The absence reduction model (AR-model)

Targeting upper secondary students with high risk of developing attendance problems

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Introduction

- Attendance problems prevent students from achieving an educational outcome and attaining work
- This study aims at targeting students with high risk of developing attendance problems in upper secondary education
- The absence reduction model (AR-model) is based on two main intervention elements;

  First; promote early identification, follow up and monitoring of students with risk of developing attendance problem in upper secondary education.

  Second, focus on promoting school engagement and autonomy (school counselor initiated).

Nonproblematic and problematic absence

- Nonproblematic: Agreed on by parents and school as legitimate in nature and not involving detriment to the child – Kearney (2003)
- Problematic: Within a 2-week period absence a) have missed at least 25 % of total school time, b) their non-attendance significantly interferes with youth's or family's daily routine, and/or c) absent for at least 10 days of school during any 15-week period – Kearney (2008)
- Excused vs. Unexcused absent (Gentile-Genitty and colleges, 2015)
- All definitions have shortcomings (Heyne and collages, 2018)
- Definitions are in the crossroads of: Empirical vs. Expert opinions

  Differences in school systems

School attendance problems (SAP)

Types of SAP:

- School refusal: 1) the child remains at home with the knowledge of the parents; 2) There is an absence of severe antisocial behavior; 3) Parents make reasonable attempts to secure their child's attendance at school; 4) there is emotional upset at the prospect of having to go to school – Berg (2002)
- Truancy: Is a non-home schooling student's act of non-attendance evidenced by missing all or part of the school day without being authorized by medical practice or sanctioned by parents or legitimatley excluded by school – Gentile-Genitty (2015).
- School withdrawl: Parent-motivated school withdrawal – Kearny and Silverman (1996)
- School exclusion: School-based decision-making (Heyne and collages, 2018)

Two main approaches

- School refusal:
- Reluctance or refusal to attend in association with emotional distress and with knowlege from parents

- Truancy:
- Absence from school (or class) without permission from school or knowledge from parents

Absence and engagement

- Research has reported that poor attendance in middle school (Balfanz, Herzog, and MacIver 2007) and high school (MacIver 2011) predicts students' later dropout in school.

- Reduced school-involvement or school engagement is found to be a key explanation for why students drop out of school (eg. Archambault et al. 2008; Blöndal & Adalbjarnardottir, 2014; Fredericks et al. 2004; Rumberg 2011).

- In research, engagement is often measured by attendance, and reviewing over 60 studies Rumberger and Lim found that in the majority of these studies engagement significantly predicted dropout

- School experience also influences the process of engagement and several school-level components influence student outcomes (like student–teacher relationships, teacher beliefs and attitudes, classroom climate, and classroom instruction) (e.g., Alexander, Entwisle & Kabbani, 2001).

Existing interventions targeting absence

- Chicago and New York City's Success Mentors programs (Ginsburg, Jordan, & Chang, 2014). Focus on districts and schools is properly monitoring attendance patterns, identifying students at risk for engaging in this behavior, and improving school engagement.

- Attendance Works, have established the Priority Early Outreach for Positive Linkages and Engagement (PEOPLE) program (Attendance Works, 2016), which emphasizes the importance of early and consistent monitoring of absenteeism, especially in early grades, as well as outreach to communities and families in order to ensure school attendance (Attendance Works, 2016).

- Diplomas Now and EWIMS. Monitors students' engagement (indicated by absence from school), behaviour (school misconduct) and skills (grades), and it was acquired support to target students' specific needs.

- Diplomas Now and EWIMS are design to be at District and not at school level. The addressed context of the interventions has been urban high schools with high prior school absence. EWIMS showed that the intervention reduced the level of absenteeism from 14 to 10 present.

Engagment and dropout interventions

- Two relevant interventions are widely used to improve attendance and engagement among students at risk of school dropout.
- Communities In Schools (CIS, 2011; ICF International, 2010).
  - School-based case coordinators, to develop community partnerships, bring local resources to school campus, and provide direct services to schools and students at risk of dropout.
- Check & Connect (C&C)
  - Monitors' individualized support, operates within a framework comprised of two components. The connect component includes two levels of student-focused interventions developed to maximize the use of finite resources.

The absence reduction (AR) model

- Research have found that such early warning systems are a promising approach to effective dropout prevention (Dynarski et al., 2008) and absence reduction (Faria, Sorensen, Heppen, Bowdon, Taylor, Eisner & Foster, 2017).
- Researchers have identified that an early warning system that systematically identifies students who are at risk can be matched with appropriate interventions to help them get on track for graduation (Heppen & Therriault, 2008; Pinkus, 2008).
- Prior research has shown that in the transition to new school when failing to retain academic skills from the previous years, students were in particular risk for psychosocial problems and absenteeism (Grills-Taquechel et al. 2010; Kearney 2001). These effects can be mitigated by support from school personnel (Cooper and Liou 2007).

Key element in the AR-model

1. Target students that are identified through 12 percent or higher absence from lower secondary education.
2. Assigning a counselor or mentor to the target student (the main purpose for assigning a mentor to the students is to ensure that the student get an appropriate and individualized follow up that addresses the student's needs).
3. The conversation guidelines follow two main purposes. A) Addresses prior underlying reasons for absence and focus on students describing them. B) Encouraging student to engage in educational and social goals setting through developing school engagement.
4. The progress (absence and educational development) will be followed and monitored.

Aim of the study

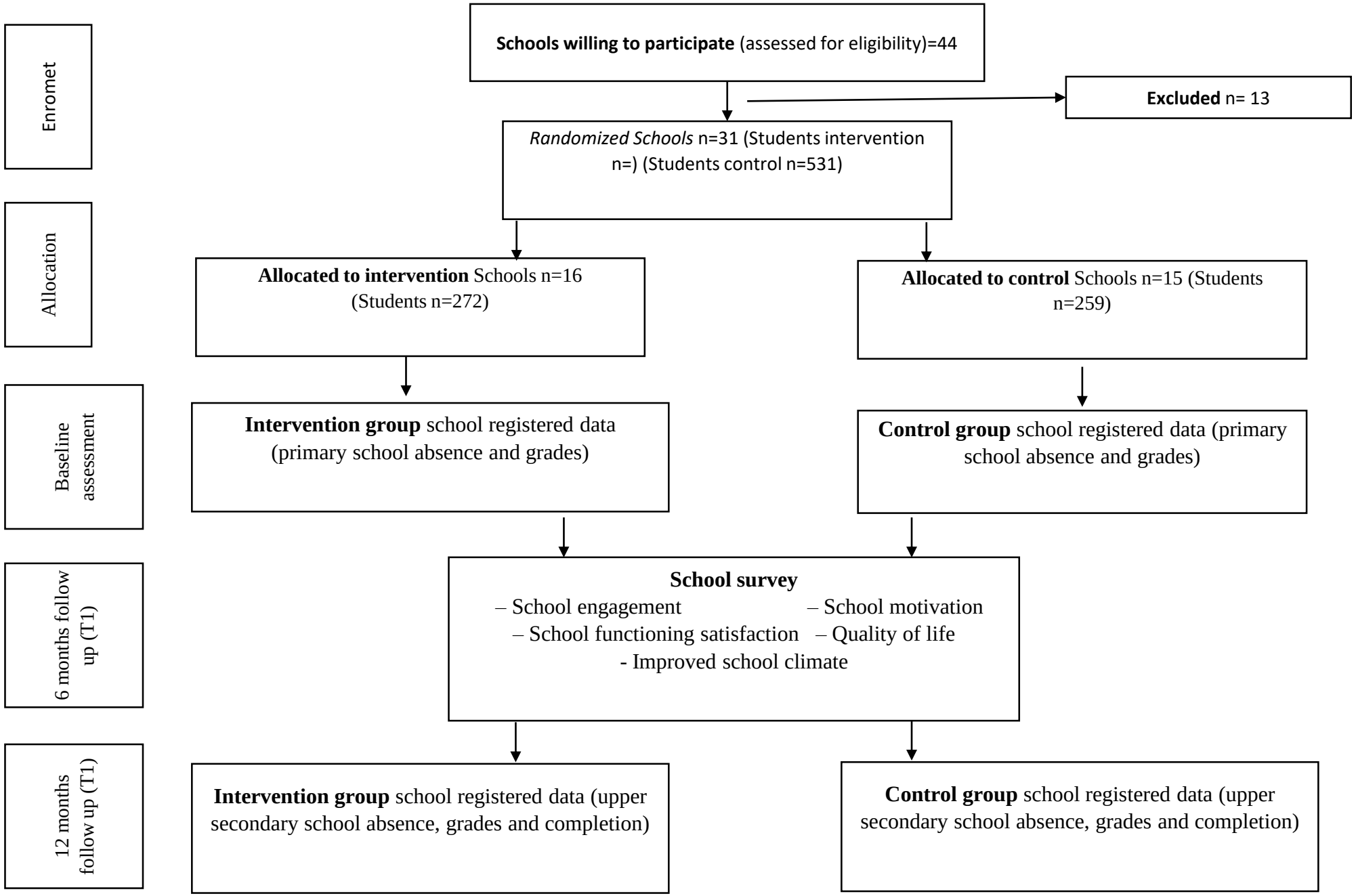
We will investigate the effectiveness of the AR-model:

1. Improved school presence
2. Improved school achievement
3. Improved educational attainment
4. Improved motivation and engagement
5. Improved school functioning and satisfaction

Project plan

Intervention/ controll	Early school intervention and engagement	Secondary outcomes	Primary outcomes
Intervention group: Students having 12 % or more undocumented absence from last year in primary school in random assign schools. Control group: Students having 12 % or more absent from last year in primary school.	Early school follow up: Early need assessment from schools for students (first two weeks after school start). School engagement: Through meeting with school counsellor promote social support and motivation	School follow up: Entering and following school special need program in school. School satisfaction. Quality of life. School engagement	Absence from school First year school completion Average grades

Flow chart


Enromet
Allocation
Baseline assessment
6 months follow up (T1)
12 months follow up (T1)
Schools willing to participate (assessed for eligibility)=44
Excluded n= 13
Randomized Schools n=31 (Students intervention n=) (Students control n=531)
Allocated to intervention Schools n=16 (Students n=272)
Allocated to control Schools n=15 (Students n=259)
Intervention group school registered data (primary school absence and grades)
Control group school registered data (primary school absence and grades)
School survey
– School engagement – School motivation
– School functioning satisfaction – Quality of life
- Improved school climate
Intervention group school registered data (upper secondary school absence, grades and completion)
Control group school registered data (upper secondary school absence, grades and completion)

Methods

- Study design

Quasi-experiments with pre- and post-control group design, pre- and post-group measure of students' school absence (10th grade (pre) and first year in upper secondary education (post).

- Population

The sample is drawn from all students attending first year in upper secondary education in Northern Norway (counties of Nordland, Troms and Finnmark).

The total sample size are 44 upper secondary schools, about 14 000 students.

Sample

16 of the schools were allocated to intervention and 15 to control (stratified on school size, student performance and absence, county).

Intervention and control students were identified through 10th grade absence (12 % or more) from school register.

	Nordland county	Troms county	Finnmark county	Total
Students receiving the intervention	82(6)	115(6)	75(4)	272(16)
Students in the control group	78(6)	112(6)	69(3)	259(15)

Absence resons:

	Intervention	Control
Did not like school	26,3	23,1
Did not like some of the subjects	28.8	24,2
Non of the subjects were interesting	30,1	29,3
The subjects are to hard	35,2	30,8
I chose wrong spesialisation	32,1	28,6
Did not get to school because of transportation	35,1	31,5
I rather stay at home	28,1	30,2
I'm working	27,1	25,2
The teachers treat me badly	31,2	32,5
I do not get the support I need from school	34,2	35,2
I rather stay with friends	31,2	34,6
I have psychological problems	19,1	20,9
I am at home preparing for a test	29,2	25,3
I have trouble at home	19,2	23,1
I've bein involved in an accident	28,2	25,2
I stay up late on my computer or gaming	32,2	29,5
I have been on vacation	18,4	19,2
Because someone in my family needs support	16,7	17,6
Because it have been some trouble in my family	24,8	21,3
I am tired of school	35,8	39,1
I am bored at school	33,6	34,2
I just skipping class because I want to be with other friends	21,6	20,1
Because I feel lonly at school	33,1	32,2
Because I do not feel at home in my class	35,6	34,2
Because I feel pressured to get good grades	27,3	29,2
Other reasons	15,3	16,2

Absence SRAS:

	Intervention	Control
Avoidance of stimuli provoking negative affectivity	35,9	30,5
Escape from aversive social and/or evaluative situations	34,3	20,4
Attention seeking	15,1	29,1
Tangible rewards	14,8	20,8

Preliminary descriptive analyses

	Intervention group	Control group
Outcome	**Mean (st div)**	**Mean (st div)**
Absence days	10,34(12,78)	13,27(19,31)
Abscence hours	15,39(15,10)	17,15(25,52)
Avarage grades first year	6,23(14,15)	6,08(13,88)
Failed subject	,14(,63)	,27(1,02)

Preliminary descriptive analyses

	Intervention group	Control group
Outcome	**Mean (st div)**	**Mean (st div)**
School engagment	27,62(3,377)	21(3,79)
School stress	24(6,95)	24,67(4,46)
School wellbeing	14,71(3,3)	12,56(4,69)
SCL	9,67(4,93)	10 (6,02)

Independent samples test for main outcomes for control and intervention groups

	Levines test of equality of variance		T-test for equality of mean					
	F	Significance	t	Signifcance (two-tailed)	Mean difference	SE difference	95% CI of the difference	
Absence, days								
Equal variances not assumed	5,543	,021	-,825	,411	-2,929	3,550	-9,977	4,119
Equal variances assumed			-,899	,371	-2,929	3,259	-9,398	3,540
Absence, hours								
Equal variances not assumed	4,350	,040	-,383	,703	-1,758	4,589	-10,869	7,353
Equal variances assumed			-,426	,671	-1,758	4,129	-9,956	6,441

Independent samples test for secondary outcomes for control and intervention groups

	Levines test of equality of variance		T-test for equality of mean					
	F	Significance	t	Signifcance (two-tailed)	Mean difference	SE difference	95% CI of the difference	
Failed subject								
Equal variances not assumed	8,903	,004	-1,412	,161	-,051	,036	-,122	,021
Equal variances assumed			-1,763	,083	-,051	,029	-,109	,007
School engagment								
Equal variances not assumed	,027	,873	3,448	,005	6,625	1,92	2,43	10,81
Equal variances assumed			3,387	,007	6,625	1,95	2,27	10,97

Discussion

- Preliminary findings indicate that The reduce absence model contributes to better school adaption for students and also increases their school engagment

- Targeting student at risk before entering upper secondary education is important

- Preliminary findings do not show robust effects

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