RtKW 9: Implementation in educational settings

What role do end-users play in implementation? Interview study to explore determinants for adopting a mental health app among high school students in Sweden

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Development of a tool to support scaling activity, evaluation and investment decisions in the UK education system: translating scaling science into real-world scaling success

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Andreas Rödlund[1]

IMplementation of the family support PRogram A Healthy School Start to promote child health and prevent OVErweight and obesity (IMPROVE) study – a hybrid type III cluster-randomised trial

Kristi Sidney Annerstedt[1], Jhon Álvarez Ahlgren[1], Lydia Kwak[1], Susanne Andermo[1], Emma Patterson[1,2], Åsa Norman[1], Sara Raposo[1,3], Nouha Saleh Stattin[1,4], Liselotte Schäfer Elinder[1,3]

RtKW 28

What role do end-users play in implementation? Interview study to explore determinants for adopting a mental health app among high school students in Sweden

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Research aim
To explore high school students' perceptions about implementation determinants for their adoption of a mobile app to promote mental health, following routine health visits within Swedish school healthcare.

Setting
The study was conducted in school healthcare in Swedish high schools. School healthcare is a key arena for managing public health through health promotion and disease prevention work among children and adolescents.

Methods
Individual semi-structured interviews with year one high-school students (n=18). All students had taken part in a routine health visit with school nurses during which they had received information about a mental health app (On the Inside). Inductive content analysis was used for analysis.

Key findings
Students noted that simply recommending a mental health app was not enough for adoption. Key factors included personal beliefs about the app, preferences for its design, and trust in it. Beyond individual preferences, contextual factors within and outside school and implementation strategies were crucial. Adults played a significant role by creating a psychologically safe environment for students to explore new interventions. School professionals could encourage adoption by facilitating discussions about mental health and the app. Overall, implementing a mental health app in schools was seen as a collaborative effort between professionals and students.

Discussion
How can implementation teams utilize end-user agency to enhance implementation success?
Can implementation science theories/models/frameworks be used to understand end-user perspectives on implementation?

Challenges
We aimed to recruit high school students with diverse genders and educational profiles. However, despite several efforts, we were unsuccessful in recruiting male students. This is a limitation of our current study, and we would appreciate any tips and advice on recruiting male students for our future research.

Key highlights
Implementing mental health apps requires collaboration between students and professionals, suggesting that implementation strategies may benefit from addressing students' needs and perspectives.
Initially, data collection was planned for health visit observations, but concerns from school nurses led to revising the objective to explore determinants from students' perspectives via interviews.

RtKW 114

Development of a tool to support scaling activity, evaluation and investment decisions in the UK education system: translating scaling science into real-world scaling success

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Research aim
Scaling effective interventions is a key real-world challenge for implementation science and practice. We developed a tool to support the UK's Education Endowment Foundation (EEF) in assessing scalability and scaling support needs at different evaluation 'pipeline' stages to centre scaling in decisions about investment in programme development and evaluation.

Setting
Education, from early years to further education

Method(s)
We undertook a rapid review of empirically-based scaling frameworks (generic or education-focused), selected eight, and synthesised their coverage. We also reviewed seven EEF scaling evaluation reports. We identified six sets of scaling considerations and for each developed indicators of the evidence or activity that should be demonstrated for a programme to be ready for EEF investment. We worked closely with EEF in a series of workshops, and piloted the framework with programme developers and evaluators funded by EEF, and with EEF staff. The final stages involve refining the framework based on piloting, and training EEF staff to use the framework.

Key finding(s)
The frameworks reviewed varied in: perspective (speaking explicitly or implicitly to e.g. programme developers, evaluators, investors or delivery settings); whether retrospective or prospective, and whether identifying determinants or necessary activity. We identified six dimensions: programme development; feasibility and acceptability; scaling vision and strategy; capacity of lead organisation; policy context and stakeholder engagement, and market considerations. Sustainment and equity were embedded in all dimensions. Piloting assessed whether the dimensions and indicators were clear and comprehensive, and whether our judgements about the requirements at each 'pipeline' stage balanced realism with the need to bring scaling considerations into play earlier.

Discussion
Have we succeeded in comprehensively mapping key dimensions of scaling evidence-based education interventions in a way that balances scientific rigour, real-world pragmatism, and the need for an earlier and sharper focus on scaling requirements? Could the framework be useful to other investors, implementation scientists and practitioners, as well as to other areas of policy and practice? How might it be used, and what refinement or adaptation would be needed?

Challenges
Communicating the nuances of scaling considerations, necessarily highly attentive to context, into a generic framework that was comprehensive, widely applicable, and useable across the different groups engaged in scaling and evaluation was challenging. The approach taken was collaborating with EEF and piloting the framework with programme developers, evaluators, and EEF staff.

RtKW 124

A cluster-randomized controlled trial in schools exploring the mechanisms of change in five implementation strategies through a mixed-method

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Research aim
The sub-studies in this doctoral thesis explore mechanisms in a multifaceted implementation strategy informed by the COM-B behaviour change model used to implement an evidence-based guideline for preventing work-related mental health problems within a school setting. Using quantitative and qualitative methods, they examine how and why this strategy produces change.

Setting
The strategy was deployed in 55 public schools across four Swedish municipalities. The guideline supports employers in managing psychosocial risks in the workplace, serving as a practical tool for fulfilling national regulations and EU directives for systematic work environment management and enhancing the primary prevention of work-related mental health problems.

Method(s)
We conducted a cluster-randomized controlled trial using a hybrid type-III design. The multifaceted strategy included an educational meeting, ongoing training, implementation teams, small cyclical tests of change, and internal facilitation. This was compared to educational meetings and implementation teams. The implementation outcome was guideline fidelity assessed on the school staff level (Baseline=2276, 12 months=1891). Mediators were measured with the Determinants of Implementation Behaviour Questionnaire among implementation team members (n=214) at multiple time points (Baseline, 3 months, and 9 months), and mechanisms were tested using single pathway mediation analysis. Interviews with team members (n=25) explored how the strategies worked for the schools.

Key finding(s)
Favourable effects in guideline fidelity were observed between baseline and 12 months for the multifaceted strategy compared to the control (B= 2.81, 95 CI: 2.49 to 3.12, p=<.001). A partial mediation effect was present in nine out of ten mediators (indirect effects= 0.35 to 2.01, p<.05). The largest proportion of the strategy's effect on fidelity was mediated through skills (41%) and behavioural regulation (35%) The third study examined the team members' experiences, resulting in context-specific hypotheses about the mechanisms underlying the strategy's effectiveness such as workshops addressing skill deficits by fostering active participation, practical exercises, and guided feedback.

Discussion
- How can these findings be translated into practical recommendations to improve the effectiveness and efficiency of implementation strategies in real-world settings? Given the observed improvements in fidelity and the mediators, how should these mechanisms be leveraged to refine strategies for broader application and sustained impact?
- What steps should be taken to adapt and apply these results to optimize the use of these implementation strategies across diverse organisational contexts? Considering the context-specific insights from team members, how can future strategies balance the need for generalizability with adaptability to local conditions?

Challenges
A challenge when assessing mechanisms is selecting an analysis unit that reflects the multi-level contexts in which strategies operate. We aggregated individual-level responses to the school level, capturing collective dynamics and aligning the analysis with the strategy's application. However, this approach risks oversimplifying complex phenomena and introduces other methodological limitations.

RtKW 293

IMplementation of the family support PRogram A Healthy School Start to promote child health and prevent OVErweight and obesity (IMPROVE) study – a hybrid type III cluster-randomised trial

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Research aim
The IMPROVE study evaluated the effectiveness of two tailored bundles of implementation strategies — Basic and Enhanced — on fidelity to the one-year Healthy School Start intervention in a hybrid type 3 implementation-effectiveness trial.

Setting
This project takes place in Swedish primary schools across three municipalities in the Stockholm region.

Method(s)
A hybrid type III cluster-randomized trial with two parallel arms was conducted in 48 schools from August 2021 to June 2024 which performed the intervention year 1 and year 2. Fidelity was measured with an adherence score (0-4) and adherence to the four intervention components, of which three targeted the parents (health brochure, health talk, Type 2 diabetes risk test). Classroom modules with the children were assessed as the primary implementation outcomes. Data were analysed using mixed-effects linear and logistical regression models as appropriate.

Key finding(s)
A total of 966 parents participated. The mean adherence score was similarly high in both groups (Basic: 3.67, SD 0.51; Enhanced: 3.67, SD 0.53; $p = 0.96$). Adherence to health talk ($p < 0.001$) and overall adherence score ($p = 0.006$) were significantly higher at 24 months compared to 12 months. After adjusting for municipality, year, and parent's country of birth, no statistically significant differences were observed in adherence score or health talk between Basic and Enhanced groups. Participants born in Sweden exhibited adherence scores that were, on average, 0.50 points higher than those of foreign-born participants (95% CI: 0.34, 0.65).

Discussion
Despite the emphasis on tailoring implementation strategies to specific contexts, evidence comparing their effectiveness remains limited. This study found that augmenting a "Basic" implementation bundle with additional strategies did not consistently improve adherence, which was already high in the first year. However, the observed fidelity improvements over time highlight the importance of targeted support during the initial implementation year, especially in schools with more foreign-born parents. These findings underscore the complex interplay between context and implementation success, emphasising the need for longer trials to optimise strategies' form and function rather than simply adding more strategies.

Challenges
Potential challenges included external processes ongoing within municipalities, e.g., administrative changes and competing priorities. Language barriers with parents posed difficulties in both the health brochure and health talk. These were addressed with proactive discussions with stakeholders, the provision of translated brochures, and training for delivering the health talk with an interpreter.