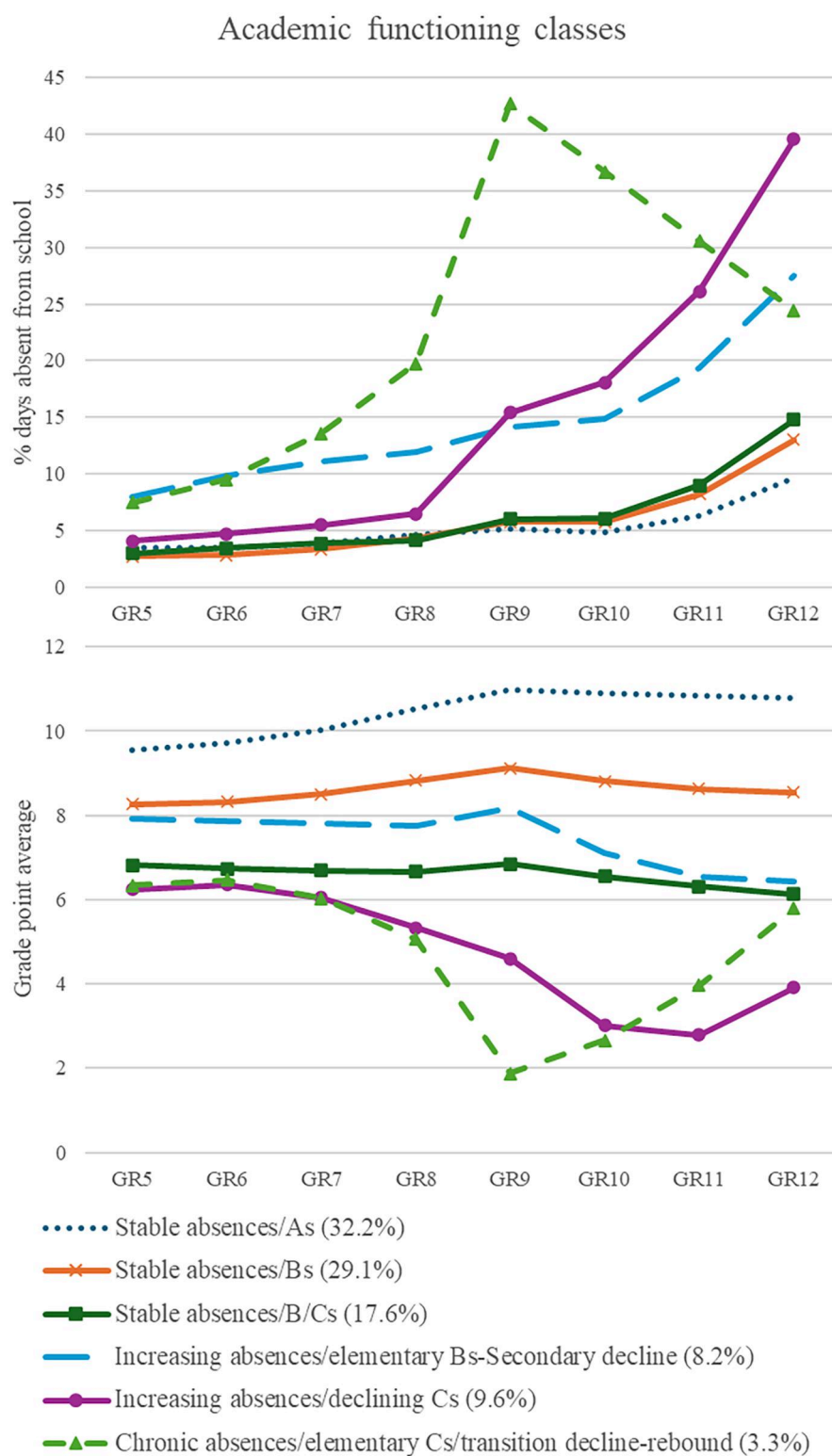


FIGURE 2

GR, grade; GPA, grade point average. Percent days absent and GPA parallel-process latent class growth analysis six class solution. Grades 5–8 are elementary school and Grades 9–12 are secondary school.

Class 6 displayed chronically increasing absences across elementary school, with a marked increase in Grade 8 to Grade 9, before declining across secondary school. The trend for elementary school GPA was like Class 5; however, they exhibited

more than a full letter grade drop in GPA from Grade 8–9 before increasing to nearly Grade 5 levels in Grade 12 ($n = 23$; 3.3%; “chronically absent/elementary Cs/transition decline-rebound”).

TABLE 4 Parameter estimates for percentage days absences and GPA parallel-process discontinuity latent class growth curve analysis.

% days absent					GPA		
Parameter	<i>n</i> / <i>%</i>	<i>Estimate</i>	<i>s.e.</i>	<i>p</i>	<i>Estimate</i>	<i>s.e.</i>	<i>p</i>
Class 1 stable absences/As							
	225/32.2%						
Intercept		3.482	0.239	<.001	9.558	0.078	<.001
Slope 1		−0.161	0.260	.536	0.076	0.060	.203
Quadratic 1		0.175	0.080	.028	0.082	0.018	<.001
Slope 2		−1.224	0.327	<.001	−0.085	0.062	.168
Quadratic 2		0.913	0.106	<.001	0.005	0.021	.814
Event—secondary school		1.612	0.303	<.001	1.424	0.074	<.001
Class 2 Stable absences/Bs							
	203/29.1%						
Intercept		2.690	0.228	<.001	8.267	0.119	<.001
Slope 1		−0.081	0.239	.734	−0.016	0.080	.837
Quadratic 1		0.201	0.085	.019	0.068	0.024	.005
Slope 2		−1.196	0.468	.011	−0.364	0.149	.015
Quadratic 2		1.205	0.176	<.001	0.057	0.051	.258
Event—secondary school		3.057	0.420	<.001	0.856	0.147	<.001
Class 3 stable absences/B/Cs							
	123/17.6%						
Intercept		2.970	0.285	<.001	6.812	0.168	<.001
Slope 1		0.546	0.303	.072	−0.083	0.142	.558
Quadratic 1		−0.057	0.104	.582	0.012	0.040	.771
Slope 2		−1.330	0.984	.177	−0.323	0.219	.141
Quadratic 2		1.418	0.508	.005	0.028	0.085	.738
Event—secondary school		3.015	0.664	<.001	0.032	0.244	.895
Class 4 increasing absences/elementary Bs-high school decline							
	57/8.2%						
Intercept		8.009	1.129	<.001	7.934	0.245	<.001
Slope 1		2.053	0.978	.036	−0.075	0.133	.574
Quadratic 1		−0.249	0.323	.441	0.005	0.04	.908
Slope 2		−1.052	1.623	.517	−1.298	0.407	.001
Quadratic 2		1.842	0.738	.013	0.239	0.181	.189
Event—secondary school		6.098	1.405	<.001	0.243	0.300	.418
Class 5 increasing absences/declining Cs							
	67/9.6%						
Intercept		4.067	0.437	<.001	6.248	0.191	<.001
Slope 1		0.531	0.460	.249	0.305	0.203	.134
Quadratic 1		0.091	0.172	.598	−0.204	0.071	.004
Slope 2		−0.020	2.209	.993	−2.257	0.351	<.001
Quadratic 2		2.690	0.847	.002	0.677	0.141	<.001
Event—secondary school		11.345	1.473	<.001	−1.650	0.321	<.001
Class 6—chronic absences/elementary Cs/transition decline-rebound							
	23/3.3%						

(Continued)

TABLE 4 Continued

Parameter	n/%	% days absent			GPA		
		Estimate	s.e.	p	Estimate	s.e.	p
Intercept		7.459	1.004	<.001	6.340	0.336	<.001
Slope 1		0.992	1.542	.520	0.394	0.361	.275
Quadratic 1		1.033	0.629	.101	−0.273	0.126	.030
Slope 2		−6.013	5.359	.262	0.533	1.030	.605
Quadratic 2		−0.023	1.997	.991	0.258	0.351	.463
Event—secondary school		35.247	4.624	<.001	−4.464	0.511	<.001

GPA, grade point average. Statistically significant parameter estimates are bolded. Linear slope and quadratic terms should be interpreted jointly when evaluating trajectory shape.

3.4.1 Class validation

To substantiate the class structure, we examined differences between academic functioning classes on parent-reported absences in Grades 6–12 and standardized test scores in Grade 6 and Grade 9. The classes differed on parent-reported days absent in all seven years examined, $p_s < .001$. In Grade 6 and Grade 7, the three stable absences classes and the increasing absences/declining Cs classes did not differ and were lower than the remaining two classes with elevated absences and changed over time in line with the estimated proportion of days. In Grade 9 and 10, the increasing absences/elementary Bs-secondary school decline and increasing absences/declining Cs classes were higher than the stable absences groups, and lower than the elevated trajectory class. In Grades 11 and 12, there were no differences between the three elevated trajectories on parent-reported absences. The classes also differed on EQAO scores in Grade 6 reading, $F(5, 666) = 84.585$, $p < .001$, writing, $F(5, 668) = 67.946$, $p < .001$, and math, $F(5, 664) = 72.001$, $p < .001$. For all subjects, the Stable absences/As class reported the highest scores, followed by the Stable absences/Bs class, then the Increasing absences/Bs-secondary school decline class (writing scores not different). All classes with increasing/chronic absences scored similarly on math and writing, with the Stable absences/B/Cs class outperforming the chronic absences/elementary Cs-transition decline-rebound class. Classes also differed on the Grade 9 standardized math assessment, $F(5, 668) = 45.316$, $p < .001$, with Stable absences/As and Stable absences/Bs achieving higher scores than the other four classes.

3.4.2 Class correlates

All results are presented in Table 5. The Benjamini-Hochberg correlation was performed on Omnibus chi-square and F statistics (no changes) and for pairwise comparisons, where 14 of the 38 statistically significant (i.e., $p < .05$) comparisons were corrected and no longer considered statistically significant.

3.4.2.1 Demographics

Gender was significantly associated with class membership with a large effect size ($\phi = .263$), with more girls than expected (standardized

residual = 3.2) and fewer boys than expected (standardized residual = −3.4) in the Stable absences/As class and fewer girls than expected (standardized residual = −3.2) and more boys than expected (standardized residual = 3.4) in the Stable absences/B/Cs class. Race/ethnicity and elementary school type (Kindergarten to Grade 8 vs. middle school) were not associated with class membership. Classes also differed by household income (moderate-large effect; $\eta^2 = .124$). The “Chronic absences/elementary Cs transition decline-rebound” class had the lowest household income (exception “Increasing absences/Declining Cs”). For parental education, Stable absences/As and Stable absences/Bs had higher parental education than other classes (large effect; $\eta^2 = .174$).

3.4.2.2 Bullying victimization

Although statistically significant omnibus tests were found for bullying victimization in elementary and secondary school, the effect sizes were small. The Levene’s test of homogeneity of variance was statistically significant, and pairwise comparisons were completed with the Dunnett T3 test. Following the BH corrections for multiple testing, in elementary school, the Stable absences/As class reported lower bullying victimization compared to the Increasing absences/declining Cs class. Although the Chronic absences/elementary Cs-transition decline-rebound class reported the highest victimization rates, the relatively higher standard errors likely precluded detection of a statistically significant result. There were no differences in secondary school bullying victimization scores.

3.4.2.3 Mental health symptoms

The six academic functioning classes were found to differ on mental health symptomology, with small to medium effect sizes ($\eta^2 = .015-.069$). In elementary school, the Stable absences/As class reported lower depression scores compared to the Stable absences/B/Cs. The Chronic absences/elementary Cs transition decline-rebound class reported higher depression symptoms than the Stable absences/As and Stable absences/Bs classes. There were no differences in anxiety symptoms in elementary school. In secondary school, there were no statistically significant pairwise comparisons between classes for depression symptoms. The Stable absences/B/Cs class reported lower secondary school anxiety symptoms than the “Increasing absences/Elementary Bs secondary

TABLE 5 Class associations.

Correlates	χ^2/F	df	p	Phi/Eta-squared	Percentage/Mean					
					C1 Stable absences As (32.2%)	C2 Stable absences Bs (29.1%)	C3 Stable absences B/Cs (17.6%)	C4 Increasing absences Elementary Bs secondary school decline (8.2%)	C5 Increasing absences Declining Cs (9.6%)	C6 Chronic absences Elementary Cs transition decline-rebound (3.3%)
Sex (% girls) ¹	48.221	5	<.001	.263	68.4% ^a	49.3% ^b	31.7% ^c	57.9% ^{ab}	43.3% ^{bc}	56.5% ^{ab}
Ethnicity (% White) ¹	4.850	5	.435	.087	85.2%	82.5%	76.1%	84.6%	79.3%	85.0%
Middle school ^a	6.036	5	.303	.093	48.7%	51.0%	39.3%	52.6%	41.8%	52.4%
Household income (Grade 5)	18.237	5	<.001	.124	6.91 ^a	6.51 ^a	5.48 ^b	5.66 ^{ab}	5.13 ^c	3.43 ^c
Parental education (Grade 5) ²	28.047	5	<.001	.174	3.60 ^a	3.29 ^b	2.84 ^c	2.64 ^{cd}	2.52 ^{cd}	2.18 ^d
Bullying victimization (Grades 5–8)	8.216	5	<.001	.056	0.54 ^a	0.69 ^{ab}	0.73 ^{ab}	0.67 ^{ab}	0.95 ^b	1.09 ^{ab}
Bullying victimization (Grades 9–12)	3.589	5	.003	.033	0.32 ^a	0.37 ^a	0.30 ^a	0.41 ^a	0.55 ^a	0.52 ^a
Depression symptoms (Grades 5–8)	10.258	5	<.001	.069	3.26 ^a	4.37 ^{ab}	4.98 ^{bc}	4.57 ^{abc}	6.26 ^{bc}	8.52 ^c
Depression symptoms (Grades 9–12)	4.945	5	<.001	.044	4.30 ^a	4.68 ^a	5.38 ^a	7.37 ^a	5.96 ^a	9.33 ^a
Anxiety symptoms (Grades 5–8)	2.083	5	.066	.015	7.09	7.51	7.93	8.29	8.72	8.88
Anxiety symptoms (Grades 9–12) ²	3.146	5	.008	.029	9.93 ^{ab}	9.56 ^{ab}	8.68 ^a	11.98 ^b	9.16 ^{bc}	14.02 ^{bc}

Pair-wise comparisons not examined for non-significant tests. Comparisons adjusted for multiple testing. Each superscript letter within a row denotes a subset of academic functioning categories whose proportions or means levels do not differ significantly from each other, $p > .05$, and after applying the Benjamini-Hochberg correction.

¹Chi-square, all other results are ANOVA.

²Levene's statistic, $p > .05$, LSD *post-hoc* pair-wise comparisons, all others are Dunnett's T3.

school decline” and the “Chronic absences/Elementary Cs transition decline-rebound” classes.

3.5 Sensitivity analysis

Classes were estimated using a subset of participants who had data in elementary school and in secondary school ($n = 573$). The structure and trajectories of academic functioning classes replicated those found with the full sample. Specifically, class sizes were within 0.17%–2.77% of classes estimated using FILM with participants with any data see [Supplementary Figure S1](#).

4 Discussion

4.1 Summary of Key findings, interpretation, and integration

We followed a large cohort of Canadian students from Grades 5 through 12 to examine the co-development of school absences and academic achievement, with attention to changes surrounding the secondary school transition from Grade 8 to Grade 9. On average, absences increased, and GPA remained relatively stable across the eight-year period, with the steepest changes emerging after entry to secondary school. Using piecewise latent growth models, we found a significant discontinuity in absences at Grade 9; compared to Grade 8, students missed approximately 3% more instructional days in the first year of secondary school which was followed by a continued upward trend through Grade 12. GPA trajectories, by contrast, were stable across elementary school, and declined only modestly in secondary school. We also observed that higher percent days absent and increasing absences trajectories were associated with lower GPAs and declining GPA trajectories. Further, significant variation in parameter estimates indicated heterogeneity in trajectories of absences and GPAs.

Person-centered analyses revealed six distinct joint trajectories of absences and GPA. Most students were in one of three groups that exhibited consistently low elementary school absences, increasing slightly in secondary school and relatively stable academic achievement with high (As), moderate (Bs), or mid-range (B/Cs) GPAs. The remaining one-fifth of students were classified in one of three groups demonstrating chronic or increasing absences, coupled with distinct GPA trajectories: (1) increasing absences with stable elementary B-level GPAs declining in secondary school, (2) increasing absences with declining Cs, and (3) chronic absences with elementary C-level GPAs with transition decline-rebound. Class membership was differentiated by gender, socioeconomic status (SES), and mental health symptoms. Girls were overrepresented in the stable absences/stable As class, and boys were overrepresented in the stable absences/stable B/Cs class. Students in the increasing absences/declining GPA classes had the lowest SES. The chronic increasing absences class had the highest depression symptoms scores in elementary school (compared to stable absences/As and stable absences Bs)

with a trend in secondary school, and higher anxiety symptoms in secondary school compared to the stable B/Cs class. These results support that absences and academic achievement are developmentally intertwined and that the transition to secondary school marks a turning point in this coupling, particularly for students already showing early risk indicators.

Our results converge with international findings showing increased school absenteeism and, for some students, academic difficulties during secondary school transitions (24, 26, 70). Both domains demonstrated the characteristic pattern of positive, stable functioning in elementary school followed by divergence and widening disparities during secondary school. Although there are no published Canadian longitudinal studies for comparison, our average trajectory for absences appears remarkably similar to the cross-sectional absences by grade figure published by the Toronto District School Board (42). These findings extend the robust pattern of transition-linked academic vulnerability identified in U.S. and European samples (30, 46, 49) to a Canadian context where such longitudinal data have been lacking.

In the absence of comparable joint-trajectory studies, our results are consistent with prior research on single construct trajectories indicating that most students maintained low absence levels (46, 48, 49), whereas a subset displayed escalating or chronic absenteeism (1, 47, 50). Our GPA trajectories align with prior research showing most students followed high- or moderate-stable pathways, whereas a smaller proportion showed consistently low or declining grades (54, 58–60). The three stable GPA groups in our study (A, B, and B/C level) correspond to these normative patterns, while the declining and chronically low trajectories follow risk groups reported in U.S. and Chinese samples (45, 56). Extending prior short-term studies, our eight-year data show that GPA recovery after decline was uncommon, indicating that achievement gaps often consolidate following the high-school transition. The chronic absences class showed notable variation in secondary school in both absences and GPA, which fluctuated in tandem. This small class, representing 3% of the sample, did demonstrate a coupled pattern of decline in academic functioning followed by improvement; however, the class had trajectory parameter estimates with high standard errors relative to other classes, leading us to use caution interpreting findings involving this class. It is possible that this class was composed of students who were absent from school for a variety of reasons (e.g., high medical needs; severe truancy) and encompassed heterogeneity within itself, which could contribute to the lack of differences in examining class correlates. For example, Dräger et al. (1) found separate classes with strongly increasing authorised absences (1.62%) and strongly increasing unauthorised absences (0.82%).

Replicating prior findings, we found gender differences by class membership, aligning with Alhadabi and Li (59), who found higher and more stable achievement trajectories among girls. Our results also support international evidence that SES remains a central determinant of academic functioning (64, 68), underscoring the need to address structural inequities that contribute to attendance-related disengagement. Unlike others who have found that racially/ethnically diverse students were more likely to follow at-

risk academic trajectories of absences (46, 47, 50) or grades (59), we found that academic functioning classes did not vary by race/ethnicity. It is possible that findings may have been different if we had accounted for the school context of racial composition. Minority students do better after school transition when they are in a school with a higher proportion of same race/ethnic peers (24, 30). Findings may also have been masked due to our crude classification of White and racially/ethnically diverse backgrounds (an analytic decision based on low representation of several minorities) or by failure to consider other factors that impact Canadian children, such as rurality. In Canada, territorial findings by the Department of Education Government of Yukon (85) indicate that half (51%) of students missed 20 or more days of school, and this was especially problematic for rural elementary (74%) and rural secondary (80%) students with similar rates reported by students who identified as Yukon First Nation (79% overall; 77% elementary; 81% secondary). More research is needed on the nuances of the Canadian landscape.

Beyond demographic factors, psychosocial correlates further differentiated academic functioning classes, although their effects were comparatively modest. Consistent with research linking peer difficulties and emotional problems to school engagement (7, 72, 73, 86–88), students in classes marked by increasing or chronic absences and declining grades reported higher depression and, to a lesser extent, anxiety symptoms. Surprisingly, larger effects between groups were not found, given the consistent small to moderate effects found between emotional symptoms and academic functioning (72, 73, 89). Differences in bullying victimization were small but followed the same gradient, albeit few statistically significant comparisons, with higher victimization in lower-achieving, high-absence groups. By combining scores for depressive symptoms, anxiety symptoms, and bullying victimization across the entire schooling period, we may have unintentionally masked year-to-year changes that could emerge with a more fine-grained analysis, especially given the variation observed across the three at-risk classes. Finally, elementary school structure (K-8 vs. middle-school) was unrelated to trajectory membership, in contrast to studies showing that students attending middle school experience declines in grades and attendance compared to those in K-8 schools (25, 90, 91). However, others have shown that school configuration alone exerts minimal influence on academic outcomes once individual and family factors are considered (61).

Our study extends prior research in several important ways. First, to our knowledge, it is the first Canadian longitudinal analysis spanning eight years of schooling, including mid-elementary school through secondary school with official school-record data. Second, by jointly modeling absences and GPA, we provide evidence that these two indices of academic functioning co-evolve. Previous research has largely treated one as a predictor of the other [e.g., (1, 5, 62)], overlooking the possibility that the two domains of functioning are mutually reinforcing, as has been suggested (6, 44, 49). The present multi-trajectory approach revealed that students with persistently high or increasing absences rarely sustain high GPA levels, and that the combination of chronic absenteeism and declining grades often emerges

around transition years. These findings also refine prior reports of transition-linked achievement declines. Whereas Benner and Graham (30) and Vásquez-Salgado and Chavira (32) documented sharp drops in grades at the transition, our results indicate this was true for a small group of students. The findings suggest that the move from elementary to secondary school may represent a sensitive period for some students, especially those already experiencing socioeconomic or emotional difficulties.

4.2 Mechanisms and explanatory frameworks

The study findings support conceptualizing academic functioning as a single system of engagement and achievement, rather than separate constructs. For some students, changes in function coincided with the secondary school transition. The observed patterns here can be interpreted using complementary frameworks. From a dynamic systems perspective (92, 93), absences and GPA form interdependent subsystems within a larger network of academic functioning. Perturbations at the school transition, such as increased academic demands, reduced teacher continuity, and changes in the peer group, can destabilize established patterns and prompt reorganization toward new equilibrium states such as resilience, disengagement, or re-engagement. As an example, in the chronic absence/transition decline-rebound class, students' absences spiked at the transition but partially recovered by Grade 12, suggesting potential re-stabilization following adaptation. Other students were more resilient to the school transition, following developmentally appropriate pathways of attendance and stable achievement. Alternatively, the secondary school transition can be viewed as a transition-linked turning point, that is, the overlap of a significant life event (i.e., the transition into secondary school) on a developmental process (i.e., adolescence). This period can be a particularly vulnerable time as it also coincides with profound developmental changes in cognition, and social, emotional, and biological development (94), leading to substantial changes in psychosocial functioning in the immediate and long-term (95). Students with differing prior experiences may respond to such transitional events in varying ways including the emergence of new behaviour, discontinuation of existing behaviour, or changes in behavioural patterns (95). In the present study, most students continued on a path of developmentally normative growth in absences and maintained consistent GPAs; however, others were vulnerable to the transition, experiencing changes in their attendance and achievement.

Increased absences can disrupt instructional continuity, which in turn reduces achievement and reinforces school avoidance. This feedback loop is well documented in previous research (5, 96). Socioeconomic disparities may exacerbate this cycle by limiting access to transportation, health care, and parental monitoring (3). Mental health difficulties, particularly depressive symptoms, can further impair concentration and motivation (97), leading to both increasing absences and decreasing grades (73). Conversely, strong parental and teacher support, school belonging, and

consistent expectations may sustain engagement through school transition related stress (70, 98).

4.3 Strengths and limitations

This study has several notable strengths. We used objective school-record data on absences and grades, minimizing recall and social desirability biases inherent in self- or parent-report measures. The eight-year longitudinal design with 4 years on either side of the secondary school transition allowed us to account for adequate time before the transition as well as how adaptation to the secondary school transition unfolded across secondary school, two notable limitations in extant school transition research (26, 70). Testing a baseline variable-centered model allowed us to examine the strength of association between curves on absences and grades. Employing parallel-process piecewise growth models and multi-trajectory analyses provided a rigorous test of whether the secondary school transition constitutes a developmental discontinuity and identified subgroups following distinct joint pathways. Class validation using parent-reported absences and standardized test scores adds convergent validity to the six-class solution. The subsample sensitivity analysis yielded comparable classes, supporting the robustness of our findings. Finally, we provide much-needed data on Canadian students (35).

Notwithstanding the notable strengths of the study, several limitations warrant consideration. First, absence records did not distinguish excused (e.g., health) vs. unexcused (e.g., skipping class) absences. Prior work shows these forms of absenteeism have differential rates of change over compulsory schooling (1) and relate differently to grades, with a higher proportion of unexcused absences more strongly related to lower test scores (96). Second, for consistency all grade data were converted to letter grades; the conversion likely reduced the variability that would have been observed in continuous percentage scores. Third, data were drawn from a single Ontario public school board, limiting generalizability to other school districts, provinces, and territories. Fourth, attrition was modest but systematic; students with lower GPAs and higher absences at baseline were underrepresented in later waves, potentially underestimating the prevalence of chronic absence trajectories. Fifth, the chronic absence class had a small sample size, and the comparison of correlates may have been underpowered to detect differences between classes. Sixth, correlates of bullying victimization and mental health symptoms were examined concurrently rather than dynamically, precluding conclusions about directionality.

4.4 Future directions

Future research should expand on the present findings in several ways. Although we have begun to understand how the elementary to secondary school transition influences trajectories of academic functioning, bullying victimization (69), and internalizing problems (71), it remains unclear how these areas of functioning are

associated in different academic periods, particularly across school transitions. Models that parse within-person and between-person variation, such as the random-intercept cross-lagged panel model (99, 100) or the autoregressive latent trajectory model with structured residuals model (101), could test temporal precedence and cascading effects among absences, achievement, peer relationships, and emotional well-being (102). Such models allow testing of how factors may initiate a cascade of school withdrawal to declining achievement, as well as plausible mechanisms. For example, bullying victimization may prompt school refusal, leading to loneliness and internalizing symptoms, resulting in achievement declines. In addition, multi-trajectory modeling approaches with simultaneous trajectories of academic functioning, bullying victimization, and internalizing symptoms would clarify the degree to which these domains co-develop and identify distinct subgroups characterized by similar patterns of risk and adaptation across the school transition.

Future research should also examine early adult functional outcomes (e.g., post-secondary enrollment and completion, earnings, positive relationships) of differing joint trajectory classes. For example, students with declining GPAs and those with low-increasing GPAs over the first 1.5 years of secondary school were far more likely to drop out of secondary school compared to mid-achieving students (58), underscoring the long-term risks associated with these lower-achieving trajectories. Extending this work beyond a deficit-focused framework to include indicators of positive behavioural adjustment, such as prosocial behaviour and school engagement, would further help identify resilient developmental profiles, which could inform prevention and intervention programs. Incorporating reason-coded absence data (i.e., excused vs. unexcused) would allow finer-grained analyses of risk mechanisms as unexcused absences are more related to academic risk than excused (21).

As this is the first eight-year study of Canadian students' absence and grade data, results require replication, not only with the time frame, but also in other provinces across the country. Given Canada's increasingly diverse population (103), future studies should examine cultural and regional differences, including Indigenous, First-Nations, Métis, and rural communities in northern Canada where absenteeism rates remain disproportionately high compared to non-First Nations-identifying and urban students (85). Indeed, researchers have highlighted the urgent need to understand school attendance supports among Indigenous students in Canada (104). Understanding these Canada-specific contextual factors is essential for designing equitable policy. Finally, for studies including data collected during the COVID-19 pandemic, careful attention should be given to school closures and other mitigating factors, as school absenteeism and grades were adversely affected (105–107).

4.5 Implications

The findings of the present study have several practical implications. At the practice level, the results underscore the

importance of monitoring both school attendance and GPA as early indicators of disengagement. Schools could integrate routinely collected attendance and grade data into early warning systems to flag students exhibiting upward absence trends or GPA declines, especially during school transition years. Kearney et al. (108) highlighted the potential early warning sign that school attendance problems play in identifying students at risk for academic failure, mental health difficulties, and school dropout, emphasizing the importance of early detection and intervention to prevent these cascading adverse outcomes. At the policy level, the results reinforce calls for standardized national reporting of attendance metrics (35) to enable longitudinal tracking and cross-provincial/territorial comparisons. Finally, our findings highlight the need for multi-tiered intervention approaches (109). Universal strategies such as consistent attendance messaging and supportive school climates should be complemented by targeted supports for youth exhibiting early risk (e.g., frequent absences in late elementary school; increasing absences in early secondary school) and intensive interventions for those with chronic absence (11). Addressing SES-related disparities through equitable access to health, transportation, and academic resources remains critical (110). Several Canadian provincial governments have proposed such principles of early warning and tiered intervention through formal policy directives [e.g. (111, 112)].

5 Conclusion

This study provides the first Canadian longitudinal evidence that school attendance and academic achievement are developmentally intertwined across the transition to secondary school. Although most students maintain consistent attendance and achievement, a significant minority follow risk trajectories marked by increasing absences and declining GPA, particularly among students with lower SES. Students in the most at-risk classes showed slightly increased bullying victimization and internalizing symptoms. Monitoring the joint progression of school absences and achievement can help educators identify students at risk of disengagement before such patterns become entrenched. Supporting continuity of learning and connection during school transitions is therefore essential to promoting long-term educational success.

Data availability statement

The data that support the findings of this study are available on reasonable request to the corresponding author. The data are not publicly available due to privacy and ethical restrictions associated with longitudinal studies. Requests to access the datasets should be directed to tracy.vaillancourt@uottawa.ca.

Ethics statement

The studies involving humans were approved by McMaster Research Ethics Board, McMaster University, and the Social Sciences and Humanities Research Ethics Board, University of Ottawa. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin and participants provided assent/consent.

Author contributions

HB: Data curation, Formal analysis, Investigation, Project administration, Validation, Visualization, Writing – original draft, Writing – review & editing. TV: Conceptualization, Data curation, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Visualization, Writing – review & editing.

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Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Tracy Vaillancourt declared that she was an editorial board member of Frontiers, at the time of submission. This had no impact on the peer review process and the final decision.

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/frcha.2026.1729744/full#supplementary-material>

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