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Master Programme in Public Health Sciences
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Barriers and facilitators to implementing an online health promotion tool addressing sexual and reproductive health and rights
– Exploring school staff's perspectives

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The Master program in Public Health Sciences at KI is carried out in collaboration between mainly three departments: The Department of Global Public Health, the Institute of Environmental Medicine and the Department of Medicine, Solna.

The master program has two specialisations; Public Health Epidemiology and Health Promotion and Prevention. The master thesis is written within the selected specialisation.

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Declaration

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The thesis *Barriers and facilitators to implementing an online health promotion tool addressing sexual and reproductive health and rights – Exploring school staff's perspectives* is my own work.

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ABSTRACT

Background: The school is a key platform to improve sexual and reproductive health and rights (SRHR) for adolescents. Staff often face barriers in implementing SRHR interventions, but tools exist to provide support in implementation processes. There is limited evidence on factors influencing implementation of these tools.

Aim: The aim of this study was to generate knowledge about factors influencing the implementation of school health promotion tools to address SRHR in Sweden.

Setting: High schools in the Stockholm Region, Sweden, with an account on the health promotion tool *the School Health Portal* (SHP), that includes a recently launched SRHR component.

Methods: The study had a qualitative design with an exploratory approach. Interviews with school staff were held (n=8), prior to implementation of the SRHR-component. The interviews were analysed using inductive thematic analysis.

Results: Unsupporting working environments, that consists of lack of leadership engagement and support, organisational changes and time pressure, negatively influence implementation of the SHP and are anticipated to hamper implementation of the SRHR-component. Perceiving SRHR as important facilitates staff's motivation and engagement to use the SRHR-component. It is influenced by acknowledgment of needs and a sense of responsibility.

Conclusions: Addressing the many existing barriers to school health promotion in Swedish high schools would enable successful implementation of the SRHR-component. It is important to consider how school staff's sense of responsibility for SRHR can facilitate implementation. If taking the barriers and facilitators found in this study into consideration, the SRHR component has good potential to respond to school staff's needs.

Word count: 250

Keywords: Implementation tool, sexual and reproductive health and rights, school health promotion, school staff, implementation research, barriers, facilitators.

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DEFINITIONS

Sexual and Reproductive Health and Rights: Sexual and reproductive *health* is not only a state of absence of disease and dysfunction, but is a state of physical, emotional, mental and social well-being in relation to all aspects of sexuality and reproduction. It relies on the realisation of sexual and reproductive *rights,* based on the human rights for everyone to:

1. have their bodily integrity, privacy and personal autonomy respected
2. freely define their own sexuality, including sexual orientation and gender identity and expression
3. decide whether and when to be sexually active
4. choose their sexual partners
5. have safe and pleasurable sexual experiences
6. decide whether, when and whom to marry
7. decide whether, when and by what means to have a child or children, and how many children to have
8. have access over their lifetimes to the information, resources, services and support necessary to achieve all the above, free from discrimination, coercion, exploitation and violence (1)

ABBREVIATIONS

CES: Centre for Epidemiology and Community Medicine

EBI: Evidence-based intervention

LGBTQ: Lesbian, Gay, Bisexual, Transgender, Queer

SDG: Sustainable Development Goals

SHP: School Health Portal

SRHR: Sexual and Reproductive Health and Rights

WHO: World Health Organization

1. INTRODUCTION

1.1 Sexual and reproductive health and rights: Public health implications

Sexual and reproductive health and rights (SRHR) is a state of physical, emotional, mental, and social well-being concerning all aspects of sexuality and reproduction. It relies on the realisation of sexual and reproductive *rights* and is closely related to the protection of human rights (1,2). Evidence shows that investments in SRHR result in profound benefits to the health of individuals and the wellbeing of humanity (1). SRHR is central to health and development initiatives, including Sustainable Development Goals (SDGs). Therefore, accelerating SRHR is essential for achieving international commitments to better health and well-being and gender equality (1). Today, SRHR-related ill-health represents a significant global disease burden. Unintended pregnancies, unsafe abortions, STIs (including HIV), maternal mortality and infertility, as well as violence, stigma, and discrimination on the basis of sex, gender, gender identity, and gender expression are essential causes of ill-health (2, 3). As with other health-related outcomes, disparities in SRHR are influenced by socio-economical, demographic, and structural factors (4). These disparities are also prevalent in Sweden (5), where children, adolescents, sexual minorities, and certain migrant groups are especially disadvantaged (5). Unequal access to SRHR-interventions can explain part of these disparities in Sweden (6).

1.2 Accelerating SRHR in the school setting

The school setting has been identified as a key platform for the realisation of SRHR globally (7). It can reach a diverse group of children and adolescents independently of their socioeconomic background. Schools are an equitable and cost-effective platform that provides a unique opportunity to reduce health inequalities (8). Evidence shows that interventions in the school setting can effectively contribute to positive social norm change and improved SRHR (9, 10). Furthermore, findings suggest that the school environment is an essential determinant for SRHR (11). For instance, a strong connection to the school, caring teacher-student relationships, and positive attitudes towards the school are related to less sexual risk-taking (11, 12). In addition, more supportive school policies positively influence adolescent's mental health (12, 13). Therefore, changes in the school environment are promising strategies to advance SRHR in high-income settings (12).

1.2.1 SRHR in Swedish Schools

In Sweden, the Public Health Agency highlights that school interventions are key to decrease the existing inequalities in SRHR. The school has a central role in the Swedish national strategic work to promote sexual rights, gender equality, and equal rights and opportunities related to sexual orientation, gender expression, and gender identity (6). Adolescents spend most of their time in the school setting, and the variety of sexual orientations and gender identities among students demands that schools have the competence required to promote an intersectional perspective on health (6). However, incorporating SRHR in the Swedish school setting poses many challenges. Recent reports highlight the importance for schools to work more systematically and holistically with SRHR (5). The Swedish School Inspectory reported that the majority of schools rely on external educators instead of systematically integrating SRHR in schools' health promotion and prevention strategies (14). Thus, the Public Health Agency emphasises the need to increase staffs' knowledge regarding masculinity norms, lesbian, gay, bisexual, transgender, queer (LGBTQ) perspectives and power relations. This will help prevent discrimination and exclusion based on sex, gender identity, and sexual orientation (6).

1.3 Factors influencing implementation of school SRHR-interventions

Although SRHR-interventions in the school setting are promising for improving SRHR, poor implementation often influences intervention success (9). Most studies about barriers and facilitators to addressing SRHR in schools were conducted in low-and middle-income settings. In high-income school settings, studies that look at overall health promotion find that the most prominent barriers to school health promotion relate to inadequate resources, competing organisational values, disenabling school culture and environment, school prioritisations, and lack of systematic organising and networking (15). The few studies looking specifically at SRHR-interventions show that common barriers are related to the low priority of SRHR, lack of self-efficacy, perception of the interventions having a low impact, and perceptions that SRHR does not fit within staff's professional role (9, 16).

1.3.1 Overcoming implementation barriers: tools and frameworks

There are a number of tools to support school staff in overcoming implementation barriers to school health promotion. Such tools are often online-based and tailored for a specific evidence-based intervention (EBI). Evaluations of these tools show varying results (17), ranging from good potential in supporting staff in the implementation process to low or no

effect (17). There is, however, to the author's knowledge, a lack of research on tools focusing on supporting the implementation of health promotion on a *systematic* level instead of on specific EBIs. In addition, few studies analyse the implementation of these tools and therefore limited evidence on what factors influence the implementation process. In implementation science, barriers and facilitators are often viewed in relation to a theory/model/framework (18). It allows to be consistent and systematic and thus makes the findings more comparable to other studies. A recent study by Leeman et al. explored barriers and facilitators to a school health promotion tool, using the Consolidated Framework for Implementation Research (CFIR), and found that factors within all domains of this framework influenced implementation (19). The CFIR is a commonly used framework to understand barriers and facilitators prior to and during implementation. It consists of five domains: *the inner setting, the outer setting, intervention characteristics, individual characteristics*, and *the process*. All these domains are evidence-based constructs known to influence implementation effectiveness (Appendix I). CFIR acts as an overarching meta-theoretical framework for identifying factors influencing implementation (20).

1.4 Rationale

The school has been identified as a key platform to promote SRHR (7). There is, however, a large research-to-practice gap for health promotion and prevention interventions (21). Studies on tools to support school staff in implementation processes focusing specifically on SRHR are limited, and none have been identified in the Swedish context. Addressing this knowledge gap and understanding related barriers and facilitators will contribute to closing the research-to-practice gap and can guide future design and strategy development to ensure successful implementation of school health promotion tools addressing SRHR.

1.4.1 Study aim

The aim of this study was to generate knowledge about factors influencing the implementation of school health promotion tools to address sexual and reproductive health and rights in Sweden.

1.4.2 Research question

To address the existing knowledge gap, a newly introduced SRHR-component of a Swedish school health promotion tool, named the School Health Portal, was studied by answering the following research question:

What are the anticipated barriers and facilitators to implementing the SRHR-component in the online health promotion tool "the School Health Portal" from the school staff's perspectives?

2. METHODS

2.1 Study design

This study used an exploratory, inductive qualitative study approach. It studied the perspectives of school staff in different professional roles in Swedish high schools in the Stockholm Region. A combination of the STaRI (Standards for Reporting Implementation Studies) Checklist and the COREQ (Consolidated Criteria for Reporting Qualitative Research) Checklist have been used for reporting on the methods used in the study and have guided the overall reporting.

2.2 Setting

The study was set in High Schools in the Stockholm Region, Sweden. The Stockholm Region is where most accounts on the School Health Portal (SHP) are registered and where chances of recruiting a diverse sample to maximise perspectives were highest. The Stockholm Region consists of 26 municipalities, in which the school varies between being state-run (by the municipality) or private (22).

SRHR in the Swedish high school setting is most clearly identified in the school's obligations to teach sexuality education. It is not a subject of its own but should be integrated into different subjects and promoted in the everyday environment in the school. SRHR is further linked to the school's equality and anti-discrimination and violation policy (23). The school principal is ultimately responsible for its implementation (23). Furthermore, recent heated political and media debates have resulted in a national decision to strengthen the school's position to promote SRHR, and revise existing sexuality education curriculums (24). This follows a previous national decision to integrate sexuality education into the teacher's university education (25).

2.3 The School Health Portal

The School Health Portal (SHP) is an online platform developed and run by the Centre for Epidemiology and Community Medicine (CES) under the Stockholm Region.

The SHP aims at providing school staff with tools to improve health and ensure that health promotion interventions reach more children and adolescents to decrease social health discrepancies. The rationale behind it is that the school organisation has the mandate, resources, and competence for this work but often lacks support for using a systematic approach to ensure the effectiveness of such interventions. The SHP was launched in 2016 after school and preschool staff expressed a need to be better supported. The SHP was developed based on scientific evidence and national recommendations from the National Board of Health and Welfare and the School Agency. The SHP provides an overall model for planning, implementation, and follow-up of health promotion interventions and tutorials to identify local health promotion priorities and acts on an environmental level. These can be used to systematically organise school health promotion or be used prior to working with a specific health theme. At this point, the SHP provides specific guidance on nine health themes, each with a collection of EBIs on an organisational and structural school level (26).

2.3.1 The SRHR-component in the School Health Portal

The SRHR-component (in the focus of this study) in the SHP is a module named *Sexuality and Relationships* (Sexualitet och Relationer). It was launched in mid-March 2021 (after data collection). It follows the overall suggested structure in the SHP: the model for planning, implementation, and follow-up of health promotion interventions and the tutorials for identifying local health promotion priorities. The collection of EBIs specific to the SRHR-component includes the following seven:

1. Educate school staff in LGBTQ, gender, and norms
2. Educate school staff about sexual harassment, abuse, and violence
3. Create an action plan against sexual harassment, abuse, and violence
4. Map the student's security in the school from an inclusive perspective
5. Map the language use
6. Create forums for collaborations
7. Distribute free condoms

Clarifications

This study defines school staff as the implementors of the intervention and will explore only these perspectives. Furthermore, the SHP is the intervention in this study and is defined as an

implementation tool. The SRHR-component is part of the SHP and is the focus of this study.

2.4 Recruitment and selection of sample

This study uses purposive convenience sampling. First, schools were sampled based on inclusion criteria (table 1) to ensure that the school had an active SHP account. Included in the inclusion criteria was that the schools should have logged into the SHP at least twice, the last time being maximum of two years ago. Thus, the schools that once created an account but never tried to implement it could be excluded. However, the school or the participant did not need to actively work with the SHP since the intention and attempt to use the portal were considered to give valuable perspectives on barriers and facilitators for implementing it. The schools were sampled based on a list of schools in the Stockholm Region with an active SHP account provided by CES. After the schools were sampled, the author found contact information for staff on the school websites. Principals and staff in the student health team (school nurses, psychologists, counselors, and special educators) were mainly selected. This was partly because these staff are the most commonly involved in the SHP, and partly because their contact information is often accessible on the school website, unlike i.e. the teachers. A formal invitation for participating in the study was sent to staff by email. All 8 study participants (out of approximately 90 invited) were recruited using this approach. Characteristics of the participants can be found in Table 2 and 3. The participants in the final sample had been utilising the SHP to a limited extent. Some had used parts of it – either the surveys or some EBI's – while some were only familiar with it to the extent that they had browsed the portal a few times.

Inclusion criteria	Exclusion criteria
● Staff at a high school in the Stockholm Region ● Work in a school with an active SHP account ● Work in a school that have logged in to the SHP account at least twice, the last time being maximum 2 years ago ● Be familiar with the portal and school health promotion	● Staff working at a school for students with special needs

Table 1: Inclusion and exclusion criteria

	Gender		Total (n)
Characteristics	**Female**	**Male**	
Participants	6	2	8
Profession			
School nurse	2	0	2
School counsellor	2	0	2
School psychologist	0	1	1
Principal	1	1	2
Special educator	1	0	1

Table 2: Participant characteristics – profession and gender

	Type of school		Total (n)
Characteristics	**State-run**	**Private**	
Participants	6	2	8
Profession			
School nurse	1	1	2
School counsellor	1	1	2
School psychologist	1	0	1
Principal	2	0	2
Special educator	1	0	1

Table 3: Participant characteristics – type of school (state-run/private) and profession

2.5 Data collection

An interview guide was developed based on previous literature on barriers and facilitators for school health promotion, interventions, including SRHR. It consisted of 9 questions, excluding introductory questions and warm-up questions (see Appendix II). The author used direct and indirect probing. The supervisor and staff at CES reviewed the guide and made relevant modifications. Efforts were made to develop questions that would contribute both thematically to knowledge production and dynamically to promote a good interview interaction, to produce as rich and valuable data as possible. As Kvale and Brinkmann recommend, the interview guide was piloted on the first participant to ensure that the questions were relevant and understandable (27). After the pilot test, the author made minor modifications to the interview guide. The interview guide consisted of two main parts. The first questions were regarding experiences of implementing school health promotion interventions and the SHP. In the second part, the SRHR-component was described to the participants. Questions were then asked regarding its relevance and perceived potential barriers to its implementation.

Semi-structured interviews were conducted in Swedish prior to the launch of the SRHR-component. They were carried out online via Zoom, which made it difficult to control the interview setting of the participant. Most were, however, situated in their workplace, which was desirable since their professional views were explored. The interviews were scheduled at a time most appropriate for the participants, during working hours. The interviews were introduced by a briefing, where the study aim was explained, and informed verbal consent was taken and recorded. The interviews were then concluded with a debriefing, where a short summary of the interpretation of the interview was made for the participant to comment on and where room for further questions and comments was given. Each interview was approximately 40 minutes long. The interviews were recorded using the zoom recording device and saved in a closed file on the authors' computer. In order to capture the complete picture of the participants' responses to ensure correct interpretation of the data, notes were taken during the interview, and an immediate reflection was noted down after the interview. No additional interviews with the same participant were conducted.

2.5.1 Sample size

To capture the full variety of school staff's perspectives, the interviews aimed at achieving sufficient information power. Information power is a method to guide the sample size. Malterud et al. describe it as a tool to establish the number of participants based on methodological considerations to ensure enough information to develop new knowledge (28). In this case, the study aim was broad, but the specific research question to be answered was narrow. The use of purposeful sampling and inclusion/exclusion criteria leads to a relatively sparse sample specificity. Malterud et al. further argue that for an exploratory study, it is not necessarily desirable to strive for a complete description of all aspects, but it can be satisfactory for a study to offer new insights that can build on existing understanding (28). Thus, a sample of 8 study participants can be considered to provide adequate information regarding the exploratory nature of the study and the research question.

2.6 Data analysis

The recorded interviews were transcribed verbatim and analysed using thematic analysis. An inductive approach was used throughout the analysis. When generating themes, the process was, therefore, data-driven. The author actively tried to avoid purely summarising the data and instead generate fully realised themes (29). A semantic approach was applied across the analysis, meaning that codes and themes were identified with the explicit meaning of the data

(29), to the best extent possible, considering the author's preconceptions. The data was analysed in Swedish to avoid losing any nuances in the data. The final themes were later translated.

The thematic analysis was informed by Braun and Clarke (29). The suggested steps were followed but adapted where necessary, as suggested by Braun and Clarke (30). After transcription, the author read the transcriptions several times to familiarise with the data and followed by creating meaning units of features that appeared interesting. Meaning units were then coded were after initial themes were created. This was done by sorting the codes out and considering how the codes might be separated or collected into different themes. The author then went back to the data extracts to identify where the initial themes overlap, are too broad or narrow. Themes were then redefined to ensure that they accurately represent the data as a whole. The final step in the analysis was to define the final themes, by identifying the essence of each theme and subthemes. This was done by once again returning to the data extracts (see Appendix III for example of the analysis process). Thus, the author has actively and reflexively engaged with the data and reflected on the author's pre-assumptions and position that is part of the qualitative research process (30). In the results section, translated quotes from different schools and staff roles are presented to give more depth to the results and increase the data dependability and rigor.

3. ETHICAL CONSIDERATIONS

This study is non-invasive, and the data were collected and analysed from the professional view of the participants. After receiving information about the aim of the research and their voluntary participation, interview participants were asked to give their informed consent. During the study, there was a risk that participants experience discomfort when speaking to a stranger or discussing a topic that they associate with negative emotions. There was, for instance, a small risk of feeling uncomfortable when talking about leadership engagement and support from colleagues. This was mitigated by paying extra attention to the participants' reactions and emphasising the fact that they can choose not to answer particular questions and withdraw at any time. To further mitigate any inconvenience for the time spent by the participants, the interview was organised at a time suggested by the participant. Online interviews were conducted to avoid any feelings of unsafety related to the covid-19 situation. The data was treated confidentially, and identifiable information was left out to protect study

participants after data collection. For example, if data was shared with the supervisor, the author ensured coding of the participant's name and school. Apart from the issues above, no further harm related to participation in the study was identified. Participants may potentially experience positive outcomes related to study participation, such as having their voices heard about a topic they relate to and contributing to research that impacts them directly. Possible benefits of the study are that a large, diverse population of adolescents is reached with well-implemented SRHR school interventions, which contributes to distributive justice. Ethical approval was not obtained for this study. This is not required according to Karolinska Institutet and Swedish regulation, for a non-invasive Master thesis where no sensitive information is collected and where the necessary precautions to protect participants are taken. Further, the thesis will not be published in peer-reviewed journals, which would require ethical approval.

4. RESULTS

Two themes were generated from the data that represent the main anticipated barriers and facilitators to implement the SRHR-component. The themes represent perspectives from staff in all roles, unless otherwise specified.

<table>
<tr><th colspan="5">Theme 1</th></tr>
<tr><td colspan="5">Unsupporting working environments generate frustration and feelings of powerlessness in working with health promotion</td></tr>
<tr><th colspan="2">Sub-theme 1</th><th>Sub-theme 2</th><th colspan="2">Sub-theme 3</th></tr>
<tr><td colspan="2">Lack of leadership engagement and support</td><td>Sustainability hampered due to recurrent organisational changes</td><td colspan="2">Time pressure limits flexibility within the profession</td></tr>
<tr><th colspan="2">Categories</th><th>Categories</th><th colspan="2">Categories</th></tr>
<tr><td>Staff feels discouraged and unmotivated to take initiatives for health promotion</td><td>Unstructured division of work increases the burden on the student health staff</td><td>Systematic work and interest gained is lost</td><td>Competing prioritisations within the profession hinder health promotion work</td><td>Acute measures take time from health promotion work</td></tr>
</table>

Table 4: Theme 1

Theme 2		
Perceiving SRHR as important contribute to school staffs' motivation to use the SRHR-component		
Sub-theme 1		**Sub-theme 2**
SRHR is perceived as the school's responsibility		Acknowledging needs to address SRHR
Categories		**Categories**
SRHR aligns with national and school-specific prioritisation and policies	Motivation to be better equipped to work with SRHR	The SRHR-component responds to existing need

Table 5: Theme 2

4.1 Theme 1: Unsupporting working environments generate frustration and feelings of powerlessness in working with health promotion

An unsupporting working environment hinders staff from prioritising and structuring health promotion initiatives, including the School Health Portal. Unsupporting working environments were identified as an overarching barrier to implement school health promotion overall and include three sub-themes: lack of leadership engagement and support, recurrent organisational changes and constraining time pressure. These are thus hindering the implementation of the overarching SHP, in which the component is operating, and are anticipated to be hindering for implementation of the SRHR-component.

Sub-theme 1: Lack of leadership engagement and support

Lack of engagement and support from the school leadership was one of the main factors behind an unsupporting environment.

Staff feel discouraged and unmotivated to take initiatives for health promotion

Staff in the student health team often feel discouraged by the leadership in taking new initiatives for health promotion and feel as if they lack power in decision making and that decisions regarding their professional role are made without their involvement. What starts off with engagement and ambition to work with health promotion often ends up with feelings of frustration and hopelessness.

"I want to highlight that it's really important, to get the School Health Portal to have a greater spread, it must go through the principals, like up there [...] We have no voice higher up. It can be like, you can go there and be enthusiastic and (the leadership says) "no but we have this, it

will be too much" [...] But I feel that's what's frustrating with my job right now, because that's the stress, wanting to do things and make a change, and feel that, you can't, it doesn't matter what you think, because it happens, all decisions are made somewhere else, you know" (Interview 3)

Unstructured division of work increases the burden on the student health staff

Lack of leadership engagement influences the division of responsibility, structure and clarity in the health promotion work. As a result, student health staff experience that they alone are responsible for developing the health promotion work since teachers do not consider health promotion to be their responsibility. At the same time, staff in the student health team do not have the mandate to allocate resources to it or the power to engage other staff. They experience that there is a lack of interest in their work and efforts made for health promotion, including the SHP, in particular from the leadership. This builds up frustration and impacts motivation.

"We [the student health team] become this institution to where you refer as a teacher: "Oh well now someone else will have to deal with this, now it got complicated" … you know. It should, everyone should work according to this and everyone should benefit from it [the SHP]" (Interview 3)

One school nurse stated that this is even more of a challenge for SRHR. Since SRHR is not included in any staff's basic education, it often ends up at the school nurses' table as they are perceived as the staff with education closest to the topic. According to the student health staff, the leadership needs to be involved by using their mandate to structure the health promotion work more clearly to reduce the burden on the student health team. Without clear structure, prioritisation and division of responsibility, the student health staff finds it difficult to systematically introduce health promotion in the organisation.

"We are supposed to work with health promotion and prevention. That's just the way the school should work, you know, or operate. But I think it all should start with the leadership. You know that all principals […] really say like this "now we will work with this, we have to as a school you know, worked with this". And then we decide that that's what we're going to do" (Interview 4)

Sub-theme 2: Sustainability hampered due to recurrent organisational changes

The participants experience recurrent organisational changes, particularly shifts in staff and leadership. This negatively influences sustainability of health promotion work.

Systematic work and interest gained is lost

When key roles for health promotion, such as the principal, the school nurses or the school counsellors, are replaced, the progress in structuring the work and gaining interest among colleagues and leadership is often disrupted or lost. Staff experience that this impacts the ability to successfully implement the School Health Portal.

"But the way it usually is, is that we often change leadership and that there will be a new organisation and so on. And then it's difficult to continue with high quality work" (Interview 2)

Further, as stated in sections above, staff already find it difficult to gain interest for the SHP among the leadership and other colleagues. Organisational changes result in having to "start from scratch" all over again with these efforts. This was mainly expressed by staff in a non-leading position.

Schools where health promotion is not yet systematically incorporated into the organisation are the ones most vulnerable to the negative effects of recurrent organisation changes. Here, implementation of health promotion, including the SHP, is instead dependent on the person behind the professional role rather than the profession itself. This makes it more difficult to replace one person with another, within the same professional role. This is particularly difficult when replacing people in a leading position.

"… some tried to continue working with it [the SHP]. But then for different reasons they stopped, and now we have a new leadership and all, and I haven't really had time to get [the principal] on board yet" (Interview 3)

Sub-theme 3: Time pressure limits flexibility within the profession

Staff in all roles experience time pressure within their profession. This hinders them from expanding their work to include health promotion.

Competing prioritisations within the profession hinder health promotion work

Staff in all roles in this study experience that certain aspects of their profession are more important and higher valued than health promotion, both by themselves and by whoever they report to. This constraints staff to incorporate health promotion alongside these set prioritisations.

The study participants emphasise that the teacher role is a critical role to include in health promotion, as they are the staff working most closely with the students. Staff in the student health team perceive that there is an increased pressure on teachers in high schools to focus on the student's academic achievements. It therefore becomes more difficult to include teachers in health promotion as this is not their primary professional responsibility. The student health staff highlights that time pressure constrains teachers to expand on their professional role, to collaborate with them in health promotion,

"When you're teaching in a certain subject, it's the subject that is the most important. That's why it fails (health promotion) at high school. […] When our new (syllabus) came, then there was such a focus on knowledge. There has always been a focus on knowledge but […] people work themselves to death. They don't have time to take an hour and talk something through that came up" (Interview 7)

Additionally, school nurses feel pressured to provide their basic tasks to their students, including vaccinations and individual meetings. They find that their role is not flexible enough to make room for health promotion (and prevention), in the way they would want to.

"Yes, for our part, we are governed by […] law and order, and it's not so free so, we need to do our basic tasks […]. And we do. But I feel that I would like much more space for free activities, prevention." (Interview 3).

Finally, pressure on school leadership to deliver measurable results related to students' knowledge, and doing so within the given budget, constraint them to expand on health promotion.

Acute measures take time from health promotion work

Staff are also limited in their work by a large amount of acute cases related to health. This includes taking acute measures to respond to harassment, violence, bullying and more. Staff in all professional roles report that there is not enough time to plan for health promotion and work with the SHP alongside dealing with these acute responses. There is consensus among staff that health promotion is important to focus on in order to decrease the number of acute cases and a strong wish to work more efficiently with it. In practice, however, it is difficult to find time to do so. This frustrates staff. School staff in schools in lower socioeconomic areas seem to be more overwhelmed by acute cases, compared to school staff in other areas.

"Sometimes someone says that this (health promotion), some principal or so, which is not true, that we don't have time to talk about it, the thing that we should focus on. So the reason that I'm not like "oh the School Health Portal, where you have started talking about this, long term and promoting and all!" it's because, well "but we can't talk about it right know, because now someone got into a fight again…"" (Interview 6)

Finally, these acute measures stand in the way of promoting SRHR in the school setting, as SRHR is not perceived as an acute issue, comparatively.

"Right now, I know there is a lot of focus on all this with sex and relationships. And we should already be there and start planning […]. But no one raised the issue, because we can't fit it. It doesn't seem to be as acute, no" (Interview 7).

4.2 Theme 2: Perceiving SRHR as important contributes to school staff's motivation to use the SRHR-component

The main identified facilitating factor for implementing the SRHR-component is the school staff's motivation to use it. This is influenced by school staffs' perception of the importance of promoting SRHR, as well as the relevance of the SRHR-component.

Sub-Theme 1: SRHR is perceived as the school's responsibility

School staff finds it important to promote SRHR as they perceive that it lies within the school's responsibility.

SRHR aligns with national and school-specific prioritisations and policies

School staff in different roles finds SRHR to be an important societal matter. They express that schools have a responsibility to work with SRHR, as they have a unique opportunity to shape values and norms among adolescents. Staff emphasise that focusing on SRHR is in line with school policies, such as the non-discriminatory policy. They further highlight that SRHR in the school setting is part of the Swedish governments' agenda, including the introduction of the new curriculum and guidelines. Therefore, staff seems to feel responsible for promoting SRHR. This facilitates their motivation to use the SRHR-component. The quote below, one staff's reaction to the description of the SRHR-component, illustrates this sense of responsibility and motivation:

"I just have to say that this is absolutely amazing, then… so this is, it's needed, in general in the society […] It is also in accordance with the new, like curriculum, or that the teachers on the teachers' education should learn more about this, like, it's in accordance with that. Like in general I think it's absolutely amazing." (Interview 4)

Motivation to be better equipped to work with SRHR

There is a concern among staff that some colleagues might find it sensitive to work with SRHR and feel uncertain in how to address it appropriately. Having a sense of responsibility to promote SRHR motivates staff to better equip themselves and their colleagues to address this. This increases their motivation to use the SRHR-component and thus get better support.

"It's (the SRHR-component) great, it's on the radar you know (…) so I think it would be great for teachers and everyone else in school too, because for God's sake I don't have the right knowledge anymore […] I really think that you need extra support for it (SRHR in the school), because you're like, you know sexuality is in general a private matter somehow" (Interview 3)

Although this is the main perspective expressed by participants, another perspective is that there is too much emphasis on the school's responsibility to promote SRHR and that the school is often blamed for SRHR-challenges in society. This instead builds up some resistance among staff to prioritise SRHR in the school setting.

"[…] all of a sudden the school gets the blame, which is like, it also becomes a bit tricky to receive when you have people who have chosen a job because they like youths and because

they want people to develop and be healthy and then they get the blame, it doesn't fly" (Interview 1)

Sub-theme 2: Acknowledging needs to address SRHR

To what extent the staff perceives SRHR to be important is further influenced by their own experiences of SRHR-related challenges in the community. Their own experiences of harassment, violations and discrimination related to sexuality, gender identity and gender in their community influence whether or not they find SRHR to be an important matter to promote and prioritise. Staff in areas where there is a greater cultural variety put more emphasis on the needs in the community, as they consider the topic to be more taboo in these areas and therefore more important to address.

"Even now, that we have such a multi-cultural school and there are, you know, there is some discrimination. There are many, like there are students at the school that told us they are lgbtq but the word can absolutely not spread since it's a huge taboo in their culture […] So that's a motivation, it becomes a motivation" (Interview 5)

The SRHR-component responds to existing needs

Another factor that would facilitate the implementation of the SRHR-component is that staff perceive that the suggested EBIs in the component are actually corresponding to the perceived needs. Staff find the suggested EBIs to be relevant and needed for the school setting, which also increases their motivation to use it.

Although most staff found the EBIs to be relevant, some found parts of them to be too disconnected from the reality they experience in the school setting, with regards to what support they actually need. They experience that some of the suggested EBIs are not grounded in an understanding of what SRHR-issues that staff are struggling to address. For instance, some find that they already have the right competence for addressing LGBTQ-issues. Despite this, it is often emphasised as a priority by external actors as a main focus. Some staff means that they instead need support to better deal with SRHR-issues related to the internet, i.e. porn, but find that this issue if often forgotten, including in the SRHR-component.

5. DISCUSSION

The aim of this study was to explore barriers and facilitators to the implementation of school health promotion tools addressing SRHR. The study's main findings reveal that unsupporting working environments negatively influence the implementation of the whole SHP and are anticipated to be a barrier to the SRHR-component. Lack of leadership engagement and support, recurrent organisational changes, and time pressure are the main underlying components of an unsupporting working environment. The primary anticipated facilitating factor identified was perceiving SRHR as important, which facilitates motivation and engagement to use it. This is mainly influenced by a sense of responsibility and acknowledgment of the need to address SRHR.

5.1 The role of the leadership

The findings in this study indicate that the overarching anticipated barrier to implement the SRHR-component is unsupporting working environments, which hinder health promotion overall. One of the main barriers identified is the lack of leadership engagement and support. Staff experience that this harms their motivation and ability to use the tool. This relates to findings from a previous Canadian study about factors influencing teacher's willingness to teach sexual health. Findings show that it is essential for teachers to perceive the school administration as supportive (16), which includes leadership. Leadership engagement further aligns with findings from Leeman et al. This study explores barriers and facilitators to implement another school health promotion tool, although not for SRHR (19). Finally, the leadership itself acknowledges the importance of leadership engagement. Therefore, future studies should include more participants in a leading position to understand barriers to leadership engagement and support.

5.2 Time pressure

The findings indicate that time pressure is an anticipated barrier to implement the SRHR-component. Leeman et al. describe the school staff as "super busy" dealing with violence and disruptive behavior (19). This is similar to the acute measures that staff in this study describe as being time-consuming and thus hindering health promotion. The findings further indicate a distinction between schools located in areas with a lower socioeconomic status compared to those not. Staff in schools located in lower socioeconomic areas experience that an overwhelming part of health work is caught up in these acute cases. The sample in this study

was too small to allow for conclusions about this potential distinction. It, however, not found in previous studies and should be explored further in future research.

Furthermore, the findings indicate that competing professional prioritisations contribute to perceived time pressure. Similar to the findings, Leeman et al. suggest that there is pressure among school staff to deliver high academic achievements rather than prioritising health promotion (19). Another study by Shepherd et al , about teachers' perceptions of barriers and facilitators to teacher training to improve the implementation of school health promotion in England, proposes similar barriers (15). Here, teachers experience that this results from a changing policy landscape, where academic achievements are more valued (15). Unlike in this study, Shepherd et al. specifically explored teachers' perspectives. Despite this, staff in this study similarly express that academic achievement is increasingly prioritised, constraining the time they have to integrate health promotion. This indicates that many professions working in the school setting experience that time pressure can hamper the implementation of school health promotion.

5.3 Motivation and responsibility

The main identified facilitating factor was that SRHR is perceived as important by school staff. This increases the staff's motivation to implement the SRHR-component. These findings are consistent with a previous study about factors influencing the willingness to teach sexual health education, where attitudes towards the topic are identified as a critical factor. The extent to which implementors value sexual health influences their willingness to implement it (16). However, findings from this study contradict previous findings from Shepherd et al., suggesting that staff do not perceive health promotion to lie within their professional responsibility (15). Findings from this study instead indicate that staff have a sense of responsibility in their professional role to promote SRHR, which positively influences their motivation to implement the component. One reason may be that SRHR has been increasingly acknowledged in media and political debates in Sweden, potentially impacting the staff's sense of responsibility. However, this study's findings also indicate that perceiving that the school carries the main responsibility to promote SRHR among adolescents can instead decrease staff's motivation to implement the component but should be explored in future research. Finally, staff's perception that the SRHR-component responded to existing needs was yet another anticipated facilitating factor. Leeman et al. indicated

similar findings. They identified that the implementors' perception of the tool's relative advantage was facilitating for its implementation (19).

5.4 The findings in relation to the conceptual framework

It is clear that the identified barriers mainly concern the school organisational level and the facilitators the school staff's individual level. However, the findings can be understood in further depth when related to the domains and constructs of the CFIR. Thus, the study suggests that barriers are mainly part of the domain *inner setting* (unsupporting working environment) and facilitators are mainly part of the domain *individual characteristics* (SRHR is perceived as important). Factors related to *intervention characteristics* (i.e., the component responds to existing needs), *outer setting* (i.e., alignment with societal policies and priorities) are identified as well but to a lesser extent. Barriers and facilitators related to the domain *process* were not identified, most likely since this study was carried out prior to the implementation of the component. The domains and constructs in CFIR often overlap, and barriers and facilitators can be difficult to categorise clearly. For instance, although perceiving SRHR as important can be categorised into *intervention characteristics* it could also be categorised into *outer setting*, as a result of the recent medial and political debates. Thus, using the CFIR, future studies can build on these findings and deepen the analysis on which specific domains and constructs are related to a successful implementation of similar tools addressing SRHR and how these are interlinked. Searching in the cross-cutting between the domains and constructs can allow for new, interesting findings in this field.

5.5 Strengths and limitations

This study used a qualitative inductive design with an exploratory approach. The qualitative approach was chosen since this provides tools to understand how people perceive the world (31). Implementation science is change-and-action oriented and focuses on understanding how, when, and why changes happen (or not happen) and who is involved in the changes. Understanding the perspectives of those involved in the implementation is essential to ensure that the intervention addresses relevant issues and that approaches used are feasible and acceptable in the real-world setting (18). Thus, a qualitative approach provides insight to the perspectives of the ones involved and the context in which the intervention is implemented. This gives us an understanding of stakeholder's implementation behaviors (18).

A deductive approach was considered but not chosen, as the strengths of using an inductive approach outweighed the benefits of a deductive approach, considering the study's exploratory nature and novice setting. The strengths of using an inductive approach for this study included making use of the richness of the data and allow seeking understanding beyond implementation frameworks. Much of the understanding of barriers and facilitators could potentially go missing when categorising factors according to implementation frameworks. However, understanding the full complexity is not always desirable, as it might be difficult to translate findings into practice, which is a limitation of the inductive approach. They might also be less comparable to other implementation studies that are using "a shared language". Furthermore, without an implementation framework, the findings could potentially be more challenging to match with appropriate implementation strategies. However, as this study was the first one, to the author's knowledge, exploring barriers and facilitators of an implementation tool, particularly addressing SRHR in Sweden, the use of an inductive approach to fully explore the perspectives of school staff is considered a strength. To mitigate any limitations using an inductive approach in an implementation study, CFIR was still discussed in relation to the findings. This provides the reader with a valuable understanding of how the findings relate to the framework. Furthermore, using CFIR to develop the interview guide was considered. It was, however, not incorporated as the author anticipated it would compromise the quality of the inductive analysis, as there would be a risk of sub-consciously applying the CFIR to the data in the analysis if organising the interview guide accordingly.

A potential limitation of the study was the sampling strategy and the sample. CES had previously experienced difficulties in recruiting school staff to participate in studies. The author took this and the limited time frame into account when recruiting the participants. Thus, the author kept inclusion criteria broad to increase the chances of recruiting a large enough sample within the given time. Despite this, the response rate was low, which potentially introduced self-selection bias, as staff who accepted might have a particular interest in the topic. Furthermore, the low response rate made it difficult to control what level of knowledge and experience the staff had of the SHP. Overall, the participants had a low level of knowledge and limited experience working with it. The author adjusted the interviews accordingly, and the participants draw on experiences from other health promotion interventions. However, suppose participants made assumptions of barriers and facilitators to implement the SHP based on other experiences. The author could potentially have interpreted participant accounts as experiences with the SHP, therefore drawing the wrong conclusions

about the barriers and facilitators that affect SHP implementation. Instead, accounts would refer to barriers and facilitators to implementing SRHR-promotion or health promotion interventions in general. However, the author mitigated this risk by discussing the participants' level of experience with SHP in an early stage of the interview and ensure that the interview dialogue was kept at an appropriate level.

Furthermore, generalisability is not a common measure for external validity in qualitative research. Instead, **transferability** is discussed, meaning whether or not the findings can be transferred to other specific settings. The number of participants was agreeable for this initial exploratory study, and clear patterns were identified in the interviews. Despite this, due to the low number of participants, one should be careful in transferring the findings to other settings, both within and outside of Sweden. Rather, the findings should guide future research to support the findings and explore them further. However, to enable the reader to judge the transferability themselves, a thorough description of the setting was provided. This included a description of the Swedish school setting, the implementation tool (the School Health Portal), the specific component studied (the SRHR-component), relevant characteristics of the study participants and the schools, as well as the inclusion and exclusion criteria, as suggested by Malterud (32). However, the author lacked knowledge of how much SRHR-education was ongoing in the schools which limits the context description necessary to successfully judge the transferability of the findings.

Credibility is concerned with the aspect of truth-value (33). To ensure credibility of the findings, the author asked the participants to provide examples and were given follow-up questions to ensure that the data was rich enough to make conclusions. The data was constantly read and re-read, analysed and the themes revised as the understanding of the data deepened. Further, to enable the reader to judge the credibility, quotes were selected to illustrate the different perspectives that constitute the generated themes. A potential limitation to the study's credibility was the risk of social desirability bias due to self-reported data. The participants could have adjusted their responses according to what they perceive as socially acceptable and desirable to say. However, this risk was mitigated by the author's ability to build good rapport early during the interviews. As the interviews were conducted one time with the participants, it was of high importance to establish good rapport early on. This was enabled by small talking before the formalities started and taking a good amount of time to warm up questions to ease the participants and make them feel comfortable. Furthermore, the

author confirmed the participants' answers with active listening, by making confirming sounds and re-statements, during the interviews. Returning to the participants to confirm the interpretation of the data (so-called member-checks) and data triangulation would have been desirable to strengthen the credibility but was not possible to conduct due to time constraints. However, constant summaries and interpretations of the conversations were made during the interviews to give the participants the opportunity to correct any misinterpretations and confirm correct ones.

Dependability was increased by following steps for thematic analysis, recommended by Braun and Clarke (30), however, in a reflexive manner and adapted to the specific process. This ensured structure and quality in the analysis process. The author actively engaged with the data by moving back and forth across the steps in the analysis process to reflect on interpretations made as the understanding of the data deepens, to increase the likelihood that findings are consistent with the data. To increase the transparency, the analysis process was well described. This also increases the repeatability of the study. The reporting of the study is based on reporting guidelines to ensure the research process is reported with transparency.

To strengthen the study's **confirmability** and mitigate researcher bias, the author acknowledged the importance of self-awareness and **reflexivity** throughout the research cycle. The individual role, the pre-assumptions embedded in it, and its implications for the research were acknowledged and reflected upon. As a female, born and raised in Stockholm, Sweden, a political scientist with previous experience in implementation research, Master's student in Public Health at Karolinska Institutet, and with prior experience working in a school setting and with SRHR, the characteristics of the author influences pre-conceptions and personal values. For instance, prior experience working with SRHR and in the school setting could influence what findings the author considered to be of most importance. By reporting on the pre-conceptions potential influence, the author seeks to avoid bias (33). Furthermore, the author did not have any relationship with the study participants beforehand, apart from the logistical emails in booking the interviews. In addition, the author was a relative novice researcher, which could have impacted the ability to be reflexive throughout the process. Although researcher triangulation would have been a way to mitigate the influence of a single researcher's preconceptions and values, this was not feasible. The individual researcher collected and analysed the data, which on the other hand, strengthened the situational understanding of the data.

5.6 Public health relevance

The fulfillment of SRHR is closely linked to the protection of human rights (2) and is crucial for the SDGs realisiation, particularly goals 3, 5, and 10 (34). The school is identified as one key platform to promote SRHR, with the potential to reach adolescents equally since it is one of the platforms in which they spend most of their time (7). There is, however, a large research-to-practice gap. On average, it takes 17 years for EBIs to be incorporated into the intended setting (21). Current implementation barriers to promote SRHR in the school setting negatively influences their potential (9) and can lead to ineffective use of public resources. Implementation tools have the potential to narrow this gap. Thus, understanding barriers and facilitators to these tools, as understood by key implementors such as school staff, can guide the development of effective designs and implementation strategies. This will enable successful implementation that contributes to more effective use of public resources and enables the realisation of SRHR among adolescents.

5.7 Recommendations

Based on the findings from this study, it is suggested that CES consider how to improve its communication to school staff, where positive messaging about the schools' potential and responsibility to promote SRHR is highlighted. This could increase staff's motivation to use the SRHR-component and engage staff in the implementation process. Furthermore, the findings pointed out the need that decision-makers allocate more resources (time and money) to school health promotion. This could enable the school leadership to prioritise and engage more in health promotion. In addition, measures, on organisational and policy level, should be put in place to enable school staff to prioritise health promotion without compromising the focus on academic achievements. However, to fully understand the most effective way to implement the SRHR-component in the SHP, these findings should be explored further. To understand differences and similarities between different school professions, barriers and facilitators should be studied by specific staff roles. Future research should pay extra attention to the leadership perspectives.

6. CONCLUSIONS

This study gives insights into barriers and facilitators to deliver an online implementation tool addressing SRHR in the Swedish school setting, based on various school staff's perceptions. The overarching themes found in this study were: *Unsupporting working environment generates frustration and feelings of powerlessness in working with health promotion* and

Perceiving SRHR as important contributes to school staffs' motivation to use the SRHR component. The findings show that it is crucial to address the many existing barriers to school health promotion on a structural level in the Swedish high school setting, to enable successful delivery of implementation tools to address SRHR. Furthermore, it is important to consider how the school staff's sense of responsibility for promoting SRHR in the school setting can act as a facilitator. This potential should be further explored and acknowledged in improvements of the SHP. If taking these barriers and facilitators into consideration, the SRHR-component in the SHP has good potential to respond to existing needs experienced by school staff.

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9. APPENDICES

9.1 Appendix I: CFIR domains and constructs

Domain	Constructs
I. Intervention characteristics	Intervention source, Evidence Strength and Quality Relative Advantage Adaptability Trialability Complexity Design Quality and Packaging Cost
II. Outer setting	Patient Needs and Resources Cosmopolitanism Peer Pressure External Policies and Incentives
III. Inner setting	Structural Characteristics Networks and Communications Culture Implementation Climate - *Tension for Change* - *Compatibility* - *Relative Priority* - *Organizational Incentives and Rewards* - *Goals and Feedback* - *Learning Climate* Readiness for Implementation - *Leadership Engagement* - *Available Resources* - *Access to Knowledge and Information*
IV. Individual characteristics	Knowledge and Beliefs about the Intervention Self-efficacy Individual Stage of Change Individual Identification with the Organization Other Personal Attributes

V. Process	Planning Engaging - *Opinion Leaders* - *Formally Appointed Internal Implementation Leaders* - *Champions* - *External change agents* Executing Reflecting and Evaluating

(35)

9.2 Appendix II: Interview guide (translated)

Introductory questions:

- How long have been working at this school?
- What is your current position?
- What are your main responsibilities?
- What is your educational background?

Warm up questions

- Can you tell me about how your school works with health promotion?
  - Examples of priorities
  - Challenges, opportunities
  - External collaborations
  - SRHR

- Can you describe to what extent you have been using the SHP so far?
  - To what extent, what themes

Questions about health promotion and the School Health Portal

- How have you experienced the portal?
  - Usefulness
  - Complexity/flexibility/relevance
  - Time needed
  - Specific themes

- Can you describe what resources you have to implement the SHP or health promotion interventions?
  - Enough/not enough
  - Time/budget/staff

- Can you tell me about your motivation to use the portal?
  - How, why/why not
  - What would increase motivation
- Can you tell me about your experiences with support from the leadership to work with health promotion?
  - Encouraged/discouraged

(Description of the new SRHR- component)

Questions about the SRHR-component

- What is your perception of adding this component to the SHP?
  - Added value
  - Necessary/useful
  - Relevance for students and staff

- What is your perception about the suggested EBIs in the component?
  - Relevance
  - Priorities

- Can you describe how you experience it would fit in the school environment?
  - Integration into existing work
  - School priorities/responsibility
  -
- Can you describe what might hinder you from using the component?
- Can you tell me what factors you consider to be important to use the component?

Final comments and questions from the participant

9.3 Appendix III: Example of analysis process

Data extract	Meaning unit	Code	Category	Sub-theme	Theme
"We have no voice higher up. It can be like, you can go there and be enthusiastic and (says the leadership) "no but we have this, it will be too much" [...] But I feel that's what's frustrating with my job right now, because that's the stress, wanting to do things and make a change, and feel that, you can't, it doesn't matter what you think, because it happens, all decisions are made somewhere else, you know"	Frustrating that leadership don't listen and pay attention	Lack of leadership encouragement Negative feelings	Staff feels discouraged and unmotivated to take initiatives for health promotion	Lack of leadership engagement and support	Unsupporting working environments generate frustration and feelings of powerlessness in working with health promotion
"...then at times there are very urgent matters, and remediations, so yes it happens that... yes, it happens that it is difficult to catch.., all health promotion and prevention work to do"	Measures to address urgent matters take up too much time	Measures to address urgent matters Time pressure	Acute measures take time from health promotion work	Time pressure limits flexibility within the profession	Unsupporting working environments generate frustration and feelings of powerlessness in working with health promotion
"If you think about the grounds for discrimination, then that they (sexual rights) are included. Then it's great that it's now included here in the SHP, so you find it there too."	SRHR-component in line with school equality policies	School values and prioritisations	SRHR aligns with national and school-specific prioritisation and policies	SRHR is perceived as the school's responsibility	Perceiving SRHR as important contribute to school staffs' motivation to use the SRHR-component