



Contents lists available at ScienceDirect

Journal of Pediatric Nursing

journal homepage: www.pediatricnursing.org

Supporting girls with painful menstruation - A qualitative study with school nurses in Sweden

Charlotte Angelhoff^{a,*}, Hanna Grundström^{b,c}^a Crown Princess Victoria's Child and Youth Hospital, and Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden^b Department of Obstetrics and Gynecology in Norrköping, and Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden^c Department of Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden

ARTICLE INFO

Article history:

Received 28 September 2022

Revised 19 November 2022

Accepted 19 November 2022

Keywords:

Adolescent
Dysmenorrhea
Pediatric nursing
School nursing
Women

ABSTRACT

Background: Painful menstruation is common among girls. To optimize school nurses' work more knowledge about their experiences of supporting these girls is needed. The aim of this study was to describe school nurses' experiences of supporting girls with menstrual pain.

Methods: Interviews were conducted with 15 school nurses in Sweden and analyzed using thematic analysis.

Results: Three themes emerged: Taking menstrual pain seriously, Being a disseminator of knowledge, and External conditions for conducting professional work as a school nurse.

Conclusion: School nurses felt competent in supporting girls with menstrual pain. However, they lacked structural, written guidelines and routines for how to treat, support, follow-up and refer girls with menstrual pain.

Practice implications: School education about menstruation and sexual health needs to be strengthened. Cooperation with other healthcare facilities and networks with other school nurses should be increased. Specific guidelines on how to support girls with menstrual pain should be implemented.

© 2022 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

Introduction

Painful menstruation is a common public health problem. A large worldwide survey reported that prevalence varied between 34% and 94% in a young population, of which up to 60% had severe pain. In more than half of the cases, menstrual pain led to recurrent school absence (De Sanctis et al., 2017). A recent Swedish study reported a prevalence of menstrual pain in 89% of girls born in the year 2000, with half of the girls experiencing that pain had a negative impact on social activities and led to school absence several times per year (Söderman et al., 2018).

According to American College of Obstetricians and Gynecologists (2018), most girls with menstrual pain have primary dysmenorrhea, meaning painful menstruation without any pathology. Secondary dysmenorrhea can, on the other hand, be caused by several pelvic pathologies, of which endometriosis is the most common. Contrary, a literature review states that around 70% of adolescent girls who seek care for menstrual pain are later diagnosed with endometriosis (Janssen et al., 2013). Endometriosis has been defined as a chronic gynecological disease characterized by the presence of tissue resembling endometrium outside the uterus, causing a chronic inflammatory reaction (World

Health Organization, 2021). Most adolescents with an endometriosis diagnosis had symptom debut before 20 years of age (American College of Obstetricians and Gynecologists, 2018) sometimes as early as at menarche (Benagiano et al., 2018; Shim & Laufer, 2020).

Adolescent endometriosis is known for its unique challenges such as diverse and diffuse symptoms and delayed diagnosis (Saridoğan, 2017; Stuparich et al., 2017). The disease often has a negative effect on several parts of life, such as physical, psychological, social and sexual health, and may result in a lower quality of life (Culley et al., 2013; Jia et al., 2012; Young et al., 2015). Young women with endometriosis are likely to be more affected by negative health consequences than older women (Lökvist et al., 2016), and seek care more frequently (Grundström et al., 2020).

The school nurse is often the first healthcare contact for school-age girls experiencing menstrual pain (Bodén et al., 2013; De Sanctis et al., 2017) – but the help offered is often solely aimed at acute pain management, i.e. receiving occasional analgesics (National Board of Health and Welfare, 2018). Yet, school nurses have an exclusive opportunity and responsibility to work actively with menstruation-related problems in order to promote students' health and well-being (Zannoni et al., 2014). The care provided by school nurses should include proper information and guidance for fast management and proper treatment of menstrual pain and possible underlying diseases. To develop and optimize school nurses' work with girls with dysmenorrhea, more

* Corresponding author.

E-mail address: charlotte.angelhoff@liu.se (C. Angelhoff).

knowledge about their experiences of supporting these girls is needed (National Board of Health and Welfare, 2018), but to the best of our knowledge, no such study has been made. Therefore, the aim of this study is to describe school nurses' experiences of supporting girls with menstrual pain.

Method

Design

This was a qualitative, descriptive interview study employing thematic analysis with an inductive and exploratory approach, focused on school nurses' experiences of encountering, talking with, and supporting girls with painful menstruation. The qualitative paradigm enables a deep understanding of the informants' experiences, perceptions, thoughts and feelings related to this particular situation (Patton, 2015).

Context

In Sweden, all schools, from kindergarten to upper secondary school, are required to have access to a school nurse and school doctor. The school health service promotes and supports the child's development towards educational goals. School nurses are registered nurses (RNs), preferably specialized in primary health care or pediatrics. They work in close cooperation with physicians, psychologists and counselors (National Board of Health and Welfare & Swedish National Agency for Education, 2016). At least every third year, the school nurses are obligated to conduct a health discussion with each student. Students with acute care needs or additional needs may come for health consultations more frequently (Garmy, 2013). Outside school, free youth clinics are available for adolescents and young adults. They can visit these clinics when they have questions about the body, sex or relationships, are feeling sad or stressed, need birth control or pregnancy tests, and/or need to be tested for or protected against sexually transmitted diseases. The youth clinics are staffed by midwives, counselors and doctors (Swedish Agency for Youth and Civil Society, 2020).

Sample and procedure

Participants were recruited in October 2020 via adverts on social media and in a magazine for school nurses. The inclusion criterion was having worked as a school nurse with 12- to 19-year-old students at compulsory and/or upper secondary school level for at least one year. Sixteen school nurses from schools all over Sweden sent emails indicating their interest in participating in the study. They were then contacted by the second author (HG), who sent written information about the study via e-mail. The school nurses emailed their informed written consent, and the interviews were then scheduled by the first author (CA), who repeated the information about the study and asked for consent to participate orally before starting the interview. One school nurse who had given written consent to participate did not respond to the two e-mails that were sent for scheduling the interview, and was therefore excluded from the study.

Ethical considerations

The study was approved by the Swedish Ethical Review Authority (reg. no. 2019-06290) and performed in accordance with the Helsinki Declaration. There were no previous relationships between the authors and the respondents.

Data collection

Fifteen interviews were conducted in October and November 2020 via phone, and audio was recorded using a downloaded application.

Table 1
Interview guide.

Can you describe your experiences of meeting girls with painful menstruation?
How common is it for girls with painful menstruation to visit your office?
What do you think when you meet girls with this kind of problem?
Which questions do you ask?
What advice and support do you usually offer?
How do you follow up their problems?
What awareness do you think that young women have about what is a "normal" level of menstrual pain, and what kind of problems they need medical help for?
What kind of support do you think they need/want?
Do young women know much about endometriosis? Is this something you talk about?
What kind of expertise is needed to meet and help girls with menstrual pain?
Which guidelines and knowledge support do you have access to in order to help them?
How do you cooperate with other medical professionals (e.g. school doctors, youth clinics, gynecologists) in this context?
Do you have any concrete advice for other school nurses when it comes to girls with painful menstruation?
Do you have any suggestions as to how your work with girls with painful menstruation could be improved?

The interviews were conducted by the first author. A semi-structured interview guide (Table 1) was used for support during the interviews, but was not followed chronologically, as the questions followed the natural flow of the conversation. Follow-up questions, probes and looping were used to gain deeper and wider information. The interviews lasted 16–41 min (median 28 min). A large amount of informative data was derived from the interviews. No new information that could exchange or change the findings of the study was found during the last four interviews.

Data analysis

The data were analyzed using thematic analysis, which is an analysis method with steps described in detail, which simplifies the analysis and strengthens trustworthiness. The method provides procedures for generating codes and themes. Codes are the smallest units of analysis that capture interesting features of the data, that are potentially relevant to the phenomenon. Codes are building blocks for themes, i.e., patterns of meaning (Braun & Clarke, 2006).

Phase 1: Familiarization with data. All interviews were transcribed verbatim by HG. The transcripts were read repeatedly by both authors to ensure familiarization with the data set.

Phase 2: Generating initial codes. Initial codes were first generated by the authors independently of each other, to enhance consistency and credibility of coding. When codes were identified they were matched with cut out data extracts that demonstrated that code.

Phase 3: Searching for themes. The codes were then collated by hand into potential themes by both authors. Thereafter, the two authors together made a first thematic map.

Phase 4: Reviewing themes. All collated extracts for each theme were re-read and considered if they appeared to form a coherent pattern. The thematic map was discussed, revised, and developed until a final map showing three themes was created (Fig. 1).

Phase 5: Defining and naming themes. The themes were reviewed and discussed until definitions and names of the themes were decided upon.

Phase 6: Producing the report. This phase involved the final analysis and write-up of the report. Both authors contributed to the writing of the manuscript.

Qualitative rigor

Rigor, or trustworthiness, of qualitative research can be divided into four domains: credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985). The first author (CA) is a registered

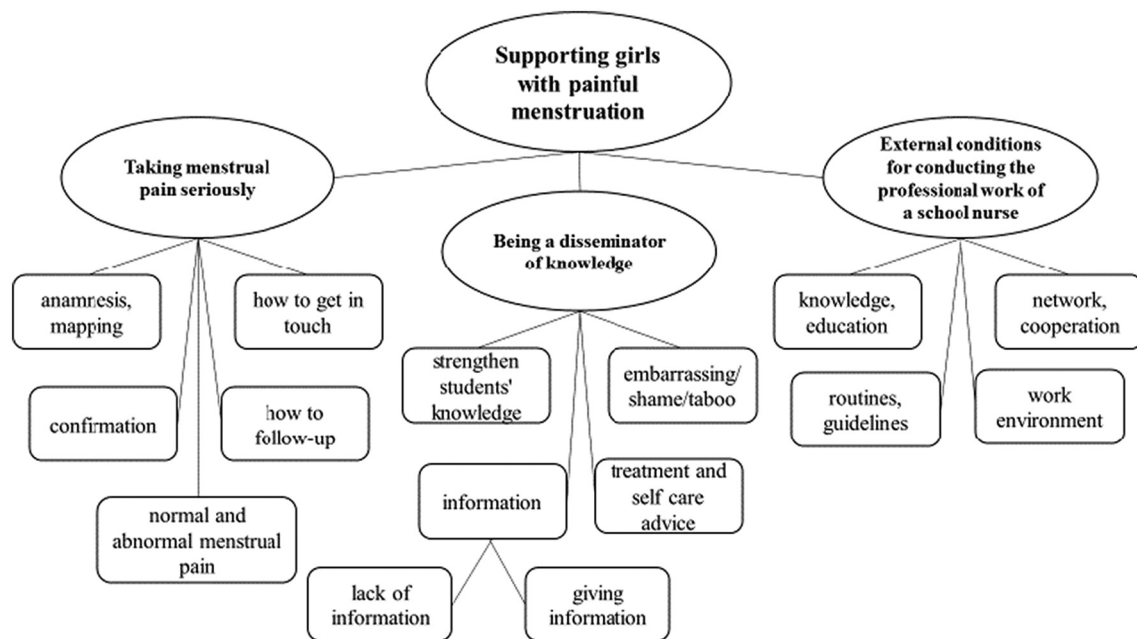


Fig. 1. Final thematic map, showing three main themes.

nurse specialized in pediatric nursing and the second author (HG) is a registered midwife with extensive knowledge of dysmenorrhea and endometriosis. Both authors have prior experience in conducting qualitative research and in the used methodology, which strengthens the credibility of the study. To avoid reflection of any potential pre-understanding of the phenomenon during the interviews, they were conducted by CA. Further, activities such as prolonged engagement, persistent observation and researcher triangulation increases the credibility of this study. In terms of transferability, the context of school nursing in Sweden, and the inclusion of school nurses from different parts of the country, with various work experience and educational level, have been carefully described. Findings from qualitative studies are not intended for generalization, but it is up to the reader to make their own assessments of whether the findings may be transferable to school nurses in similar contexts.

Dependability is strengthened by the thoroughly described research process. To ensure confirmability, quotes from the interviews were translated into English by a professional translator. They are used in the results to provide an immediate and vivid sense of what the theme is about and to demonstrate that findings are clearly derived from the data.

Results

In total, 15 school nurses, 14 female and one male, participated in this study. The nurses worked at compulsory schools with students aged 6–15 years, and upper secondary schools with students aged 16–19 years, in both rural and urban areas, from northern to southern Sweden. The number of students at the schools varied between 150 and 1050 (median 400). Thirteen of the school nurses were RNs with master's-level training in public health and/or child and adolescent health. Two of these school nurses were also midwives. One school nurse was an RN with master's-level training in pre-hospital emergency care, and one was an RN without further specialist education. Their median age was 48 (range 36–58 years), with a median of 22 years (range 11–35 years) of work experience as RNs, including a median of five years of work experience as school nurses (range 3–20 years) (Table 2).

Three themes were identified to describe school nurses' experiences of supporting girls with menstrual pain: taking menstrual pain

seriously; being a disseminator of knowledge; and external conditions for conducting the professional work of a school nurse. The names used in the report are fictitious to ensure respondent confidentiality.

Taking menstrual pain seriously

The school nurses had many experiences of supporting girls with menstrual pain, and this was considered as an important matter and part of their health promoting work. The situations in which they talked about menstruation with the girls varied. For some girls, the school nurse booked appointments with the girls who sought help so that they could sit down and talk undisturbed. However, more commonly, the girls came to the nurses and asked for analgesics during school time. Sometimes they wanted to stay and talk to the nurse, while others just “flitted in” between classes. Another way to talk to girls about menstruation was during the obligatory health discussions in grade 8 (compulsory school) and grade 1 (upper secondary school), which included questions about menstruation.

The nurses highlighted the importance of taking the girls' pain and worries about menstruation seriously. They talked about supporting girls at an individual level and the importance of listening to the girls and to confirm their pain:

Taking them seriously. Like, listening to them. Really giving them the care they need. Because it really does hurt a lot. That's how it is. When you're in pain, you need somebody to take good care of you. And it might be that you, you know, really show empathy and understanding. (Karin)

During the visits, the school nurses wanted to thoroughly investigate the menstrual problems by asking about frequency and duration of menstruation, pain intensity, and if the girls' activity levels or school-work were affected. By asking these questions, the school nurses tried to distinguish between what they called “normal and abnormal menstrual pain”. They described normal pain as a slightly occasional menstrual pain that could be relieved by either over-the-counter analgesics such as paracetamol or NSAID, or by non-pharmacological treatment such as a heated wheat pillow, rest, or slight physical activity. For some girls, analgesics were enough to ease the pain, while others needed more care, for example comforting talk and having a lie down:

Table 2
Participant characteristics.

Name	Age	Education	Working experience as RN (years)	Working experience as school nurse (years)	Type of school	Number of students (in total)
Anna	49	Primary Health Care	15	4	Grade 0–9 (compulsory school)	650
Jonna	49	Primary Health Care	20	7	Upper secondary school	200
Fredrik	51	Pre-hospital Emergency Care	27	3	Grade 4–7 (compulsory school)	380
Elisabeth	58	Primary Health Care	35	3	Upper secondary school	400
Sarah	46	Primary Health Care	22	10	Grade 4–9 (compulsory school)	320
Karin	56	Primary Health Care	32	20	Upper secondary school	510
Susanne	48	Primary Health Care	26	7	Grade 0–9 (compulsory school)	470
Emma	44	Primary Health Care	22	6	Grade 6–9, (compulsory school)	300
Lena	47	Midwife, School nursing	15	4,5	Upper secondary school	750
Ingrid	55	Pediatric Care	32	9	Grade 6–9 (compulsory school)	400
Louise	47	Primary Health Care	13	5	Upper secondary school	370
Linda	36	Pediatric Care	11	5	Upper secondary school	350
Sophie	36	Pediatric Care	13	7	Grade 7–9 (compulsory school)	150
Catrin	53	RN ^a	29	6	Upper secondary school	570
Anette	47	Midwife, Primary Health Care	23	5	Grade 0–9 (compulsory school)	1050

The names are fictitious to ensure respondent confidentiality.

^a No master's-level training in specialist nursing.

They say they're in pain... those who come to us. 'Do you have any painkillers?' But then there are some who are a bit weepy or have burst into tears and all that... they sit down in the office and we talk a little about how things are, how they feel, and all these questions... if you're relaxed and talk and ask questions, they usually relax a bit themselves, and stop crying, without me having given them a painkiller... the conversation can help them be less upset and sad. (Lena)

Abnormal menstrual pain was described as a persisting pain lasting for several days before, during or after menstruation, often in combination with nausea, tiredness and difficulties in micturition and defecation. Recurring absence from school due to menstrual pain was also considered abnormal. There was a prior understanding among the school nurses that intense dysmenorrhea could be a symptom of endometriosis, and they were alert to these symptoms. Some of the nurses had personal experiences of endometriosis, or knew a relative or friend who had it, whereas others had heard about the diagnosis in media or at conferences:

maybe you've got period pain for a day or two before, and after one or two days of your period, it really gets more intense, when the womb really cramps to get out all that mucosal tissue. That's more normal, I reckon. But if you need to lie down, or you're ill or something, or if you really feel dreadful – I don't think that's normal. (Louise)

Although the school nurses took menstrual pain seriously, only a few arranged a follow-up meeting afterwards. Some school nurses asked the girls to come back on their own initiative, but did not seek out the girls if they did not show up. When the question about follow-up came up during the interviews, several school nurses began to reflect on how to improve this, and it was agreed that this should be done to a larger extent. Often, the absence of follow-up was due to lack of time, but also a fear of embarrassing the girls by contacting them at school. When they did follow up the girls, they used to set a reminder in the medical record system, and sent a text to the student, to handle it discreetly. Most nurses used to follow up the students who had severe problems, high school absenteeism and/or had been referred to other health care services. However, this was not consistent.

If I... er, send them over to, like, the next youth clinic or gynaecologist clinic, then I can, of course, if possible, get in touch with them and ask them how it went? But most of the time I've actually just taken it for granted, that they've, that I've just sent them

on their way, and assumed that now they're going to get help for this from the youth clinic. (Karin)

Being a disseminator of knowledge

The role of a disseminator of knowledge was a recurrent theme. Some nurses experienced that the girls – especially the younger ones – had poor knowledge of their bodies and menstrual cycle, and that the subject was embarrassing to talk about. Other nurses thought that the girls were well informed and prepared, and that technology such as mobile applications helped the girls to keep track of their menstrual cycle. There was a consistent opinion among the nurses that sexual health education in school needed to be improved. However, they indicated that many schoolteachers did not have the right skills to educate the students about sexual health and reproduction. Some nurses organized small groups with the students to educate them and talk about body development and sexual behavior.

The school nurses found it important to talk about menstruation, but experienced that it was not always natural for the girls. For some girls, it was a sensitive and embarrassing subject, while others talked freely about it. In order to make girls feel less embarrassed, the nurses tried to signal that talking about menstruation is okay. They tried to normalize the subject by putting up posters in their rooms, offering brochures and giving out free pads.

One of the nurses was male and he had reflected on the fact that this could influence how girls would seek him out for their menstrual problems:

... when I first took the school nurse job at [name of school], I said it might be a problem, because I'm a man, and they'll come and talk about their problems with periods and their growing breasts and all that. But it only took two weeks before a girl came and stood in the doorway and started shouting about her period pain. And I said "close the door and come in. What do you want?" So I think that they've been quite open in talking about their period problems. (Fredrik)

The nurses experienced that several girls found talking about their menstruation-related symptoms uncomfortable, especially when it came to pain during intercourse or pain during defecation. The nurses also described how some girls with other cultural or ethnic backgrounds could find it hard to talk about menstruation and their bodies within the family, as the subject was shameful and taboo. The school nurses knew that contraceptives were the first choice of treatment for dysmenorrhea

and potential endometriosis, but they reported that many parents did not have this knowledge. To them, contraceptives were directly related to sexual acts and thereby implausible.

Almost all nurses lacked information, such as material and brochures, about puberty and the menstrual cycle to give to the students. Some of them used government promoted websites, but they also wished for non-digital material for the girls to read whenever they wanted. A paper brochure about menstrual pain could also be used to initiate a conversation about menstruation and normalize the topic.

I think it can be good for them to get information. It's good that we talk about this, discuss it a little, and that they get something to take and read at home, and that you can then follow up on it again, and think "what can we do?", "what do you think?", "what do we think?" and so on. (Ingrid)

When the school nurses were consulted by girls because of menstrual pain, they tried to encourage the girls to stay in school and participate in activities to the best of their abilities. They often gave the girls paracetamol and ibuprofen to cope with pain, but they experienced that many girls were afraid of overdosing. Therefore, they found it important to inform them about the right dose and to encourage them to take the drugs regularly to avoid breakthrough pain. The girls also received self-care advice such as using warm wheat pillows and performing light physical activity to ease the pain. They made sure that the girls had listened and understood the information before they left the room.

[It] depends a lot on how much pain they're in. I don't tell all of them to go out for a walk, since you can't do that if you're really in pain. But it's more like, um, how they should take painkillers, and general things like heated cushions, trying to go out for walks but walking slowly, and if that's too hard then just get out and get a bit of air, meet up with friends, just do something, but in a more relaxed way, if they don't have the energy for a proper walk. Probably the main thing I check is whether they've correctly understood how to take their painkillers. (Linda)

When girls came to the nurses for help with recurrent menstrual pain, some of the nurses gave information about endometriosis and related symptoms, while others were more reluctant when they talked about possible causes of the pain. When they perceived that the symptoms could be caused by endometriosis and that the girls needed to be further examined, they advised the girls to visit the local youth clinic or the primary health care center. They encouraged the girls to seek help by themselves, but sometimes they helped them to call and make appointments. They expressed that they, as school nurses, were not the ones to make a diagnosis, nor had they the authority to prescribe contraceptives.

As I said, we go through the symptoms, and I tell them that they need to get help with this because it's important, it can affect future pregnancy, and it can affect the whole quality of life, and you might throw up and faint once a month, and it leads to a lot of absence from school and that kind of thing. It has a huge effect of course. So I try to get them help at a youth clinic, and as far as I know all of them have gone and got help there. (Jonna)

External conditions for conducting the professional work as a school nurse

The school nurses described internal as well as external conditions related to their ability to conduct their professional work. They experienced that they were unique in their professional role at their workplace and were proud of their position. It was not uncommon for teachers to come to the school nurse for advice on the handling of students; however, school nurses seldom went to the teachers to discuss students.

The nurses considered medical and nursing knowledge to be essential in their professional role. Without the right knowledge, they would not be able to give correct advice or refer the girls to other care services. They had basic knowledge about reproductive health such as the menstrual cycle and changes during puberty. However, some school nurses wished for deeper knowledge. It was essential for them to be up to date with the latest health topics discussed on, for example, social media, and to update themselves with the latest evidence in nursing practice – although they were sometimes unsure of where to receive that knowledge.

Participation in networks with other school nurses was appreciated. Both smaller networks with school nurses in the same area and larger national networks were mentioned. In networks with other school nurses they could meet, talk, exchange experiences and keep themselves up to date on the latest findings regarding menstrual pain and reproductive health. Special education days and lectures from youth clinics were also appreciated for gaining deeper knowledge about menstrual pain.

But, actually, we're going to have a meeting together this month, all the school nurses and those who work with youth health in our municipality, to, like, talk about lots of things including this. There are lots of developments in contraceptives, and what we learned when we trained to be school nurses or district nurses, or any other kind of basic training – maybe that's not so relevant anymore. So we're going to try and collaborate a bit more effectively. (Louise)

One nurse expressed that she wanted to do a whole-day study visit at the youth clinic and other clinics. She wanted to learn about their routines and to get inspiration for how to talk to and inform girls about menstrual pain. Afterwards, she could also inform students about what would happen if they were referred to other clinics.

The school nurses described that they had written routines for other medical conditions that helped them to inform the students and families, but they lacked knowledge, support, and routines about informing about menstrual pain. This led to inconsistent information given to the girls and the families, and information and advice could differ between the schools depending on the school nurse's knowledge and experience. There was a wish for general guidelines and routines for all school nurses. They asked for a general manual to follow, a flow chart or a point-to-point list of questions to tick off and guidelines on what to do with the answers they received.

Let's say that a pupil has headlice, at this school, we say yes, we know what the school will decide to do. Yep, we ring to the guardian, and the child is sent home straight away. That's what we do here at this school. And the question is whether there's anything we can do on that front. If there's a pupil who says X, Y, Z. Do they have period pain? Yes. Then we have this routine in place. That we help out. That all pupils get the same treatment and receive the same information. Regardless of whether it's me you come to or my colleague at another school. (Anette)

Discussion

Our results revealed that the school nurses often met girls with menstrual pain and that, overall, they felt competent in giving advice and caring for these students. They emphasized the importance of taking the pain seriously and considered themselves as important disseminators of knowledge when it came to menstrual pain and other aspects of reproductive and sexual health. However, they wished for structural, national guidelines with written routines for how to treat, support, follow-up and refer girls with problems related to menstruation.

The school nurses experienced that there was a considerable variation in girls' knowledge and experiences of menstrual pain. They found it important to meet the girls at an individual level and to talk

to them based on their current knowledge level. The need for an individualized approach when talking to students has been recognized before (Golsäter et al., 2010; Wigert et al., 2021; Yetwin et al., 2018). Wigert et al. (2021) concluded in their interview study that school nurses who met students with recurrent pain benefited from shifting from traditional knowledge transfer to dialogues with students. If the nurses actively listened to the student's narratives and invited the student to take part in the health plan, the relationship with the student was strengthened (Wigert et al., 2021). In our study, most school nurses described how they tailored the conversation about menstruation to each individual, but they did not reflect much upon the partnership with the girls, nor did they seem to strive for collaborative care. They were more focused on "solving the medical problem" than on relational aspects with the students.

The variation in knowledge about menstruation and menstrual pain among young women has been recognized before (Randhawa et al., 2021; Seear, 2009), and an urgent need for improved menstrual health education was recently demonstrated in the UK (Randhawa et al., 2021). A common concern from students is that menstrual health education is too abstract and focused on biological aspects, when students are in more need of information about how to distinguish between "normal" and "abnormal" menstruation (Beausang & Razor, 2000; Newton, 2016; Seear, 2009). If girls are not provided with adequate information about menstrual characteristics, they are at risk of normalizing symptoms for which they should be seeking help (Bodén et al., 2013; Grundström et al., 2018). When supporting girls with menstrual pain, the school nurses in this study tried carefully to map out where the pain was located on the "normal to abnormal" spectrum. Most nurses felt competent enough to ask "the right questions" and to give adequate information about menstrual pain, but they acknowledged a lack of deeper knowledge about menstrual irregularities, gynecological illness and hormonal contraceptives. They also reflected on the lack of written guidelines to support them in the treatment, support, follow-up and referral of girls with problems related to menstruation. Our results partly contradict Sweeney et al. (2022), who concluded that elementary school nurses in Minnesota felt unprepared to teach menstrual health and hygiene to their students (Sweeney et al., 2022). Furthermore, important aspects that were revealed and described as challenging by Sweeney et al. (2022) were not considered by the nurses in our sample. For example, no one talked about transgender competency training regarding menstrual health.

It is interesting to view our results in the light of those of Bodén et al. (2013), who asked adult women with endometriosis about their experiences of consulting school nurses about endometriosis symptoms during their adolescence. Their common experience was that school nurses had failed to support them and that the nurses lacked competence related to menstrual pain and the detection and treatment of menstrual pain and endometriosis (Bodén et al., 2013). However, the women included in that study were born between 1983 and 1990 (Bodén et al., 2013), and the public conversation and knowledge about menstruation, menstrual problems and endometriosis have changed a lot in Sweden during the past 20 years. For example, there have been information campaigns aimed at decreasing the taboo surrounding menstruation led by different actors, such as governmental services and social media influencers, and the Endometriosis Patient Association have organized marches and demonstrations to increase knowledge about endometriosis. Therefore, it is reasonable to believe that today's school nurses may be more able to live up to students' expectations of support and competence regarding these topics, as demonstrated in our results.

The school nurses recognized that many girls were uncomfortable in talking about menstruation, which has been shown before (Randhawa et al., 2021; Seear, 2009). In addition, it has been argued that women of all ages actively hide problems related to menstruation because of the stigma associated with it (Seear, 2009). The school nurses used different strategies to try to decrease the menstrual taboo. They also performed menstrual education in small groups of students, which

corresponds to Randhawa et al. (2021), who claim that student's healthcare should provide safe spaces for girls to discuss menstruation from a personal perspective, including both biological and socio-psychological factors (Randhawa et al., 2021).

The school nurses felt unique in their professional role at their workplace, but also highlighted the need for collaboration with other school nurses. There is often only one school nurse working at each school, which makes it impossible to discuss day-to-day issues regarding care and assessments. Therefore, the networks with other school nurses were appreciated by the nurses and enriched their professional development and gave support in complex situations. School nurses' need for collegial support from other school nurses has been reported before (Jönsson et al., 2019; Spratt et al., 2010), and Spratt et al. (2010) described how school nurses were both part of the school staff and felt excluded (Spratt et al., 2010).

Most school nurses had an awareness of endometriosis and the typical symptoms of the disease. They also showed an understanding of the important role of student healthcare in detecting girls with early symptoms of endometriosis and referring them to proper care. Symptoms of endometriosis among girls are often normalized and trivialized, which explains the delay in diagnosing and treating the condition (Bodén et al., 2013; Grundström et al., 2020; National Board of Health and Welfare, 2018). Hopefully, the results of this study will be read by school nurses and thereby contribute to the awareness of endometriosis. The results also suggest facilitators and barriers to discussing menstrual pain with girls in a school context and could be helpful in determining a starting point for what would be important to address in any future guidelines.

Practice implications

Our results provide an improved understanding of the important work of school nurses in regard to girls with menstrual pain. We identified several areas for improvement that could contribute to improved support and treatment for girls with menstrual pain: 1) school nurses could initiate more frequent conversations about menstruation and menstrual pain in order to increase girls' knowledge about menstruation. These conversations should include the girls' individual experiences of menstruation and not only focus on biological aspects. The conversations could be performed both in groups and during one-to-one consultations, in order to individualize information and support; 2) Cooperation with other healthcare facilities, such as youth clinics and primary care settings, as well as national networks with other school nurses, should be increased. The school nurses would benefit from having structured national guidelines and specific routines for how to care for girls with menstrual pain, which could facilitate the treatment and diagnosis and lead to more equal care; 3) The school nurses need appropriate material about menstruation, menstrual pain and self-care strategies, such as brochures or pamphlets adapted to the students' ages, to hand out to students who come to them for menstrual problems.

Future research should include girls' experiences of seeking medical advice for menstrual pain. Furthermore, it would be valuable to develop and validate an instrument with structured guidelines on how to support and care for girls with menstrual pain.

Limitations

The recruitment of participants through advertising may have led to selection bias in favor of school nurses who were particularly interested in menstrual problems and reproductive health, which is a limitation of the study. The wide range of participants' ages, education, work experience and the geographical spread are strengths of the study. Additionally, our sample included a male school nurse, which is rare.

Conclusion

The school nurses felt competent in supporting girls with menstrual pain but experienced that the girls lacked basic knowledge about their reproductive health. The nurses inquired structural, written guidelines and routines for how to treat, support, follow-up and refer girls with menstrual pain. Additionally, they wished to increase the cooperation with other healthcare facilities.

Funding

This research received no funding.

Author contributions

Charlotte Angelhoff: Conceptualization, Methodology, Data Curation, Formal Analysis, Writing - Original Draft.

Hanna Grundström: Conceptualization, Methodology, Data Curation, Formal Analysis, Writing - Original Draft.

Declaration of Competing Interest

None.

Acknowledgments

A warm thank you to all the participating school nurses.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.pedn.2022.11.022>.

References

- American College of Obstetricians and Gynecologists (2018). Dysmenorrhea and endometriosis in the adolescent. *ACOG Committee Opinion*, 760.
- Beausang, C., & Razor, A. (2000). Young Western women's experiences of menarche and menstruation. *Health Care for Women International*, 21(6), 517–528.
- Benagiano, G., Sun-Wei, G., Puttemans, Gordts, S., & Brosens, I. (2018). Progress in the diagnosis and management of adolescent endometriosis: An opinion. *Reproductive Biomedicine Online*, 36(1), 102–114.
- Bodén, E., Wendel, C., & Adolfsson, A. (2013). Adolescents with endometriosis: Their experience of the school health care system in Sweden. *British Journal of School Nursing*, 8(2), 81–87.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Culley, L., Law, C., Hudson, N., Denny, E., Mitchell, H., Baumgarten, M., & Raine-Fenning, N. (2013). The social and psychological impact of endometriosis on women's lives: A critical narrative review. *Human Reproduction Update*, 19(6), 625–639.
- De Sanctis, V., Soliman, A., Elsedfy, H., Soliman, N., Soliman, R., & El Kholi, M. (2017). Dysmenorrhea in adolescents and young adults: A review in different country. *Acta Bio-Medica: Atenei Parmensis*, 87(3), 233–246.
- Garmy, P. (2013). School nursing: The picture in Sweden. *Community Practitioner*, 86(8), 38–39.
- Golsäter, M., Sidenvall, B., Lingfors, H., & Enskär, K. (2010). Pupils' perspectives on preventive health dialogues. *British Journal of School Nursing*, 5(1), 26–33.
- Grundström, H., Alehagen, S., Kjølhed, P., & Berterö, C. (2018). The double-edged experience of healthcare encounters among women with endometriosis: A qualitative study. *Journal of Clinical Nursing*, 27(1–2), 205–2011.
- Grundström, H., Hammar Spagnoli, G., Löfvqvist, L., & Olovsson, M. (2020). Healthcare consumption and cost estimates concerning Swedish women with endometriosis. *Gynecologic and Obstetric Investigation*, 3, 1–8.
- Janssen, E. B., Rijkers, A., Hoppenbrouwers, K., Meuleman, C., & D'Hooghe, T. (2013). Prevalence of endometriosis diagnosed by laparoscopy in adolescents with dysmenorrhea or chronic pelvic pain: A systematic review. *Human Reproduction Update*, 19(5), 570–582.
- Jia, S.-Z., Leng, J.-H., Shi, J.-H., Sun, P.-R., & Lang, J.-H. (2012). Health-related quality of life in women with endometriosis: A systematic review. *Journal of Ovarian Research*, 5(1), 29.
- Jönsson, J., Maltestam, M., Bengtsson Tops, A., & Garmy, P. (2019). School nurses' experiences working with students with mental health problems: A qualitative study. *The Journal of School Nursing: The Official Publication of the National Association of School Nurses*, 35(3), 203–209.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Löfvqvist, L., Boström, P., Edlund, M., & Olovsson, M. (2016). Age-related differences in quality of life in Swedish women with endometriosis. *Journal of Women's Health*, 25(6), 646–653.
- National Board of Health and Welfare (2018). Nationella Riktlinjer För Vård Vid Endometriosis (Artikelnummer 2018–12- 27). <https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikkelkatalog/nationella-riktlinjer/2018-12-27.pdf>.
- National Board of Health and Welfare & Swedish National Agency for Education (2016). Vägledning För Elevhälsan. (Artikelnummer 2016-11-4). <https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikkelkatalog/vagledning/2016-11-4.pdf> Accessed 2022-11-07.
- Newton, V. L. (2016). *Everyday discourses of menstruation: Cultural and social perspectives*. London: Macmillan Publishers Ltd.
- Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). Thousand Oaks, CA: Sage Publications.
- Randhawa, A., Tufte-Hewett, A., Weckesser, A., Jones, G., & Hewett, F. (2021). Secondary school girls' experiences of menstruation and awareness of endometriosis: A cross-sectional study. *Journal of Pediatric and Adolescent Gynecology*, 34(5), 643–648.
- Sarıdoğan, E. (2017). Adolescent endometriosis. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 209, 46–49.
- Seear, K. (2009). Social science & medicine the etiquette of endometriosis: Stigmatisation, menstrual concealment and the diagnostic delay. *Social Science & Medicine*, 69(8), 1220–1227.
- Shim, J., & Laufer, M. (2020). Adolescent Endometriosis: An Update. *Journal of Pediatric and Adolescent Gynecology*, 33(2), 112–119.
- Söderman, L., Edlund, M., & Marions, L. (2018). Prevalence and impact of dysmenorrhea in Swedish adolescents. *Acta Obstetrica et Gynecologica Scandinavica*, 98, 215–221.
- Spratt, J., Philip, K., Shucksmith, J., Kiger, A., & Gair, D. (2010). 'We are the ones that talk about difficult subjects': Nurses in schools working to support young people's mental health. *Pastoral Care in Education*, 28(2), 131–414.
- Stuparich, M., Monnellan, N., & Sanfilippo, J. (2017). Endometriosis in the adolescent patient. *Seminars in Reproductive Medicine*, 35(1), 102–109.
- Swedish Agency for Youth and Civil Society (2020). YOUUMO - online youth guidance centres in different languages. <https://www.youmo.se/en/> Accessed 2022-11-07.
- Sweeney, E., Fisher, C., & Adkins, M. (2022). Elementary school nurses' perceptions regarding menstruation education: An exploratory study. *Journal of School Nursing*, 1–6.
- Wigert, H., Fors, A., Nilsson, S., Dalenius, K., & Golsäter, M. (2021). A person-centred approach when encountering students with recurrent pain: School nurses' experiences. *Journal of School Nursing*, 37(4), 249–258.
- World Health Organization (2021). Endometriosis. <https://www.who.int/news-room/fact-sheets/detail/endometriosis> Accessed 2022-11-07.
- Yetwin, A., Mahrer, N., John, C., & Gold, J. (2018). Does pain intensity matter? The relation between coping and quality of life in pediatric patients with chronic pain. *Journal of Pediatric Nursing*, 40, 7–13.
- Young, K., Fisher, J., & Kirkman, M. (2015). Women's experiences of endometriosis: A systematic review and synthesis of qualitative research. *The Journal of Family Planning and Reproductive Health Care*, 41(3), 225–234.
- Zannoni, L., Giorgi, M., Spagnolo, E., Montanari, G., Villa, G., & Seracchioli, R. (2014). Dysmenorrhea, absenteeism from school, and symptoms suspicious for endometriosis in adolescents. *Journal of Pediatric and Adolescent Gynecology*, 27(5), 258–265.