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A compulsory school in need of a physiotherapist - an interview study

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ABSTRACT
Physical activity among schoolchildren is declining. Increased physical activity and motor training in school have shown good effects on health, learning and school performance. Physiotherapists can cooperate with school staff, but there are challenges in terms of environment and working methods. The study aim was to explore the attitude of compulsory school staff to physiotherapeutic competence in school and in student health care. Interviews were conducted with school staff and student health care team members. Data were analysed with qualitative content analysis. Based on categories and subcategories, a theme was identified as The physiotherapist as a piece of the student health care team puzzle. The staff were positive about the competence, gave suggestions on work areas, and could see advantages to including a physiotherapist on staff. More studies are needed in the field, especially regarding inclusion of physiotherapists in teams that work to promote health and prevent illness and injury.

Introduction
Physical activity among Swedish schoolchildren is declining (Public Health Agency of Sweden, 2019; Raustorp & Fröberg, 2019; Raustorp et al., 2020). Physical activity integrated into the school day can have an effect on children’s health. School-based health programmes that promote an active lifestyle in children and adolescents can improve quality of life (Wu et al., 2017). Recess activity and school-based interventions have potential to promote physical activity and physical health (Parrish et al., 2020; Yuksel et al., 2020). On the other hand, education of staff and interventions in connection to the school day show no effect on students’ physical activity, when it comes to moderate to intensive physical effort (Löndal et al., 2020; Riiser et al., 2020).

Motor skills in schoolchildren can be developed, and children’s school performance improves with higher levels of physical activity and motor control training (Ericsson, 2008); the effect is shown to remain up to grade nine (Ericsson, 2011). Interventions to promote motor development can improve school performance (Donnelly et al., 2016; Fernandes et al., 2016; Macdonald et al., 2018; Tilp et al., 2019) and cognition (Donnelly et al., 2016; Fernandes et al., 2016). A positive relationship between reading and movement skills is shown (Westendorp et al., 2011).

School-based interventions with physical activity can also reduce anxiety, increase resilience to mental illness, improve well-being and promote mental health in children and youth (Andermo et al., 2020). School-based physical activity is a promising tool to promote positive mental health, learning and behaviour in children (Fedewa et al., 2013).
Many children sit in poor positions while doing their schoolwork, which affects their learning ability (Myhr, 2015). If students are to absorb the lessons being taught, these ergonomic and motor problems need to be analysed and addressed. In one study, students’ reports of neck and shoulder discomfort decreased when standing desks were used (Parry et al., 2019).

The National Board of Health and Welfare and the Swedish National Agency for Education published a Guide for Student Health Care in 2016 (The National Board of Health and Welfare, 2016). According to the school law (Skollag, 2010), a school doctor, school nurse, psychologist and curator for medical, psychological, and psychosocial care must be available to each school. Medical services can be provided by other specialities, for example, physiotherapists. School staff and student health care professionals can cooperate to promote health and learning among students and to prevent illness and obstacles to learning. The National Board of Health and Welfare has set out the work to be done for promoting health and preventive measures from a student perspective.

Interventions led by physiotherapists, and students participating in the design, points out the social-cognitive perspective, empowerment of children, and information and communication as important factors in the process (Lindqvist, 2017). Environmental possibilities and challenges affect professional and habitual working patterns for physiotherapists at school (Boll & Boström-Lindberg, 2010). Teachers search support from a physiotherapist when they have access to one (Neal et al., 2019).

The aim of this study was to explore the attitude of compulsory school staff to physiotherapeutic competence in school and in student health care.

**Methods**

**Study design**

A qualitative design was used, with semi-structured individual interviews conducted with people working in a school and in student health care. The interviews were analysed using qualitative content analysis (Bryman, 2016; Graneheim & Lundman, 2004; Lindgren et al., 2020).

**Participants**

Inclusion criteria were working in a school or in student health care at a compulsory school. Exclusions could have been made if necessary to avoid the risk of homogeneity with regard to gender, age, profession, work experience and length of employment at the workplace, but there was no need to exclude any participant. The selection was partly of convenience and partly strategic, which is deemed suitable for the study (Graneheim et al., 2017). In the first stage, participants were recruited in the same school unit in the same municipality, in northern Sweden. In the second stage, participants were recruited in another school unit, but in the same municipality, to get a suitable number of interviews and sufficient data.

Interviews were conducted with seven women and three men. The participants were 30 to 62 years old. They had worked in their profession from two to 35 years and in the workplace from one to 20 years. The participants represented several professions in education and student health care: principal, class teacher, language teacher (three participants), physical education teacher (two participants), operations manager for student health care, school nurse (two participants), and special education teacher. One of the participants worked both as a language teacher and as a physical education teacher. There was no physiotherapist working in the school units or in the municipality. Among those who showed interest in participating two persons discontinued participation when they cancelled the interview meeting for personal reasons. One person never responded to the invitation to participate.
Table 1. Example of analysis. From meaning unit to code.

<table>
<thead>
<tr>
<th>Meaning unit</th>
<th>Condensed meaning unit</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>And we think, this is just what we think, that we would need help to look over example ergonomics, movement.</td>
<td>We probably need help to look over ergonomics and movement.</td>
<td>Need help with ergonomics and movement</td>
</tr>
<tr>
<td>We talk a lot specifically about how they sit, in other words they sit six-seven, six hours in school.</td>
<td>We talk a lot about how they sit six to seven hours every day in school.</td>
<td>Talk about prolonged sitting</td>
</tr>
</tbody>
</table>

Data collection and procedure

School leaders were first asked about participation in the study. The principal and operations manager for student health care contacted their staff and invited them to participate. The researcher (L.P.) got names and contact details from the recruited staff of all potential participants. Interested participants were sent an email with information about the study and those who wished to participate replied with their written agreement.

A semi-structured interview guide with open-ended questions was developed and tested in a pilot interview, which was not included in the study. No alterations were made to the guide or the interviewer’s approach after the pilot interview. The participants got access to the topics to be covered one to two weeks in advance of the interviews.

Due to the ongoing pandemic, the individual interviews were conducted digitally, except one, which was conducted by phone. The interviews lasted between 23 and 60 minutes and were conducted in December 2020, January and February 2021. The interviews were recorded digitally, transcribed verbatim by the first author (L.P.) and de-identified.

Data analysis

Data were analysed using qualitative content analysis (Bryman, 2016; Graneheim & Lundman, 2004; Lindgren et al., 2020). An inductive approach was used, meaning that data were analysed without preconceptions (Graneheim et al., 2017; Kvale & Brinkmann, 2014). The first author (L.P.) read and listened to the interviews several times to obtain a sense of the whole. After reading and listening to the interviews, meaning units were identified and then condensed, shortening the content but maintaining the essence. The condensed units were coded (Table 1). The codes were then grouped and abstracted into subcategories and categories by their commonalities on a manifest level. Further interpretation and abstraction resulted in a theme that exposes the latent content in the data. Quotations were chosen to exemplify and clarify. Through all the steps in the analysis, similarities and differences in data and content were noted. The analysis was conducted by the first author (L.P.). To ensure dependability, the material was discussed and revised together with the second author (R.S.), who had read the material as a whole.

Ethical considerations

Ethical approval for the study was obtained from the Swedish Ethical Review Authority, Dnr 2020-05724. The participants were informed about the study orally and in writing, and they gave signed informed consent.

Results

The analysis revealed three categories, ten subcategories and a theme. The categories were: Positive view of physiotherapeutic competence, Work areas where there is a need for a physiotherapist, and Benefits of having a physiotherapist at school. Based on the categories and subcategories the theme The physiotherapist as a piece of the student health care team puzzle, was formed (Figure 1).
Theme is based on the participants’ view that a physiotherapist could complement the work of the student health care team and working groups in school.

The results are outlined below with illustrative quotes marked with the participant’s number. The results are presented under the subheadings of the categories.

**Positive view of physiotherapeutic competence**

The participants were positive about the idea of physiotherapeutic competence as a complement in student health care and school. Some had experience working with a physiotherapist, with both external and internal cooperation. They wanted to know more about what physiotherapists could contribute.

**Interest in physiotherapy**

The participants said that there were ongoing conversations about the development of student health care and orientation in general, and especially the possible role of a physiotherapist. Openness and curiosity emerged. They wanted to learn more about physiotherapeutic competence, physiotherapy in school and its potential role in the medical aspects of student health care. The participants said that they were interested in increased cooperation with existing staff and professional groups not yet included.

I would like to have better, more cooperation with, for example, the school nurse, or if one could, if it would be possible to work with a physiotherapist. (Participant 10)

**Advantages of physiotherapeutic competence**

It emerged from the interviews that the knowledge of a physiotherapist would benefit the school and student health care, that a physiotherapist would complete the student health care team and existing occupational groups. The participants saw advantages in having access to a physiotherapist, and their current cooperative arrangement with a physiotherapist was working well. The staff was
aware of procedures for reporting student matters or asking the students themselves or caregivers/parents to contact a physiotherapist. Participants who were part of the student health care team talked about the advantages of having the physiotherapist working at the health care centre near the school. The close proximity and existence of an established working relationship made contacting the physiotherapist fast and easy.

Periodically, there is much contact with the physiotherapist; I can call the physiotherapist at the health care centre and ask for their advice (...) It has been an advantage here that it is so close by. The physiotherapist works here next to the school, and she is here one day every week, so students can go to her by themselves if they need anything. (Participant 7)

**Experience of contact with physiotherapists**

The participants had experience working in cooperation with a physiotherapist, both in previous positions and in their existing one. Most of the contacts were from outside school, through Habilitation, Child and Adolescent Psychiatry, and in single cases, with the Special Education School Authority (SPSM). The general perception was that cooperation works well; they had good experiences with the support from the physiotherapist in these cases.

They are professionals in what they do, that different professions, like, cooperate, I think that is generally always good. (...) things that one isn’t aware of, simply because one doesn’t have the knowledge. (Participant 1)

**Lack of competence as an obstacle to contact with a physiotherapist**

Participants indicated that insufficient knowledge about the work of physiotherapists, and also about how even to reach one when needed, could be obstacles to contact. It was mentioned by the participants who worked in the student health care team that there was not one to turn to when it came to questions about students. It also seemed that participants had not considered how to establish this contact when needed.

So, I have practically no one to ask. Maybe that I should ask the health care centre, I haven’t even thought about that. No, but I can’t get hold of any physiotherapist or occupational therapist if I want to. (Participant 8)

**Work areas where there is a need for a physiotherapist**

Participants could see a need for competences other than their own, including those not yet part of the team. The inclusion of a variety of occupational categories gives more eyes to see with, and that can give a broader perspective on students’ health and how work can develop and lead to different results. There are work areas where staff had experienced deficiencies regarding competence, and they brought up several such areas during the interviews. Knowledge of what physiotherapists can do, and examples given regarding how physiotherapy might contribute varied among the participants.

**Development of teamwork and cooperation**

The participants suggested that a physiotherapist could help with assessing students in need of support. Another area brought up was the ability to do more work in health promotion and prevention; the staff indicated that they did not have the time for that. Participants considered that the student health care team would improve their work with a physiotherapist on the team, and that it would make a difference compared to the current situation. They could see themselves tutored and supported in their work by a physiotherapist. Views of the physiotherapist acting as a consultant, coaching and sharing information from new perspectives, came up. The participants said that students appreciate new elements and ideas in teaching. While
a physiotherapist would have a clear role on the medical student health care team with the nurse and doctor, the participants could also see how a physiotherapist could benefit teachers, for example in physical education, classroom teaching, home economics, and student counselling.

If I’d a physiotherapist in student health care, I would have used it in classroom setup, in recess activities, in teaching, to tutor, cooperation with school nurses. (Participant 6)

**Look at physical environment, furniture and ergonomics**

The participants identified the work environment and ergonomics as areas where competence was lacking. They mentioned working position and its effect on learning, noting that an individually customized body position benefits learning in students, and that a physiotherapist could contribute ergonomic input. They talked about the effects of sitting in the classroom and having someone to consult about things like chair and desk height when buying new furniture, ways of furnishing a classroom, and even the work environment when it comes to noise and ventilation.

But stuff, like, that it is well designed, so the conditions are as good as possible in the classroom, because they spend most of the time in there. (Participant 9)

Students could be considered to receive too little education on the elements of ergonomics and how to use and load their bodies. Participants also talked about energy saving for students, to help them better cope with the school days.

If there is a student with health problems remedied by physiotherapy or similar, of course it would affect goal completion and school performance. Thanks to this adjusted workplace for the student, he or she saves energy and can perform. (Participant 2)

**Student health care in motor skills, movement and physical activity**

Several participants talked about prolonged sitting and the need for movement and physical activity as obvious areas where a physiotherapist could help. They said that they did not have the competence to assess motor skills and introduce interventions for motor training, and that the physiotherapist could complement the work of physical education teachers when it comes to challenges with motor skills.

They talked about activities with motor orientation, controlled by adults, noting that the physiotherapist has excellence in the field, and even that supply of aids to address motor challenges that students might have can be a work area. The participants talked about movement breaks between lessons, time outdoors and activities for all students to join as areas for a physiotherapist to work with. They also spoke about physiotherapeutic competence in body and movement deficiencies caused by pain, and ways that a physiotherapist could support and help students to available tuition in a way that might not exist currently.

**Broaden view of health from a student perspective**

The participants talked about a physiotherapist participate in and perform health status of students and broaden the view on student’s health. The need for a holistic view on health continued to be brought up, with support provided to students not only in the classroom but also during recess and leisure time and both in and outside of school. Opinions were also expressed about physical training in leisure time.

Education in physiology, also in the context of eating disorders, was brought up during interviews.
**Benefits of having a physiotherapist at school**

The staff interviewed could very well see that students’ well-being and school performance could improve if a physiotherapist could join the student health care team and carry out interventions promoting health. A physiotherapist could also benefit the work of the teachers. The participants said that a physiotherapist at the school, who was familiar with the students, would have advantages compared to having external competence brought in.

**Improved health and learning in students**

Participants expressed a belief that students’ learning achievements and school performance would improve if a physiotherapist was available, that achievements and learning are connected to students’ health and the parts of health that a physiotherapist could contribute to. They also spoke about how social activities and movement, for example at recess, would benefit students’ learning. It was claimed that a greater proportion of the students would achieve passing grades if a physiotherapist participated in the work with them.

**Advantages of having a physiotherapist on site at school**

Several participants mentioned the benefits, for the school and its operation, of having physiotherapeutic competence on site rather than having it brought in from a distance. They talked about bringing in external help as a slow process that could delay efforts to help students in need, and they indicated that it would often be easier to have a physiotherapist on site within the school organization. Some of the earlier external cooperation with efforts could be conducted internal and on site at school, with a physiotherapist as a part of the student health care team. The need for direct and close competence was emphasized by the participants, that it would be better for students not to have to go off the school property to meet with a physiotherapist and instead have the work conducted on site by someone familiar with the students and the school. The participants thought that everybody would prefer the physiotherapist to be on site, and that there was development potential in the local work at school.

**Discussion**

The aim of this study was to explore the attitude of compulsory school staff to physiotherapeutic competence in school and in student health care. This study resulted in the theme The physiotherapist as a piece of the student health care team puzzle and was identified based on categories and subcategories.

School staff and the student health care team showed interest in knowing more about what contributions a physiotherapist might be able to make in the school. Current knowledge about and experience of physiotherapy is positive in character, and physiotherapeutic competence is seen as a needed complement to student health care today and a knowledge lift that the school and the students would benefit from. However, there are knowledge gaps about ways in which a physiotherapist can contribute, and in many cases, staff did not know how to contact a physiotherapist at work when they needed to. Lack of knowledge becomes an obstacle to future work and development. We see that as a problem that most probably could be solved in time if a physiotherapist had the opportunity to work in school and student health care.

The staff could see some obvious areas where a physiotherapist could contribute, working as part of the student health care team and also helping teachers in their daily work. The participants talked about cooperation with other professional groups, suggesting that the physiotherapist could function as a tutor or coach and come up with new ideas in different contexts. Science supports cooperation with teachers in physical education; it could be helpful in encouraging physical activity...
as a part of health promotion (Lindqvist, 2017). It is emphasized that it is important to take advantage of the students’ views, that activity should be adapted to their abilities and that they should find it enjoyable. This study confirms that new, well-thought-out ideas are appreciated by the students, and it shows the students’ perspective, which has been emphasized as important by the National Board of Health and Welfare and the Swedish National Agency for Education (The education act, 2010; The National Board of Health and Welfare, 2016).

When the participants in this study considered areas where they saw a lack of competence and a need for a physiotherapist, they talked about sitting, ergonomics and the working environment. The participants pointed out that the school is the students’ workplace and that they sit approximately seven hours every day. They felt that the work of student health care might need to be intensified and developed in just that area. The participants talked about lacking the competence to assess sitting, and classroom ergonomics and to carry out effective measures as a way to promote students’ learning. That subject is also brought up in literature (Myhr, 2015; Parry et al., 2019), where researcher account for the importance of adjustments in ergonomics and body positions linked to education and conditions for students to obtain new knowledge. Variation and individual adjustment have positive effects on students’ ability to concentrate and on their school performance. We would argue that physiotherapists, with their knowledge about the body, ergonomics and working positions, are well equipped to make individual assessments of and adjustments for students at school, thereby preventing ill health and improving possibilities for learning.

The participants brought up the topic of motor skills and the promotion of motor ability, indicating that they miss that perspective in the ongoing work. Students with impaired motor and physical ability can experience exclusion in play and teaching, according to the interviews. Physical activity and extra motor training can have a positive effect on learning ability, as has been made clear in earlier studies (Ericsson, 2008, 2011; Fernandes et al., 2016; Macdonald et al., 2018). Connections have been seen between physical activity, learning (Fedewa et al., 2013), cognition and school performance (Donnelly et al., 2016). Targeting preventive and health-promotive efforts on physical activity and motor training at school seems to result in slightly improved health, well-being and learning in students. These are effects that participants of this study also talked about. Spontaneous elements of movement and activity, such as taking breaks from sitting during lessons, were also mentioned. A physiotherapist could therefore be useful in this regard, having competence in motor skills and physical activity, and with a working assumption that everybody should be able to be active and participate on their level and regardless of their condition.

The participants talked about a holistic view on health, taking into account not only students’ school time, but recess activity and what the students do in their free time, both in and out of school.

The staff in this study talked about their good cooperation with a physiotherapist at the health care centre. The centre is close to the school and the physiotherapist is easy to reach when their expertise is required. Participants in the student health care team talked about proximity as decisive when seeking cooperation and more competence. Hiring external physiotherapist was seen as a slow process which could delay efforts to help a student. It seems that a physiotherapist connected to and working on site at the school would save time and efforts and, most importantly, be beneficial for the students. A participant talked about how presence and availability instil safety for the students. The student perspective is represented here. The participants believed having a physiotherapist in the student health care team would have good effect, and with that comes great development potential for the local work in school.

**Implications for school health policy and practice**

The participants talked about teamwork within student health care as health promoting and preventive, which is also the aim stated in the Guide for Student Health (The National Board of Health and Welfare, 2016). Physiotherapists could be participating in that work, according to the interviews in this study. The staff indicated that work with student health care could improve with physiotherapeutic competence in
the team. Researchers (Guvā & Hylander, 2011) mean that there is a gap between a rhetoric view, representing a salutogenic perspective, and the work in practice, representing a pathogenic perspective, among the different professional groups in school-based teams. The importance of understanding and will to learn more about each other’s areas of competence, for staff in student health care as well as for teachers, is emphasized. Other researchers (Boll & Boström-Lindberg, 2010) conclude that there is hidden potential in the competence of physiotherapists that could work in health promotion in schools, and that there are possibilities but also challenges that affect professionalism and working patterns of physiotherapists. We consider that a physiotherapist as a member of a student health care team and as a part of the school staff can participate in important work, as a part of a functional professional team. Physiotherapists basically have a salutogenic approach and, as participants in student health care, should strengthen and fortify visions and working methods in line with the ambitions of health promotion and prevention in school. In summary, the physiotherapist could be seen as an important piece of the student health care team puzzle, as well as the included professional groups of student health care and school today.

**Strengths and limitations**

In this study, the choice of method was a qualitative content analysis (Bryman, 2016; Graneheim & Lundman, 2004; Lindgren et al., 2020), with individual interviews. Qualitative content analysis focuses on interpretation of texts and is commonly used in health care sciences, often for review and interpretation of recorded interviews (Lindgren et al., 2020). An advantage with interviews compared with surveys is that they allow for greater depth in stories, and the interviewer can ask supplementary questions during the conversation (Graneheim et al., 2017). In design and use of the interview guide, the intention was to reflect the aim of the study. The guide was semi-structured with follow-up questions.

The interviews were conducted digitally, due to the ongoing pandemic. One interview was conducted via telephone. Body language is emphasized as an important part of interviews (Graneheim et al., 2017), and therefore there may be some disadvantage to conducting an interview via telephone as the participant cannot be observed.

The pre-understanding in this study is that the researcher/first author (L.P.) is a physiotherapist, works with children in a health care centre, and has an opinion about the desirability of including physiotherapists in schools and in student health care teams. It is pointed out that it is the participants’ voices that should be heard, not the researchers’ interpretations (Bryman, 2016; Graneheim & Lundman, 2004; Lindgren et al., 2020). However, the researcher is co-creator of the text because interviews are conducted in an interplay between researcher and participant; it is therefore a challenge to be clear about the voices being heard in different parts of the research report. During the interviews and data analysis, the aim was reconnected. The work of analysis was mirrored to the second author (R.S.), who read the transcriptions, tables of analysis and description of results. Disagreements were discussed until consensus was reached. All of this was to ensure dependability.

In a discussion paper (Lindgren et al., 2020) it is written that to bring in different perspectives on the phenomenon being investigated it is important that participants have a dispersed representation, which increases the study’s dependability. To get participants who are considered to have experience of the phenomenon studied and are willing to talk is a prerequisite for a good result, increasing the credibility (Bryman, 2016; Graneheim & Lundman, 2004; Lindgren et al., 2020). There should also be enough data to cover significant variability (Graneheim & Lundman, 2004). Participants in this study were recruited in two school units and in one student health care team, and there was a spread in occupational affiliation, gender, age, and time in the workplace. This can be thought to represent the population of school and student health care staff in these units. The decision not to include more schools or student health care units was a choice of convenience, to minimize the number of people in leader positions, and to get a picture of the situation in the current context. Data from 10 individual interviews was considered enough material to meet the aim of the study and the scope of project work. The result from the study is an impact in the current context. Although, the results’
transferability to other schools that exist under similar conditions in Sweden can be justified, it is up to the reader of this report to decide whether the findings are transferable to other conditions (Lindgren et al., 2020).

**Conclusion**

The conclusion of this study is that there is room for physiotherapists to work in schools and in student health care teams. The participants in this project could see a need for further and complementary competence, and they indicated that physiotherapeutic competence may very well be what is needed. There is a need for more research and studies in the field to explore how physiotherapists can contribute to student health care teams. Physiotherapists as a part of professional teams that work in prevention and promotion of health is an important perspective to raise in the future.

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**Disclosure statement**

No potential conflict of interest was reported by the author(s).

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