

Informational and instrumental support related to menstruation: adolescents' perspective

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ABSTRACT

Adolescent girls can experience puberty and menstruation in their school environment, especially when they decide to study in a boarding school for girls. The study aimed to describe the adolescent perception of informational and instrumental support related to menstruation. The descriptive study was conducted at a single institution-boarding school for girls in East Java, Indonesia. There were 236 students in junior high school were asked to fill out a questionnaire. Absenteeism due to menstruation was experienced by 35 students with 1-2 days of absence. In terms of informational support, more than 50% of students received information related to menstruation from their teachers. The school did not provide materials on menstrual hygiene on the toilet walls. In terms of instrumental support, most adolescents reported that clean water was available but soap for washing hands was not always available. Closed trash cans and access to a sanitary pad are available. According to most of the adolescents, the latrines in their school were easy to clean, but there were still around 10% who stated that the latrines were difficult to clean. Schools need to evaluate and improve support for students who are menstruating at school. Teachers' knowledge of reproductive health is a major concern.

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1. INTRODUCTION

Adolescence is a crucial period in human growth. There is a period of puberty that marks a change from childhood to adulthood. Puberty is the most difficult stage in human growth and development. Adolescents who go through puberty will experience many physical and psychological changes very quickly [1]. The physical changes of puberty have an important meaning for the psychological and social functioning of adolescents and between factors are interrelated [2]. The interrelatedness of several aspects of adolescence makes adolescence also have the risk of various disorders that can carry a high burden of disease throughout life. This incident shows that there is a need for intervention and prevention of problems experienced by adolescents during puberty [3].

Menstruation is a stage in adolescents regarding their reproductive health. Healthy menstruation is a provision for long-term maternal health. In adolescence, there is the term menarche which means the first menstruation, and during that period, adolescents need knowledge related to their reproductive health and how to manage it. In addition, menstrual health is an integral part of overall health [4]. Menstruation means a

new phase and a new vulnerability in a teenager's life. There are many problems faced by adolescents during their menstrual period, including problems with access to hygiene during menstruation and several other stigmas in society [5].

Although menstruation is a physiological normal in a woman's life, if not managed safely, it can interfere with daily activities or can cause health problems [6]. Maintaining the cleanliness of the reproductive organs, including hygiene during menstruation for women and girls or menstrual hygiene management between menarche and menopause is an important aspect [7]. There are many social, cultural, and religious boundaries that become the main obstacles in ensuring women's health and hygiene during menstruation. Many problems are faced, especially in rural areas, involving the readiness of girls to face their menstruation therefore they are faced with problems at home, school, and work including in terms of hygiene [8]. The phenomenon that occurs is also that there is a lot of absenteeism in schools related to menstruation.

There are teenagers in Indonesia who decide to grow up in an Islamic Boarding School environment. This school is considered an important solution to integrate formal education and deepen religious knowledge. The condition causes young girls to spend their time participating in daily activities in the school environment and living in a dormitory or cottage. Pesantren are schools that have dormitories, where students live and learn in the school environment. Therefore, all kinds of living needs and learning needs are provided by the school [9]. The aspect of reproductive health is an important phase and needs to be well understood by adolescents, including adolescent girls in the islamic boarding school environment.

Based on the results of the preliminary study, some students did not attend school because they were menstruation. They also complain of problems such as vaginal discharge and other reproductive health complaints such as dysmenorrhoea to their teacher. They also conveyed the lack of information at school about their reproductive health. Boarding schools for girls should provide better support for adolescent girls in their reproductive health than public schools. The study aimed to explore adolescent perspectives on boarding school support regarding menstrual and reproductive health. The results of this study can be a reference for evaluating the learning process, a reference for reproductive health interventions in Islamic boarding schools, and providing insights that support adolescent menstrual hygiene behavior so therefore adolescents can be healthier in their reproduction.

2. RESEARCH METHOD

This descriptive study was conducted in a single school-Islamic Boarding School for girls in East Java, Indonesia. The survey was conducted in August 2021. This study involved all students in the school. Student who was absent at data collection was removed from the list of respondents. A total of 236 students were involved in this study.

With the permission of the school authority, data were collected using a self-administered semi-structured questionnaire. This questionnaire was compiled from an adaptation of an instrument that was validated in previous research, namely the research of Hayam *et al.* and Aditi *et al.*, and used recommendations from UNICEF for the assessment of facilities in schools that support menstrual hygiene [10], [11]. The questionnaire was modified to suit the current research objectives. This questionnaire was previously prepared in English and at the time of its use as a research instrument, the questionnaire was translated into Indonesian. This questionnaire was also pre-tested and modified according to the feedback from the participants. Validity and reliability test of the instrument conducted on students in other schools and has been declared valid and reliable. The questionnaire consisted of general demographic data, menstrual data, knowledge data, absenteeism, and school support data. Adolescent knowledge about menstruation is evaluated by giving one point for the correct answer and zero for the wrong answer, then the score is calculated. The total score for the knowledge section is ten. The total score for knowledge is classified as follows: good=score 8, moderate=score 4-7, poor=score <4. The forms of support studied in this study are informational and instrumental support. Instrumental support is the provision of tangible assistance and services that directly assist. Informational support is the provision of advice, suggestions, and information that can be used to solve problems. The data obtained were analyzed descriptively through frequency distribution data. This research was conducted through an ethical test process at the Faculty of Medicine, Universitas Airlangga, Indonesia number 269/EC/KEPK/FKUA/2021.

3. RESULTS AND DISCUSSION

This study involved 236 students and found that most of them were 11-13 years old, already had menstrual experience, and the duration of menstruation was 3-7 days. These results are in agreement with a study by Omidvar *et al.* who found that more than half of them reported duration of menstrual blood flow of 5-6 days and 12% of participants had menstrual flow >7 days [12]. In this study, it was found that two

students had a menstrual duration of more than seven days. They have a longer bleeding period (>6 days) and this has practical implications as it makes these adolescents potentially more susceptible to iron deficiency anemia [13]. Research conducted by De Sanctis *et al.* found that the average duration of menstrual flow was between 4 to 6 days, with a normal range from 2 to 8 days and the average blood loss per menstrual cycle was 25-30 mL [14].

Most of the students stated that the first age they experienced menstruation or called menarche was at the age of 10-14 years. This result is not different from the study conducted by Omidvar *et al.* in India which found that the mean age of menarche was 13 ± 1.1 years in India with a greater variation in 10-17 years [12]. Various factors influence the occurrence of menarche. Age at menarche correlates with body mass index-for-age and the waist-height ratio [15]. Research examining 10,050 school-going girls found that the median age at menarche was 12.4 years. Girls who reached menarche were found to be taller and heavier with a higher body mass index (BMI), and have a larger waist and hip circumferences compared to their pre-menarche counterparts. Girls with low socio-economic status (SES) experience delayed onset of menarche compared to those with medium/high SES [16]. In developed countries, the median age for menarche remains relatively stable-between 12 years and 13 years-across well-nourished populations. Environmental factors, including socioeconomic conditions, nutrition, and access to preventive health care, can influence the timing and development of puberty [17].

More than half of the students said they had a range of 21-35 days in their menstrual cycle but there were still many students who complained about the erratic menstrual cycle. Another study found that 73.1% had a cycle duration of 21-35 days. Menstrual cycles tend to be shorter in early adolescence [12]. Certain ethnicities can have an impact on menstrual abnormalities, although in general menstrual disorders, especially oligomenorrhea, often occur in Indonesian adolescents. Oligomenorrhea is more common in Chinese girls than in Javanese or Arab girls [18]. This should be of concern because adolescent girls with persistent oligomenorrhea, in the first two years from menarche, have a higher risk of persistent menstrual irregularities [13]. Menstrual cycle disorders have a significant relationship with body mass index and body fat percentage [19]. In addition, the quality of sleep also affects the menstrual cycle. Adolescents are at risk of experiencing menstrual cycle disorders 2.05 times if they have poor sleep quality and 2.26 times if they are stressed [20].

Almost all of them get information about menstruation before they experience menstruation. The results of the assessment of adolescent knowledge found that most of the adolescents are in the moderate to good category. This result is different from the study conducted by Coast *et al.* which found that girls had less knowledge about menstruation; Menarche as a trigger for girls to learn about menstruation is common. Young teenage girls are less ready for puberty and menstruation [21]. Other studies have also found this, where young women in low- and middle-income are often uninformed and unprepared for menarche. Information mainly obtained from mothers and other female family members is not necessarily well equipped to fill gaps in girls' knowledge [22].

Mood changes are the most common complaints. The menstrual cycle affects the integration of emotional and cognitive processing in all women. Stress levels are mediated by the phase of the menstrual cycle and occur in women with premenstrual syndrome (PMS) [23]. Women with PMS appear to have a dysregulation of emotion-like traits throughout the menstrual cycle [24]. In addition, the complaints that are often experienced are complaints of weakness, dysmenorrhea, and dizziness. Weakness may be related to heavy blood loss. Research conducted by Omidvar *et al.* found that 30.1% of the 536 respondents reported heavy blood loss. There were 66.8% experienced dysmenorrhea and no difference was observed between early and late adolescents [12]. The duration and volume of menstruation and adolescent social life were significantly correlated with dysmenorrhea [25].

Absenteeism due to menstruation was recorded by 35 students with 1-2 days of absence. This is in agreement with another study which found that girls were significantly more likely to miss school on days when they had their menstrual period compared to other school days, but the overall impact on attendance was very small, totaling 0.4 days. absent from school per girl for 180 school days per year [26]. Most of the adolescents in this study believed that menstruation did not interfere with their activities. This is in contrast to another study which found that 65% of 600 adolescents reported that menstruation affected their daily activities at school and they had to miss their exams and classes because of pain, anxiety, embarrassment, anxiety about leakage, and staining of their uniforms [11].

Some of the teenagers who did not attend school because of menstruation stated that they felt uncomfortable with complaints related to their menstruation. Another study suggested that absenteeism was found to be more likely in women with dysmenorrhea. However, apart from that, a higher chance of absenteeism was also found in women who experienced nausea and vomiting, dizziness, sleep disturbances, and those who felt depressed. This menstrual experience can be considered a relevant issue among young women, leading to absenteeism, and a negative influence on academic performance [27]. Research by Septiani *et al.* found that giving 250 ml of mung bean extract drink/day for seven days as well as stretching

once a day for seven days before menstruation can help reduce primary dysmenorrhea in adolescent girls at both moderate and severe stress levels. This can help teenagers in dealing with the problems of dysmenorrhea they are experiencing [28]. Table 1 shows the results of the assessment of the characteristics, knowledge, and absenteeism of adolescents related to menstruation.

Table 1. Characteristics, knowledge, and absenteeism in adolescents related to menstruation

Variable	Category	Total	
		n	%
Age	11-13 years old	205	86.8
	14-16 years old	31	13.2
Menstrual status	Yes	214	90.6
	No	22	9.4
Age of first menstruation	<10 years old	4	1.7
	10-14 years old	210	88.9
	>14 years old	0	0
Time to gain knowledge about menstruation	Before	222	94
	After	14	6
Menstruation duration	3-7 days	204	86.4
	<3 days	8	3.3
	>7 days	2	0.8
Menstrual cycle	21-35 days	120	50.8
	<21 days	4	1.6
	>35 days	10	4.2
	Not sure	80	33.3
Complaints during menstruation	Weak	118	50
	Dysmenorrhea	65	27.5
	Mood changes	180	76.2
	Nauseous	20	8.4
	Back pain	50	21.1
	Breast pain	30	12.7
	Bloated	30	12.7
	Dizzy	65	27.5
	Good	101	42.7
	Enough	103	43.6
Knowledge about menstruation	Bad	32	13.5
	Yes	35	14.8
Absenteeism related to menstruation	Not	201	85.1
	1-2 days	35	14.8
Long time not attending school related to menstruation	3-4 days	0	0
	5-7 days	0	0
	Uncomfortable because of complaints during menstruation	33	13.9
Reasons for not attending school related to menstruation	Afraid to leak	1	0.4
	A lot of blood	1	0.4
	Shy	0	0
	There is no private place to arrange menstruation at school	0	0
	Lack of water source	0	0
	Lack of space for sanitary napkin disposal	0	0
	There is no	150	63.5
	Interfere with daily activities at school	56	23.7
	Leaving the exam/test	0	0
	Can't exercise	59	25
Effects of menstruation on activities at school	Poor concentration	1	0.4
	Difficulty answering questions in class	0	0
	Difficulty writing on the blackboard	1	0.4
	Avoid sitting in groups	1	0.4
	Bad academic	0	0

The supports studied in this study are informational support and instrumental support. In terms of information support, teachers also contribute to providing knowledge support to students related to reproductive health, although students can get it from parents, friends, and the mass media. Most girls get information about menstruation and/or puberty from their mothers, although mothers are not always girls' source of choice for learning these topics [21]. More than half of students receive reproductive health information from their teachers. The school does not provide material on menstrual hygiene that can be accessed by young girls, even though the school is specifically for women. School teachers need to receive training and pilot comprehensive puberty and menstruation education curricula with their students finding value in teaching the material and feeling it is important to continue providing such content to this group of students in the future [29]. Information about adolescent reproductive health should be included particularly

in biology classes [30]. Reproductive health knowledge improvement programs can also be carried out outside school hours, with studies on self-development, social, physical, sexual violence, and prevention of sexually transmitted infections. The program is implemented using an innovative approach and media balance method for adolescent development and involves health workers, teachers, and parents [31].

In terms of instrumental support, most students reported that clean water was available but soap for washing hands was not always available. According to most of the students, the latrines in their school were easy to clean, but there were still around 10% who stated that the latrines were difficult to clean. Instrumental support involves providing tangible assistance and services that directly help people in need. The results of this study differ from other studies which found that most teachers said schools did not provide sanitation products to students, even in an emergency. However, regarding the supply of clean water and soap, this study found something similar to the results of the study in Ghana. No school has a regular supply of water in handwashing facilities, mirrors for girls to check for bloodstains on their uniforms, or soap in toilet facilities for washing hands [32]. Improving school facilities to support menstrual hygiene can overcome existing problems. Improvement of school toilet facilities increases the comfort of adolescent girls in managing menstruation [33]. An evaluation of menstrual management interventions that address psychosocial (self-confidence, attitude) and physical (pain management, use of adequate menstrual hygiene materials, improved water and sanitation facilities) aspects of menstruation is needed [34]. Table 2 shows reproductive health support at boarding schools for girls. The results of a study in Ethiopia revealed that only half of the adolescent girls in Ethiopia had safe menstrual hygiene practices. To ensure that girls in Ethiopia can manage menstruation in a hygienic and dignified manner, water, sanitation, and hygiene (WASH) facilities are needed [35].

Table 2. Reproductive health support at boarding schools for girls

Support type	Category	Total	
		n	%
Informational support			
Source of menstrual knowledge	Teacher	127	53.8
	Parent	163	69
	Friend	54	22.8
	Mass media	19	8
There are materials related to hygiene during menstruation pasted on the wall	Yes	0	0
	Not	236	100
Instrumental support			
There is clean running water available in an easy-to-clean container	Yes	200	84.7
	Not	36	15.2
Soap is available for washing hands	Yes	120	50.8
	Not	116	44.1
Closed trash cans are available	Yes	236	100
	Not	0	0
The latrine has a wall that is easy to clean	Yes	211	89.4
	Not	25	10.5
Easy access to buy sanitary napkins or supplies at school	Yes	236	100
	Not	0	0

The results of this study indicate that adolescent girls at boarding schools have access to information that can come from friends or teachers. As the closest environment, it must be ensured that the information provided is correct. Information support from health workers can support information support in schools. This is of course combined with a comprehensive school education program on menarche and menstruation issues so that it can help girls cope better and seek appropriate medical assistance [12]. Schools need to improve instrumental support so that female students feel safe and comfortable in their schools regarding menstrual hygiene. This is following the objectives of reproductive health services. Menstrual hygiene for female students is a priority issue including increasing cross-sector integration and improving progress monitoring [36].

This research supports the understanding of school support in reproductive health but has various shortcomings. This research has not been able to explore the in-depth information support provided by the teacher and directly observe the instrumental support in schools. Further research needs to conduct more in-depth exploratory research in the form of qualitative as well as the need to test experiments as a form of approach and development of reproductive health from health workers.

4. CONCLUSION

Schools have not provided sufficient informational and instrumental support even though some students receive information from their teachers. Instrumental support in schools such as access to hand washing is not always available. Information support and instrumental support provided by schools still need

to be improved, especially with the view that this school is exclusively for girls. Schools need support from health workers and stakeholders involved so that women's reproductive health can be maintained while they are studying.





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