

ARTICLE INFORMATION

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Health literacy among senior high school female students with dysmenorrhea

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Abstract

Background: Health literacy is still a problem in Indonesia characterized by the low level of health literacy in most of the population aged 15 - 18 years. The incidence of dysmenorrhea at senior high school 1 Cileungsi is very high, reaching 418 female students (63%). The lack of health literacy regarding dysmenorrhea causes knowledge, attitudes, and inappropriate behaviour in treating dysmenorrhea, which can increase the morbidity rate in adolescent girls. Therefore, health literacy regarding dysmenorrhea is very important for adolescent girls so that they can understand and solve the dysmenorrhea problems they experience to improve their health status.

Purpose: To determine the level of health literacy among female students who experience dysmenorrhea especially at senior high school 1 Cileungsi.

Method: This type of research is quantitative descriptive using univariate analysis with a population of all female students who have experienced dysmenorrhea at senior high school 1 Cileungsi. The sampling technique used Proportionate Stratified Random Sampling with a sample of 224 female students who had experienced dysmenorrhea.

Results: This study showed that most female students at senior high school 1 Cileungsi have adequate health literacy regarding dysmenorrhea, namely 117 female students (52.2%). Apart from that, the majority of female students experienced difficulty in applying information regarding appropriate treatment for dysmenorrhea namely 130 female students (58%).

Conclusion: Even though the majority of female students have adequate health literacy, there are still many female students who have inadequate health literacy regarding dysmenorrhea. Therefore, it is hoped that health workers can determine appropriate interventions to overcome health literacy problems.

Keywords: Adolescent Girls; Dysmenorrhea; Female Students; Health Literacy.

INTRODUCTION

Health literacy is a person's ability to search for, understand, evaluate, and apply health information to assist in making decisions regarding health, disease prevention, and health promotion so that it can influence a person's health knowledge, attitudes and behavior (Sørensen, Broucke, Fullam, Doyle, Pelikan, Slonska, & Brand, 2012; Isyroofanaa, Faizah, Utomo, 2021). In developed and developing countries, health literacy is still a problem in 2010, the prevalence of people with low health literacy in Taiwan and Turkey

was 30.3% and 71.9%, respectively (Sahroni, Anshari, & Krianto, 2019). In Indonesia, health literacy is a neglected problem (Sutarsa, Astuti, Choy, & Moore, 2020). In 2013 - 2014, the level of health literacy in the low category in Indonesia reached 64% of 1.029 respondents, with the majority of the population aged 15 - 18 years (Ditiharman, Agsari, & Syakurah, 2022).

A person with a high level of health literacy will have a more remarkable ability to control, maintain,

Health literacy among senior high school female students with dysmenorrhea

and improve their health because they can apply the health information they obtain (Wahyuningsih, 2022). Meanwhile, a person with a low level of health literacy will have a more significant potential for disease, greater expenditure on disease treatment costs, low health status, frequent misuse of therapy or medication, lack of self-care, and low utilization of health facilities as a result of the individual's lack of understanding regarding health information (Wahyuningsih, 2022; Kesumawati, Ibrahim, & Witdiawati, 2019).

Research of health literacy levels in Indonesia is still limited, especially in certain population groups (Sahroni et al., 2019). According to the literature review results, research of health literacy still needs to be improved, especially regarding dysmenorrhea. Dysmenorrhea is cramping pain in the lower abdomen either before, during, or after menstruation, which can be accompanied by nausea, vomiting, diarrhoea, headaches, muscle cramps, low back pain, fatigue, and even sleep disturbances (McKenna & Fogleman, 2021; Nurfadillah, Maywati, & Aisyah, 2021). Based on 2018 WHO data, the incidence of dysmenorrhea in the world is very high, with an average of >50% of women in each country experiencing dysmenorrhea or menstrual pain (Lail, 2019). The reproductive health problem of dysmenorrhea in Indonesia in 2018 reached 107.673 (64.24%) people (Ariendha, Handayani, Pratiwi, Fatmawati, Setyawati, Hardaniyati, Herlina, Zulfiana, & Ulya, 2022). In West Java, the incidence of dysmenorrhea reached 54.9% (Andriana, & Fitriani, 2020). Thus, dysmenorrhea is still a reproductive health problem in Indonesia, especially in West Java.

In West Java, the problem of dysmenorrhea is often encountered or complained about by adolescent girls. In 2018, as many as 11.565 adolescent girls aged 10 – 24 years had the reproductive health problem dysmenorrhea (Agustini, Wati, Kurniawan, Hijriani, & Putri, 2022). Dysmenorrhea can have an impact on female students' absence from class (20.1%) and decrease concentration during studying or daily activities (Armour, Parry, Manohar, Holmes, Ferfolja, Curry, Macmillan, & Smith, 2019). Furthermore, dysmenorrhea can also impact decreasing productivity, causing a decrease in the quality of life of adolescents and having a negative impact on expenses (Handayani & Sari, 2021). The

data above shows that the health status of adolescent girls is poor and causes high morbidity rates.

Even though the morbidity rate is high, not many adolescent girls know information about dysmenorrhea. This statement is similar to the previous study, which shows that more than 50% of adolescent girls have insufficient knowledge regarding dysmenorrhea (Komalasari, 2018; Dillah, Bohari, Nur, Rupa, & Kamaruddin, 2020; Amalia, 2022; Elfriede, 2022). Adolescent girls with insufficient knowledge have inappropriate behaviour in treating dysmenorrhea, such as not taking medication, not taking action to treat dysmenorrhea and tend to let the pain they feel just like that (Purba, Rompas, & Karundeng, 2014; Sandra, Enawati, Ambarwati, 2015; Sabaruddin & Arifah, 2017; Wianti & Pratiwi, 2018; Martina & Indarsita, 2020).

A person's knowledge, attitudes, and behaviour to overcome dysmenorrhea are closely related to their health literacy ability (Fredelika, Oktaviani, & Suniyadewi, 2020). Explained that the ability of adolescent girls to access information, especially regarding dysmenorrhea, influences the level of knowledge among adolescent girls. In this case, adolescent girls who do not receive enough information or are less exposed to information about dysmenorrhea and how to treat it have less knowledge, which can cause these adolescent girls to have a negative attitude toward overcoming dysmenorrhea and handling dysmenorrhea inappropriately (Fredelika et al., 2020; Puspita, 2022). Therefore, health literacy regarding dysmenorrhea is very important for adolescent girls so that it can help them understand and solve the dysmenorrhea problems they experience in order to improve their health status. Health literacy is essential in overcoming various health problems because it can determine a person's health behavior (Fitriyah, 2017).

In 2021, Cileungsi District have so many adolescent girls, namely 144.396 people (Badan Pusat Statistik, 2021). Because of that, researchers conducted a preliminary study and screening for dysmenorrhea at senior high school 1 Cileungsi in this sub-district. The screening results showed that 418 female students (63%) at senior high school 1 Cileungsi had experienced dysmenorrhea. Apart from that, based on a preliminary study, researchers discovered health literacy problems regarding dysmenorrhea in that school.

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Health literacy among senior high school female students with dysmenorrhea

There has yet to be any research that discusses the level of health literacy in adolescent girls who experience dysmenorrhea in Indonesia, especially at senior high school 1 Cileungsi. To determine the level of health literacy regarding dysmenorrhea in that high school, it is necessary to carry out an assessment or measurement through research so that it can be used as basic data and consideration for health workers to determine appropriate interventions in overcoming health literacy problems.

RESEARCH METHOD

This type of research is quantitative descriptive using univariate analysis with a population of all female students who have experienced dysmenorrhea at senior high school 1 Cileungsi. The variable in this research is health literacy with an operational definition, namely describing the abilities possessed by female students in searching for, understanding, assessing, and applying information regarding dysmenorrhea. The sample in this study was 224 female students who met the inclusion and exclusion criteria. The inclusion criteria in this study were all female students who had experienced

dysmenorrhea and were aged 14 - 18 years. Meanwhile, the exclusion criteria in this study were female students who were unwilling to be respondents and female students who had a history of endometriosis. The sampling technique uses proportionate stratified random sampling. This study has been approved by the ethical commission of 'Aisyiyah Bandung University with the number 697/KEP. 01/UNISA-BANDUNG/XII/2023.

Data was collected directly using Google Forms using the HLS-EU-SQ10-IDN. Then, the researchers modified the questions on the health literacy instrument and carried out validity and reliability tests on 30 respondents according to the research population criteria with the results of a Corrected Item-Total Correlation value between 0.379 – 0.533 and a Cronbach's Alpha value 0.749. The research instrument consists of 18 questions using a Likert scale, and the level of health literacy will be divided into two categories, namely adequate and inadequate health literacy. This research still pays attention to the rules or principles of research ethics, which include autonomy, beneficence, non-maleficence, justice, veracity, and confidentiality.

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RESEARCH RESULTS**Table 1. Frequency Distribution of Characteristics Respondents (N = 224)**

Variables	Results
Age (Mean ± SD) (Range)	(16.06±0.46)(14 – 18)
14 – 15 years	68/30.4
16 – 18 years old	156/69.6
Class (n/%)	
X	101/45.1
XI	85/37.9
XII	38/17.0
Regional origin (n/%)	
Java Island	121/54.0
Outside of Java Island	103/46.0
Source Information Health (n/%)	
Parents	34/15.2
Friend	1/0.4
Teacher	2/0.9
Health workers	21/9.4
Mass media (magazines, internet, social media, etc.)	132/58.9
Have no source of information	34/15.2
Respondent Get Information About Dysmenorrhea Through Promotion Health or Counseling (n/%)	
Ever	103/46.0
Never	121/54.0
Health Literacy (n/%)	
Inadequate	107/47.8
Adequate	117/52.2
Dimensions of Health Literacy (n/%)	
Ability to search information about dysmenorrhea	
Inadequate	112/50.0
Adequate	112/50.0
Ability to understand information about dysmenorrhea.	
Inadequate	111/49.6
Adequate	113/50.4
Ability to evaluate information about dysmenorrhea.	
Inadequate	102/45.5
Adequate	122/54.4
Ability to apply information about dysmenorrhea.	
Inadequate	130/58.0
Adequate	94/42.0

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Table 1. shows that most respondents from senior high school 1 Cileungsi were in class X (45.1%), aged 16 - 18 years (69.6%), came from Java Island (54%), mass media was the source of health information for respondents (58.9%), and they never received information about dysmenorrhea through health promotion or counselling (54%). Table 1. shows that most respondents from senior high school 1 Cileungsi had adequate health literacy, 117 female students (52.2%). However, there were still many female students with inadequate health literacy, namely 107 female students (47.8%). Table 1, shows that 112 female students (50%) at senior high school 1 Cileungsi had inadequate and adequate ability to search for information about dysmenorrhea. Apart from that, female students at this high school have a sufficient ability to understand and evaluate information about dysmenorrhea. However, female students' ability to apply information about dysmenorrhea is mainly in the inadequate category, namely 130 female students (58%).

Table 2. Cross Tabulation of Characteristics Respondents and Level of Health Literacy (N = 224)

Respondent Characteristics	Health Literacy	
	Inadequate (n=107)	Adequate (n=117)
Age (n/%)		
14 – 15 years	42/39.2	26/22.2
16 – 18 years old	65/60.8	91/77.8
Class (n/%)		
X	60/56.0	41/35.0
XI	29/27.1	56/47.8
XII	18/16.9	20/17.2
Regional origin (n/%)		
Java Island	61/57.0	60/51.3
Outside of Java Island	46/43.0	57/48.7
Sources and Access Information Health (n/%)		
Parents	25/23.3	9/7.6
Friend	1/0.1	0/0.0
Teacher	1/0.1	1/0.1
Health workers	11/10.2	10/8.5
Mass media (magazines, internet, social media, etc.)	42/39.2	90/76.8
Have no source of information	27/27.1	7/7.0

Table 2. shows that most respondents from senior high school 1 Cileungsi aged 14 - 15 years had inadequate health literacy, namely 42 female students (39.2%). Based on class characteristics, class X shows that the majority of respondents, namely 60 female students (56.0%), had inadequate health literacy. Meanwhile, most female students had adequate health literacy in classes XI and XII. Based on the characteristics of regional origin, most female students from Java Island, namely 61 female students (57.0%), have inadequate health literacy. Meanwhile, the female students who come from outside Java Island are in the adequate health literacy category, namely 57 female students (48.7%). According to respondents' health information sources, most female students with mass media sources have adequate health literacy, namely 90 female students (76.8%).

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DISCUSSION

Based on the research results, most female students who experienced dysmenorrhea at senior high school 1 Cileungsi had adequate health literacy, namely 117 female students (52.2%). This result is similar to the previous study, in which 91.4% of students in Banda Aceh have adequate mental health literacy (Nazira, Mawarpury, Afriani, & Kumala, 2022). The majority of women aged 15 – 25 years in Australia have inadequate health literacy regarding menstrual or reproductive health. Not only that, health literacy regarding menstrual health among adolescent girls in low, middle, and high-income countries is included in the inadequate health literacy category. Even though the results of this study mostly had adequate health literacy, researchers also found that there were still many female students with inadequate health literacy, namely 107 female students (47.8%) (Armour, Hyman, Al-Dabbas, Parry, Ferfolja, Curry, MacMillan, Smith, & Holmes, 2021).

As age increases, an individual's health literacy abilities will also decrease due to a decrease in sensory abilities due to ageing, thereby causing a decline in thinking abilities and affecting the individual's understanding of the information they obtain (Wahyuningsih, 2022). The research results showed that as many as 42 female students (39.2%) aged 14 - 15 years had inadequate health literacy. Most respondents (61.1%) with inadequate health literacy were >30 years old (Kesumawati et al., 2019). A person's level of education influences their level of health literacy because through education, a person continues to train their abilities in reading, searching, understanding, and applying health information so that they can improve their skills in health literacy (Wahyuningsih, 2022). The results of this study show that class XI and XII female students have better health literacy skills than class X. This result is similar to the previous study on 4.498 school-age children in China, respondents with a high school education level had better health literacy skills compared to respondents with an elementary and middle school education level (Qiao, Wang, Qin, Wang, Zhang, & Xu, 2021). Research conducted at the Dahlia Polyclinic TNI AD Tk.IV Hospital, Garut Regency also showed that respondents with a bachelor's education level had better health literacy than those with other levels of education (Kesumawati et al., 2019).

Culture can influence a person's level of health literacy because cultural values can influence their attitudes, beliefs, and actions in making decisions regarding their health. The research results showed that most respondents from Java Island had inadequate health literacy (57.0%). Meanwhile, most respondents from outside Java had an adequate health literacy (48.7%). 56.7% of respondents from Java Island had worse health literacy than respondents from outside of Java Island (Kesumawati et al., 2019)

In this study, most respondents chose mass media as a source of health information, namely 132 female students (58.9%). Based on the results of the preliminary study, some students stated that the internet or mass media was a source of information about health because it was straightforward to access and could be accessed at any time. The research results also show that female students who use mass media as a source of health information have better health literacy, with a percentage of 40.2%. It is easier for adolescents to access extensive information regarding reproductive health via the internet (Nisaa & Arifah, 2019).

As time goes by, information technology also develops. This shows that more and more health-related information can be accessed online. Thus, when someone can access information technology, that person has adequate health literacy (Wahyuningsih, 2022). The research results showed that some respondents experienced difficulties (50%), and other respondents (50%) did not experience difficulties in accessing information about dysmenorrhea. This happens because many female students can use health information sources well. However, it was also found that 34 female students (15.2%) had no source of health information at all, which could affect their ability to search for health information, especially regarding dysmenorrhea.

Dimensions of the ability to understand and evaluate health information are also important in health literacy because they help people make health decisions (Sørensen et al., 2012). The study results showed no problems with female students' ability to understand and evaluate information about dysmenorrhea because most female students (50.4%) could understand and evaluate the information (49.6%). Based on the results of the

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preliminary study, some female students received information about dysmenorrhea more often from their families because they felt the information obtained was easier to understand. 15.2% of respondents got information from their families because using easy terms made it easier for them to understand and evaluate the information they got. After an individual obtains, understand, and evaluate information, they apply that health information they obtain to maintain and improve their health (Sørensen et al., 2012). Based on the research results, the majority of female students who experienced dysmenorrhea at senior high school 1 Cileungsi experienced difficulty applying information regarding appropriate treatment for dysmenorrhea, namely 130 female students (58%). Their lack of ability to apply information regarding the appropriate management of dysmenorrhea causes them to be unable to control the pain. Apart from that, based on the results of a preliminary study, it was also found that when they are unable to control the pain due to dysmenorrhea, this will disrupt the activities and decrease the concentration of female students.

CONCLUSION

The study showed that most female students who experience dysmenorrhea at senior high school 1 Cileungsi have adequate health literacy. However, there are still many female students have inadequate health literacy in this school. On the other hand, most female students have difficulty applying information regarding appropriate treatment for dysmenorrhea, so they cannot control the pain. Thus, it is hoped that the results of this research can be used as evaluation and consideration for health workers to determine appropriate interventions in overcoming health literacy problems so that they can improve the health status of female students and reduce morbidity due to dysmenorrhea in adolescent girls.

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Health literacy among senior high school female students with dysmenorrhea

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