RESEARCH PROTOCOL

Support Groups - a model for social inclusion and reduction of bullying in school

01.08.2024

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Study Summary

Study Title: Support Groups - a model for social inclusion and reduction of bullying in school
Study Design: Cluster Randomized Controlled trial (CRCT)
Objective: To investigate the effectiveness of a support group intervention using a solution-focused approach among school children in 5^{th}-7^{th} grade in southeastern Norway
Intervention: Peer support groups with a solution-focused approach
Clinical 1.Trials.gov:
Study Population: School Children

Background and rationale for research

Bullying is defined as repeated aggressive behaviour characterised by an observed or perceived power imbalance between the victim and perpetrator (Olweus et al., 1983). A newer definition includes social exclusion and points out exclusion as a possibility in all social groups and contexts. The risk of being judged unworthy to belong to a social group includes feelings of being misunderstood, not seen, socially threatened and deprived of dignity (Søndergaard, 2012). Bullying is considered to be a significant public health problem with both short- and long-term physical and social-emotional consequences for the victim (Gaffney et al., 2019). The negative consequences of bullying are pervasive, and bullying exposure in childhood is also associated with poor mental and physical health, lack of social relationships, economic hardship, and decreased quality of life in early adulthood and midlife (Klomek et al., 2015; Koyanagi et al., 2019; Lereya et al., 2015). A good psychosocial environment in school is paramount in reducing the burden associated with mental health disorders in young people (Arango et al., 2018). Hence, the government of Norway have maintained that in accordance with regulation for health promotion and prevention in the school health services, the school nurse and school staff should collaborate to create a good and healthy environment for the children. If there is any indication of bullying, school nurses, in collaboration with school staff, are obliged to intervene early at class-, group- and/or individual level (Norwegian Directorate of Health, 2019). Although appropriate actions and practice to prevent bullying and create a good environment within the schools exist (Eriksen, 2018a; NOU, 2015), bullying is still reported to affect around 14.7 % of children and young people in Nordic countries (Krusell et al., 2019), and six percent of children in Norway (Wendelborg, 2021). The Norwegian student survey for 2023 shows a clear increase in elementary school students experiencing bullying. In the 7th grade, 13 percent responded to being subjected to bullying, while in the 10th grade, the percentage was 11 percent (NOU 2023:1 Regjeringen.no).

The growing awareness of bullying has led to the implementation of different school-based anti-bullying programs in the last 20 years (Rettew & Pawlowski, 2016). Some meta-analyses (Fraguas et al., 2021; Gaffney et al., 2019; Gaffney et al., 2021; Jiménez-Barbero et al., 2016; Lee et al., 2015; Ttofi & Farrington, 2011) have reported small to moderate effectiveness of anti-bullying programs, with a mean decrease of approximately 20% in bullying rates. However, variation in effectiveness exist due to methodological designs, program types, and geographic regions, which indicate the need for additional research (Fraguas et al., 2021; Gaffney et al., 2019; Gaffney et al., 2021; Guzman-Holst et al., 2022). Gaffney et al, (2021) evaluated the effectiveness of over 80 school-bullying intervention programs and indicated several intervention components that were crucial to intervention outcomes (Gaffney et al., 2021). For example,

informal peer involvement like group discussions or role-playing activities reduced bullying perpetration by about 12.5% and bullying victimisation by 9%.

The Support group intervention is a peer group program using a solution-focused approach (SFA), which is based on children's own goals, strengths and resources. The SFA method has previously shown to be an effective treatment strategy for a range of behavioral and psychological outcome (Gingerich & Peterson, 2013; Ma et al., 2021), and is implemented in many schools and school health services. This project will investigate the effectiveness of a Support group intervention utilizing the SFA method for reduction of bullying. The intervention is designed especially for schoolchildren in primary school. In the Support group intervention, school nurses, teachers and students collaborate in a systemic way within the school setting to improve a bullied child's situation through enhancing levels and quality of peer support. Limited research has explored the effect of anti-bullying intervention based on the SFA method. Kvarme et al (2016) found in quality interviews among 19 schoolchildren aged 12–13 years that support groups contributed to the cessation of bullying. The improvements remained 3 months later (Kvarme et al., 2016).

Pilot study, 2020-2022

The present study is based on a pilot study which tested the feasibility and acceptability of the support group intervention in seven primary schools in South- East Norway (Heitmann et al., 2022; Kvarme, Heitmann, et al., 2022; Kvarme et al., 2016). The pilot study ended in December 2022. The non-profit organization "*Adults for Children*" (Voksne for Barn) collaborated with researchers in the implementation of the intervention. A total of 20 social teachers and/or public health nurses and about 235 children aged 9-12 years participated in the study. The pilot study had a quasi-experimental design, and both qualitative and quantitative data were collected. Two articles reporting on qualitative aspects has been published (Heitmann et al., 2022; Kvarme, Heitman, et al., 2022). Overall, both teachers, public health nurses, parents and school children were satisfied with the intervention. Some children reported that they felt stronger, safer, and happier because of the support group, while other children said that the intervention improved the atmosphere in the classroom. The support group was highlighted as a practical work tool by school nurses (Heitmann et al., 2022).

Theoretical approach:

In recent years, bullying has to a greater extent been seen as social processes that must be addressed with systemic approaches instead of individual measures (Lund & Helgeland, 2020). Bullying is not merely seen as a dyadic problem between peers and a lonely or excluded child; instead, it is acknowledged as a group phenomenon, arising within a social context where various factors play a role in promoting, sustaining, or alleviating such behaviour (Olweus., 2013). The social-ecological system theory, based on Bronfenbrenner's ecological model, contends that the lonely child is part of complex, interrelated system levels that place them at the centre and moving outwards from the centre to the various systems that shape the individual. These levels encompass micro- (peers, family, community, and schools), meso- (interactions between components of the microsystem), exo- (social context), macro- (social, cultural, and political contexts), and chrono- (historical or life events) levels (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 2006). In the area of bullying, this perspective is used to understand how characteristics of the individual child interact with environmental contexts or systems.

Study objectives

The primary study objective of this project is to investigate the effectiveness of a support group intervention using a solution-focused approach in reducing bullying, enhancing mental health, improving quality of life, and increasing general self-efficacy among school children in 5^{th}-7^{th} grade.

We hypothesize that the awareness of bullying created by the intervention, and the empowerment of children as contributors to the solution, will generate positive ripple effects benefiting all children in intervention schools. Furthermore, we hypothesize that children with a peer support group will exhibit lower levels of bullying, improved mental health, better quality of life, and increased general self-efficacy after the intervention compared to their baseline levels. We expect these effects to persist even after 6 and 9 months.

Aligned with the cluster RCT we will undertake a parallel process evaluation to assess the extent of the intervention coverage, whether the intervention was implemented according to the protocol and identify factors that hinder or aid the implementation of a support group intervention. For the process evaluation we will use the framework presented by the Medical Research Council guidelines focusing on the implementation (what is implemented and how), the mechanisms of impact (how does the delivered intervention produce change), and the context (how does the context affect implementation and outcomes)(Moore et al., 2015). The outline of the process evaluation is described later in the protocol.

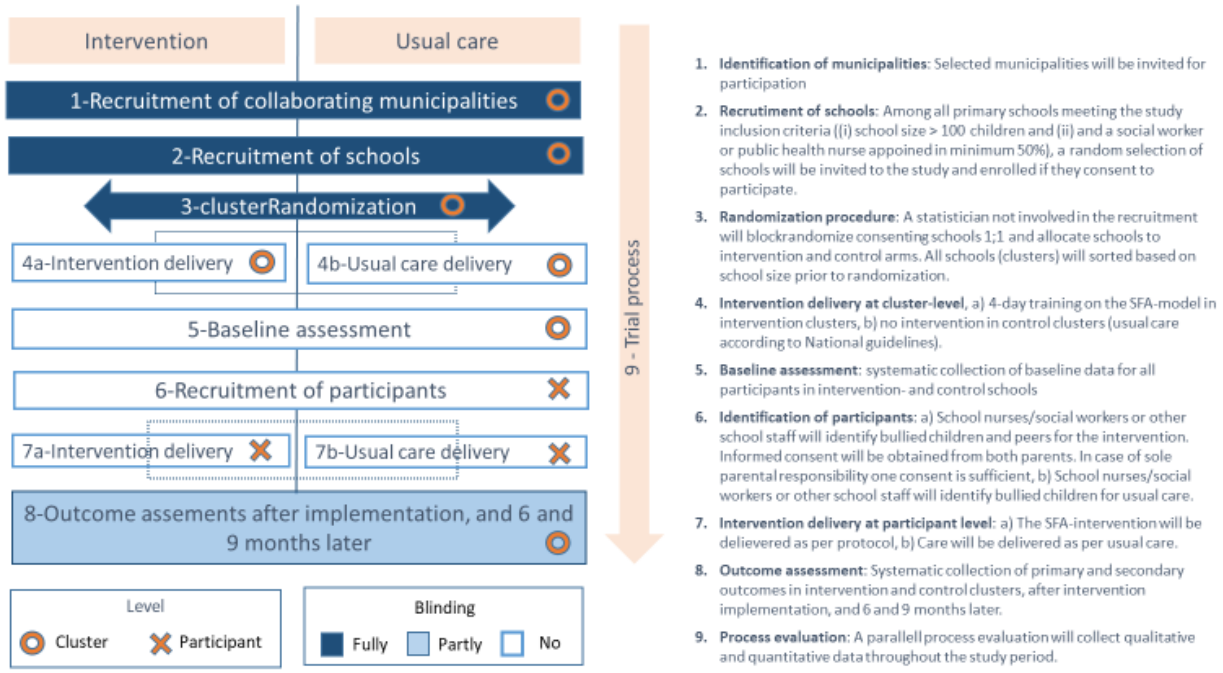
Research questions: (prefix of p indicates primary research questions, prefix of s indicates secondary research questions)

pRQ1: To what extent do children in intervention schools report a reduction in **bullying** following a peer support group intervention compared to children in control schools receiving usual care, at intervention end and after 6- and 9 months?
pRQ2: To what extent do children in intervention schools report higher **quality of life** following a peer support group intervention compared to children in control schools receiving usual care, at intervention end and after 6- and 9 months?
pRQ3: To what extent do children in intervention schools report improved **classroom environment** following a peer support group intervention compared to children in control schools receiving usual care, at intervention end and after 6- and 9 months?
pRQ4: To what extent do children with a peer support group report a reduction in **bullying** at the end of the intervention compared to their pre-intervention baseline level?
sRQ5: To what extent do children with a peer support group report improved **mental health** at intervention end compared to their pre-intervention baseline level?
sRQ6: To what extent do children with a peer support group report better **quality of life** at intervention end compared to their pre-intervention baseline level?
sRQ7: To what extent do children with a peer support group report increased **general self-efficacy** at intervention end compared to their pre-intervention baseline-level?
sRQ8: To what extent does the effects as measured in R1-R7 persist 6- and 9 months after intervention end compared with pre-intervention baseline level?
sRQ9: To explore the recruitment rate and factors associated with non-participation, on school, provider, and child level.
sRQ10: To describe whether the intervention was delivered according to protocol in terms of quality, quantity, adaptions and variations across schools and time.
sRQ11: To describe the intervention acceptability from children's, teachers, school nurses and residents' perspectives.
sRQ12: To investigate barriers and facilitators to intervention delivery and the mechanisms of impact.

Study design

This is a cluster randomized trial of children in 5th to 7th grade in Norwegian primary schools with randomization at school level. The cluster design is well-suited due to the significant risk of contamination between the groups with a regular RCT design. The study flow is presented in figure 1. Intervention schools will implement the SFA-model for reducing bullying, whereas the control schools will offer usual care according to national guidelines. The intervention is at two levels; (i) training of school nurses and school staff and raising awareness about the SFA-model among parents and students; for this part the outcomes will be measured at cluster-level, and (ii) implementing the SFA-model on individual participant level; for this part the outcomes will be measured on individual level in the intervention cluster only. The recruitment process, the intervention and the outcomes measured are described below.

Figure 1 Study flow for the Cluster randomized controlled trial

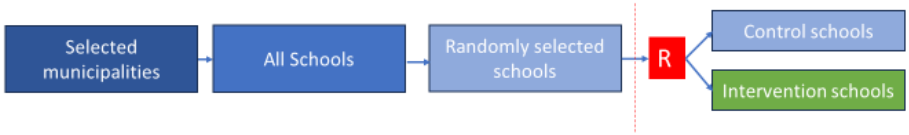


Methods

The target population for the study are all school children in 5th-7th grade in primary schools in Asker, Moss and Lillestrøm municipalities in the central-eastern part of Norway. Primary schools with more than 200 students and with a school nurse appointed in at least 50% position are eligible for the study. Eligibility for having a support group established is based on the subjective experience of loneliness by the individual child and is defined as a negative emotional state caused by the discrepancy between the desired and actual social relationships, in line with Peplau et al (1).

Clusters and randomization procedure Since decisions about bullying interventions are typically made at the municipal level, we will begin the recruitment process of schools through enrolment of selected municipalities, as illustrated in figure 2. In selected municipalities consenting to participate, we will randomly invite 26 primary schools from the pool of eligible primary schools in these municipalities.

Figure 2. Illustration of the recruitment process of primary schools in xx, xxx and xxx municipalities in Norway



We will continue enrollment until the pre-identified number of schools is reached. The enrolled schools will be sorted by size and then block-randomized in a 1:1 ratio to either the intervention arm (hereafter referred to as intervention schools) or the control arm (hereafter referred to as control schools). A statistician not involved in the study will carry out the randomization procedure. After randomization, the schools will be informed about their assigned cluster and will receive more detailed information accordingly.

Sample size calculation *School level*: Based on the available literature, we anticipate that 6-10% of children in 5th -7th grade will report bullying (Krusell et al., 2019; Wendelborg, 2021). This proportion is expected to be reduced to at least 6 % in intervention schools' post-intervention. With a significance level at 5% and power at 80%, we will need 721 children in each arm. Accounting for additional variation, we would need 793 in each arm. We assume there will be three classes in each school with about 30 children in each class. Thus, we aim to include 26 schools (13 for each arm) to ensure that the study is sufficiently powered. *Individual child level*: The quality-of-life inventory KIDscreen-27 (28) has 5 domains and is scored from 0-100. For the domain "social support and peers", we anticipate a change of at least 3 points from baseline to 9 months (35). Further, when assuming a correlation of 0.7 to account for statistical dependencies (as the same child is assessed several times), and keeping significance level to 5%, we would need 55 children experiencing loneliness. To account for possible dropouts, we add additional 10% participants, i.e., 60 children.

Study procedure Essential information about the intervention, including the recruitment process and the continuation and follow-up phases will be shared with the municipality, students, parents, teachers and school nurses involved in the project. Written information about the option for support groups for children encountering challenges related to bullying at school will also be provided to parents. **Training** *Intervention Schools:* A group of two to three teachers or school nurses will participate in a three-day training program centered around the solution-focused approach and the support group model. This training will be led by *Adults for Children*, an organization possessing extensive expertise in implementing interventions within school settings. Following the training, the peer support group intervention will be initiated as soon as possible. *Control Schools*: In the control schools, preventive and health promotion services will be provided as usual and according to the guidelines set forth by the Norwegian Directorate of Health (29).

Recruitment and follow-up of children experiencing bullying: The first initiative for a support group may come from the child itself or other individuals concerned about the child's well-being. Initiating a dialogue is the first step in building trust and determining if a support group could help. The child, together with the school nurse or teacher, will assess whether the support group is suitable for them. The school nurse and teachers will evaluate the child's situation carefully before recommending a support group, and if necessary, they will explore alternative follow-up options, particularly for children with complex challenges. The child experiencing bullying will not be part of the support group but will be involved in the selection of peers and will agree on what can be shared about their story with the group. The school nurse or teacher will collaborate with the child to identify 5-7 peers who could be suitable to join the group. The child is individually followed with weekly consultations with the teacher or school nurse, using an SFA-counselling approach.

Recruitment and follow-up of peers in the support group: Once peers are chosen, they are invited to the group. In the support group children are asked if they are willing to help another child. Clear boundaries will be set for peer supporters, specifically on what they may and may not share with others. They brainstorm actions they can take in the upcoming week. This transforms the group into a catalyst for improving a child's situation through small initiatives, using fellow students as a resource for change (Heitmann et al., 2022). Weekly consultations with the child and the supporting group are set up to monitor progress and brainstorm further enhancements. Peers are encouraged to concentrate on improvements and will receive acknowledgement for their progress. Sessions usually last 15-30 minutes weekly until improvement is seen. Studies indicate that the situation often improves rapidly, and in many cases, 3-5 weeks is sufficient (Heitmann et al., 2022; Kvarme, Heitman, et al., 2022; Kvarme et al., 2016; Ma et al., 2021). A comprehensive implementation manual has been developed for this intervention, and key steps are presented in table 1.

Table 1 Overview of all steps in the intervention.

The solution-focused counseling approach (SFA) is used in each step
Step 1: *Meeting with the child who needs help.* Create hope and identify participants for the support group.
Step 2: *Meeting with the participants that are selected to the support group.* Create motivation to participate in the group and invite students to come up with suggestions to help the bullied child.
Step 3: *Follow up meeting with the bullied/excluded child.* In line with SFA, look for progress, create motivation and faith that he/she can contribute to make a change.
Step 4: *Follow up meeting with the support group.* Give positive feedback and confirm all efforts made. The progress continues until the situation improves.

Process evaluation Quantitative data from the process evaluation will provide information on fidelity, dose, and reach. Qualitative data will inform changes in implementation, experiences of the intervention and unanticipated pathways (table 2). Data will be collected at different timepoints to capture changes to the intervention over time. Process and outcome evaluators will not be completely separated which allows for data on implementation to be integrated into the analysis and interpretation of outcomes. This will also reduce the measurement burden on participants.

Outcome measures: All outcomes will be measured using validated inventories, table 2. The main outcome bullying will be evaluated with the Olweus questionnaire (Olweus., 2013). Quality of life (HRQoL) will be evaluated through the use of the Kidscreen-27 (Haraldstad et al., 2011), a validated 27-item scale.

Table 2 Overview of planned studies, outcome measures and time of measurement.

No	Population	Outcome	Outcome measure	Time of measurement	RQno[a]
Study 1	All students	Bullying Quality of life Class environment	Elevundersøkelsen-UDIR	Baseline, intervention end and after 6- and 9-months	pRQ1-3, sRQ8
Study 2 and 3	Participants with a peer support group	Bullying Quality of life Mental health General self-efficacy	Olweus [II] KID screen-27[I] SDQ [III] GSE scale [IV]	Baseline, intervention end and after 6- and 9-months	pRQ4, sRQ5-8

Study 4	children, teachers, school nurses and residents	Participant perspectives on study implementation	Quantitative data Qualitative data	At implementation, intervention, intervention end and after 6 months	sRQ9-12

[a]Corresponding research questions, [I] KIDSCREEN-27 (Haraldstad et al., 2011), [II] Olweus` questionnaire (Olweus., 2013), [III] Strength and Difficulties Questionnaires (Goodman, 1997), [IV]General self-efficacy scale (GSE) (Roysamb et al., 1998)

This instrument assesses various aspects of physical and psychological well-being, autonomy, parent relations, social support, peer support and the school environment in children and adolescents aged between 8 and 18 years. The questionnaire has been validated for use in Norwegian school children (Haraldstad et al., 2011). Additionally, the student survey (Elevundersøkelsen, UDIR) will be administered at class-level. This survey includes inquiries about inclusion and well-being within the school setting. Mental health will be evaluated using the Strength and Difficulties Questionnaires, a validated tool for children between aged 2-17 years (Goodman, 1999). To measure self-efficacy, the General Self-Efficacy scale (GSE) will be utilized. This scale captures one's confidence in dealing with various demanding situations. A validated 5-item version of the GSE is available for use with Norwegian schoolchildren (Roysamb et al., 1998).

Table 3 Process evaluation outline and outcomes.

Indicators	**Data sources**	**Timing**
Recruitment		
Number of eligible schools invited and numbers consenting to participation.	National data, project data, including socio-demographic. information (e.g., school size, ethnicity, SES)	At study start
Number of possible participants at each school (school children), number of participants invited to attend activities, actual number who do attend each activity	Attendance records	Ongoing throughout the intervention period
Number who drop out (Bullied children and peers)	Attendance records and a survey to explore reasons	Ongoing throughout the project
What was delivered		
Number of activities delivered in terms of use of resources, training sessions, and resource use, training conducted and attendance at training	School action plan, school environment questionnaire, interviews with teachers and school nurses (intervention deliverers)	Monthly collection of logs/records, brief interviews at regular intervals throughout project and final exit interviews and school environment questionnaire (pre-, post-)
Description of unintended events		
Logg with unexpected side effects or outcomes from the intervention. Unexpected outcomes do not necessarily have to be negative. There may also be unanticipated positive health outcomes.	Survey with pupils, teachers and school nurse	monthly collection of attendance, exit survey

Participant satisfaction, acceptability and enjoyment		
Satisfaction/dissatisfaction with the programme Promoting and inhibiting factors (with the context, program, organization and implementation)	Interview with teachers and school nurses, focus groups. Pupils brief exit survey to all pupils, focus groups with teachers, school nurses.	Midpoint (brief) and exit
Understanding supporting networks		
What existing local infrastructure does schools (teachers/school nurse) perceive as useful to support the intervention. Which formal or informal networks exist and are used	Interview with teachers/school nurses of control and intervention schools	Midpoint and exit
Sustainability		
Whether plans have been made to continue with the intervention in some way	Interview with school leaders, teacher/school nurses	Exit interview

Safety Considerations

Since all children in the study are younger than 16 years of age, consent will be sought from both parents and children who participate in the support group, followed by informed assent by children in all 5ths–7th grade in intervention and control schools. Informed consent will also be sought from parents and children participating in peer support groups (intervention schools). For parents of children in 5-7 classes who do not participate directly in the support group, passive consent will be obtained. In this part of the research, no personally identifiable information will be collected. The questionnaire is anonymous and no name, personal number or other directly identifiable information is asked. No one in the municipality, neither teacher, school nurse, administration staff or others will have access to answers that can be used to identify what individuals have answered. The results will be published through statistics showing how children and young people responded, or how different groups responded (boys or girls). Obtaining consent from all parents for students in the 5th–7th grade is a demanding process that will represent an additional burden and work for the schools. However, every student in 5th–7th grade will be informed of their right to refuse participation or to only assent to certain areas of the survey. They will also be informed that they are free to withdraw from the study at any time. The questionnaire will be conducted in the classroom with a teacher or school nurse present, and there will be minimal risk of being exposed to discomfort, stress, and injury. There will be no direct intervention or interaction. The researchers will conduct thorough research on ethical assessments of risks and develop concrete measures in terms of emergency response.

All study materials will undergo quality assessments by *Adults for Children* to ensure their suitability for the intended age group in terms of language and content. Interpreter services will be made available for families who are not proficient in Norwegian. Children will be clearly informed that they have the right to discontinue the intervention at any point, without any obligation to provide a justification. They will still receive support as normal. Additionally, they will be provided with details regarding whom to contact and how, if they perceive any discomfort. Participants will be encouraged to seek help if an unmet need, such as a mental health concern, is identified. Peers will be supported regularly throughout the study. In addition, the pilot project's data identifies key factors for participant risk reduction. These factors encompass strong school integration, comprehensive solution-focused methodology training, sufficient time- and resources,

and ensuring effective communication with parents and children regarding the intervention. These elements will be integrated to safeguard participant well-being.

Risks. We have conducted a comprehensive assessment of potential risks that could impact the successful achievement of the project's activities, as well as strategies to mitigate them. **Risk 1, Risk of contamination:** The potential for contamination exists due to the dissemination of intervention details among control schools, facilitated by their knowledge of the intervention and prior experiences from the pilot study. This could undermine the integrity of the study's results. However, no schools or staff from the pilot study participated in this study. **Risk 2, Insufficient response rate for inclusion:** To address this risk, our starting point will be the administration in the selected municipalities, as decision to participate in school-interventions is commonly decided upon at this level. If the selected municipalities support participation in the study, we assume that school administrations will be more likely to consent to participate. In the recruitment of schools, we will benefit from *Adults for Children,* as they have substantial experience in engaging schools for analogous initiatives. They will assist in training and supporting school nurses and teachers, ensuring their thorough readiness for implementation and follow-up. This encompasses refining how the project is introduced to foster participant confidence in the project's safety and participation. Additionally, a partnership with the Norwegian Nurses Association will leverage their social media network to generate interest and desire among potential participants. **Risk 3, Delay in completing project activities:** to mitigate this risk, we have established a project team of experienced researchers prioritizing adherence to the project timeline. Furthermore, we plan to submit applications for ethical and GDPR approvals by February 2024, ahead of the projects planned funding period. This proactive approach will head-start project activities. Leveraging insights from the pilot study, we will ensure that REK (Regional Committees for Medical and Health Research Ethics) has timely access to all necessary information for ethical approval considerations. **Risk 4, Time constraints for completing a full PhD:** Acknowledging the study's complexity and the 9-month post-intervention follow-up for study results, the project teams is dedicated to support the PhD-candidate to ensure ample thesis-writing time. We may also involve master students in public health nursing to support the candidate in data-collection and analyses.

Follow-up of participants

All study support group participants will receive post-study follow-up consultations with the school nurse or social teacher after the intervention. *Adults for Childrens'* experience with research involving children and will carefully address the ethical responsibilities, including how to inform children, in their 3-days training program. Participants from *Adults for Children* and the researchers are available for teachers, school nurses, children, and their parents throughout the study. A safety plan is also prepared for additional support should be necessary after the study concludes. If the intervention yields positive effects, all control schools will be invited to implement the intervention as per protocol soon after the conclusion of the study.

Data protection and statistical analysis

We will seek ethical approval for the study from the Regional Ethical Research Committee (REC) in South-East Norway and ensure compliance with data privacy regulations in line with NSD and EUs privacy regulation GDPR. Data will be collected through and stored in the secured server *Tjenester for Sensitive Data* (TSD), integrated solution for collecting and storing sensitive data, managed by the University of Oslo. This includes recording of interview-data through the use of Nettskjema-diktafon in TSD. This is in line with OsloMet's standards for confidentiality and data protection. A risk assessment with appropriate actions will be conducted prior to study implementation.

Baseline data will be presented descriptively. We will use 1600 children (9 schools in each arm) for comparison between intervention- and control schools on school-level. Generalized mixed models (GLM)

for repeated will be used to explore intervention outcomes on individual level for children who were targeted for support groups. GLM will also be used to analyse possible differences on school level. The results will be reported as the estimated between group changes with 95% confidence intervals.
For the process evaluation, descriptive statistical analysis of quantitative data and content analysis of qualitative data will be carried out.

Quality assurance

The study will comply with the CONSORT guidelines for dissemination of results from cluster randomized trials. Written consent forms will be scanned and stored in a separate folder in TSD. The paper version of the consent will be deleted without delay Sensitive data will be stored on a server, which guarantees the secure and reliable storage of data. On start-up of the project, the project manager will carry out a risk assessment and establish procedures for data processing in the Project after REK has given its approval. A data management plan according to EUs privacy regulation (GDPR) will be carried out.

Further, ethical guidelines for research will be followed. We will apply for permission to conduct the study by the Regional Ethical Research Committee in Norway. We will obtain voluntary informed consent before the study starts from all parents to children included in the study in intervention and control schools. Participants will be informed that their participation in the study is voluntary, and they are free to choose whether they want to participate in the project. Even though a school child qualifies to participate in the study they will be assured that they can withdraw from the study at any time, and still receive care and help from the health center as usual.

Expected study outcomes.

We expect that the project's experimental design will yield reliable and trustworthy results, potentially forming the basis for an enduring school-based model to reduce bullying in school children, contingent upon the intervention's effectiveness. Consequently, this study will yield novel insights into working with peer support groups and SFA in this group of children. This could significantly enhance the prospects of bullying children and their families, offering an opportunity for change at relatively low cost. Prior investigations of support group intervention with SFA have not employed a randomized design to explore its effectiveness.

Furthermore, this research could offer valuable methodological insights to peer support groups and SFA in general, extending its applicability to other outcomes and amplifying its potential impact**.** Shifting the focus from describing the problem to promoting healthy environments in schools, through feasible and universal interventions, holds potentially noteworthy societal impact. Additionally, this research endeavour, targeting the enhancement of school health services, is both timely and essential, given the limited research directed at these services. Hence, supporting these services in adopting evidence-based approaches holds significant value. The research that is proposed in this proposal may also have an impact on the UN Sustainable Development Goal 3 (Ensure good health and promote quality of life for all, regardless of age), specifically Goal 3.d, "Strengthen the capacity for risk mitigation and management of national and global health risks."

Dissemination of results and publication policy

The results of our studies are of interest not only to target audiences directly involved in school health services, but also to the general population, policy makers, politicians and professions collaborating with school health services. Results from the study will be published in open-access, high-impact scientific peer reviewed journals, as well as in popular media, and in national and international conferences. *Adults for Children* will play a vital role in advocating for bullying children's voices during result dissemination, through popular science publications and media outreach. The Association for Public Health Nurses will actively

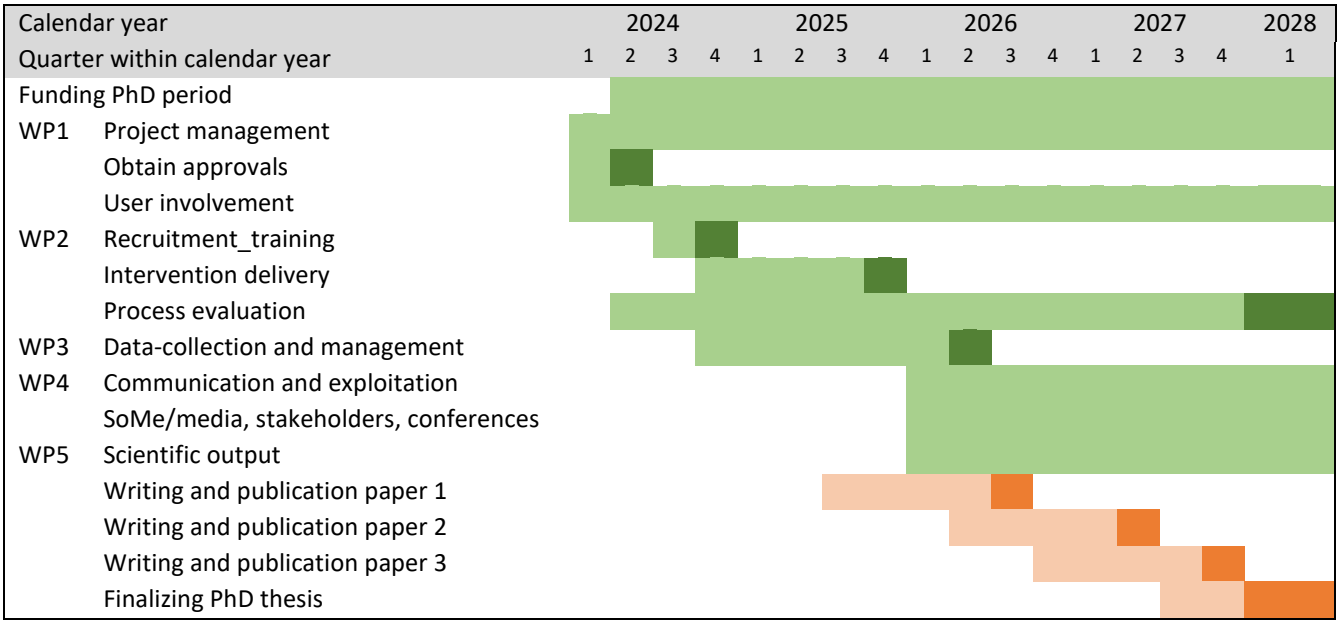
share project results among members via annual conferences, social media, and other outlets, also contributing to guideline revision. School nurses and teachers will collaborate with the research group, integrating implementation into the project, ensuring practical result utilization. All users will receive results pre-publication and contribute to inquiries, aiding coordinated dissemination via press, social media, and presentations.

Duration of the project

The study period is from 01.08.2024 to 01.08.028

The intervention will be implemented from September 2024 to September 2025. Figure 3 illustrates the planned timeline for the study.

Figure 3 Study progress plan with main activities and milestones



Darker color indicates that a task should be completed.

Project management

The project manager and principal investigator of the project will be Associate Professor Lisbeth Valla at OsloMet. She has long-term and considerable expertise within mental health, health promotion, and primary prevention. The interdisciplinary OsloMet team includes Professors Lisbeth Gravdal Kvarme, Brita Askeland Winje, Milada Småstuen, Sølvi Helseth, and Atle Fretheim, and Associate Professor Bente Sparboe- Nilsen. This team brings diverse proficiency in public health and intervention research. Additionally, Professor Robert Thörnberg from Linköping University, Sweden will contribute by actively informing decisions, study design, evaluation, and findings dissemination through manuscripts, research conferences, and grants.

A reference group to be established and led by Valla, will include experts in the field with extensive experience in initiating, leading and successfully completing similar project in the field, the user representatives, *Adults for Children*, as well as a representative from the Norwegian Nurses Association. Collaborative activities encompass the ongoing refinement of the support group model, formulating

implementation strategies for schools, school training initiatives, and dissemination of results. This group will meet twice yearly and ensure user involvement as described. The work plan is described in the GANT chart (Figure 3). The rationale for the four-year study plan is stated under Risks, and also that study preparations will start ahead of the funding period. The PhD student will be part of the health Sciences PhD program at the Faculty of Health Sciences at OsloMet and be employed within the Department of Nursing and Health Promotion. The candidate will be a member of the research group Quality of Life, where also supervisors are members. The three listed publications will be included in the candidates PhD-thesis. Other planned publications are presented in the full application.

Ethical consideration

Enrolling children in research raises a number of ethical concerns, including consent, confidentiality, and protection from harm (Powell et al., 2016). Children experiencing bullying are particularly vulnerable, underscoring the researchers' responsibility to prevent any additional risks. Conversely, their inclusion can empower children by giving them a voice. Chapter 9a of the Education Act, mandate schools to act if a student is experiencing an unsafe or unfavorable environment. In cases of social exclusion or feelings of loneliness, school nurses, in collaboration with the school staff, are obliged to intervene early at class-, group- or individual level. The support group intervention has the potential to directly benefit participants, aligning with the rights perspective. It can reinforce their sense of being valued individuals who are heard, offering opportunities for significant improvements in their own well-being. These benefits include increased opportunities to acquire knowledge, develop new skills, form new friendships, expand support networks, and have their concerns genuinely acknowledged and addressed. Given their unique perspective, individual children are able to evaluate potential risks to their own well-being. This underscores the importance of effectively communicating with the children, ensuring that they grasp the essence of the intervention and have a clear understanding of what is anticipated from their participation. All study materials will undergo quality assessments by *Adults for Children* to ensure their suitability for the intended age group in terms of language and content. Interpreter services will be made available for families who are not proficient in Norwegian. Children will be clearly informed that they have the right to discontinue the intervention at any point, without any obligation to provide a justification. They will still receive support as normal. Additionally, they will be provided with details regarding whom to contact and how, if they perceive any discomfort. Participants will be encouraged to seek help if an unmet need, such as a mental health concern, is identified. Peers will be supported regularly throughout the study. *Adults for Childrens'* experience with research involving children and will carefully address the ethical responsibilities, including how to inform children, in their 3-days training program.

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