

Social support and elementary school girls' readiness in facing menarche in the digital era

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ABSTRACT

Adolescent girls have wide access to menarche-related information in the digital era; however, the validity of the information they receive may vary and lead to unpreparedness in facing these changes. In this context, social support from parents, peers, and the surrounding environment becomes an important aspect in shaping adolescents' readiness to face menarche. This study aimed to determine the relationship between social support and adolescents' readiness to face menarche in the digital era. This research used an observational analytic design with a cross-sectional approach. The study involved 102 female students from grades IV to VI at an elementary school in Surabaya, selected through a proportional random sampling. Data were collected using a questionnaire and analyzed using the chi-square test. The results showed that the majority of respondents (70.6%) received social support, especially informational support (78.4%), with mothers being the primary source of support (65 respondents), and TikTok as the most popular digital platform (39 respondents). Most respondents (79.4%) were categorized as ready to face menarche, with the readiness of pre-menarche students (83.1%) being higher than those who had already menstruated (73.0%). The chi-square test showed a significant relationship between social support and adolescents' readiness to face menarche, with a p-value of 0.005 ($p < 0.05$). Social support plays an important role in increasing adolescents' readiness to face menarche in the digital era. Therefore, the role of families, schools, and the social environment in providing education and emotional support is essential to help adolescents face menarche with greater confidence.

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INTRODUCTION

According to the World Health Organization (WHO), adolescents are individuals aged 10–19 years, which is a transitional period from childhood to adulthood marked by physical, mental, and social development. This period includes sexual maturation, the transformation from dependence to

independence, as well as social and economic changes. Along with this development, adolescent girls experience the maturation of sexual organs, which begins with signs of puberty, one of which is menarche, or the first menstruation (World Health Organization, 2023; Juwita, 2019).

Based on the 2023 Indonesia Health Survey, the average age of menarche in Indonesia falls within the range of 12 to 14 years; however, variations still exist and are affected by social and health-related factors. In certain regions, menarche may occur earlier, at the age of 10, which is likely due to factors such as nutrition, environmental exposure, and family support in understanding these changes (Kementerian Kesehatan Republik Indonesia, 2023).

A study conducted by Widyaningrum et al. (2024) stated that readiness to face menarche is affected by various factors, including social support from parents who provide information, emotional support, and appreciation. This study emphasized the importance of the parents' role, especially mothers, in delivering accurate information about menarche, maintaining hygiene during menstruation, and providing both physical and mental support. Good communication between parents and children regarding puberty-related issues greatly contributes to improving adolescents' readiness to face physical and psychological changes.

In the current digital era, the challenges faced by adolescents in preparing themselves for menarche have become increasingly complex. Information related to menstruation is more easily accessible through the internet and social media; however, not all of these sources are valid and reliable. Research shows that 47% of adolescents obtain menstrual information from digital media, yet most of them find the information difficult to understand or irrelevant to their own experiences (Nurhayati & Kartika, 2022). This is consistent with research findings indicating that only a small proportion of adolescents verify the information obtained from social media (Irma et al., 2024). Moreover, despite high internet access, a deep understanding of menstrual health remains low without proper guidance (Rahayu & Putri, 2024).

Adolescents' readiness to face menarche depends not only on information but also on social support from various parties, such as family, peers, and teachers. Social support can help adolescents understand the changes in their bodies, overcome anxiety, and develop a positive perception of menstruation. A national survey in 2021 revealed that 60% of adolescents felt they did not receive adequate support from their families on this topic (BKKBN, 2021). The involvement of the family as the first source of information and as an emotional support system, as well as a facilitator of formal education, is essential to ensure that adolescents not only understand menarche but also feel supported both emotionally and socially.

RESEARCH METHOD

The study was conducted from January to March 2025 using a quantitative, observational analytic design with a cross-sectional approach. It aimed to explore the relationship between social support and adolescents' readiness to face menarche in the digital era. The research was carried out at an elementary school in Surabaya, Indonesia.

The population consisted of all female students in grades IV, V, and VI at the selected school, totaling 111 students. The sample included students who had or had not experienced menstruation and were willing to participate in the study. A total of 102 respondents were selected using a proportional random sampling technique to ensure representation across all grade levels.

Data were collected using a validated, structured questionnaire that assessed two main variables: perceived social support and readiness for menarche. The questionnaire was administered directly to participants under the supervision of the research team to ensure accurate completion and understanding.

Collected data were processed and analyzed using the chi-square (χ^2) statistical test to examine the association between social support and readiness for menarche. The analysis was conducted using statistical software, with a significance level set at $p < 0,05$.

This study received ethical approval from the Health Research Ethics Committee of the Faculty of Medicine, Universitas Airlangga, under certificate number 44/EC/KEPK/FKUA/2025.

RESULTS AND DISCUSSIONS

The study was conducted at one of the elementary schools in Surabaya with the following characteristics of the respondents:

Table 1. Characteristics of study respondents

Characteristics	Criteria	Frequency	(%)
Grade	4	27	26,5
	5	41	40,2
	6	34	33,3
Age (years)	10	33	32,4
	11	45	44,1
	12	24	23,5
Body Weight (kg)	21 - 80		
Body Height (cm)	122 - 164		
Body Mass Index (BMI) (kg/m ²)	Underweight	48	47,1
	Normal	44	43,1
	Overweight	3	2,9
	Obese	7	6,9
Access to Digital Media	Yes	62	60,8
	No	40	39,2
Menarche	Yes	37	36,3
	No	65	63,7
Age at Menarche (years)	9	2	5,4
	10	18	48,7
	11	12	32,4
	12	5	13,5

Table 1 shows that the majority of respondents were 11 years old (44.1%), followed by those aged 10 years (32.4%) and 12 years (23.5%). The respondents' body weight ranged from 21 to 80 kg, with height varying between 122 and 164 cm. Based on the Body Mass Index (BMI) classification, most respondents were categorized as underweight (47.1%) and normal (43.1%), while the rest were classified as overweight (2.9%) and obese (6.9%). A total of 60.8% of respondents had access to digital media, while 39.2% did not. Regarding menarche status, 36.3% of respondents had experienced menarche, with the highest proportion occurring at the age of 10 years (48.7%), followed by 11 years (32.4%), 12 years (13.5%), and 9 years (5.4%).

Table 2. Frequency distribution of social support and readiness to face menarche among respondents (n=102)

Variable	Criteria	Frequency	(%)
Social Support	Present	72	70,6
	Absent	30	29,4
Informational Support	Present	80	78,4
	Absent	22	21,6
Appraisal Support	Present	75	73,5
	Absent	27	26,5
Instrumental Support	Present	64	62,7
	Absent	38	37,3
Emotional Support	Present	72	70,6
	Absent	30	29,4
Readiness to Face Menarche	Ready	81	79,4
	Not Ready	21	20,6

Table 2 shows that the majority of respondents had social support, totaling 72 individuals (70.6%). Respondents who received informational support amounted to 80 individuals (78.4%),

while those who did not receive informational support totaled 22 individuals (21.6%). A total of 75 respondents (73.5%) received appraisal support, and 64 individuals (62.7%) received instrumental support. In addition, 72 respondents (70.6%) had emotional support. In the variable of readiness to face menarche, the majority of respondents, namely 81 individuals (79.4%), were categorized as ready, while 21 individuals (20.6%) were not yet ready to face menarche. These data indicate that most adolescents have received various forms of social support, which contributes to their level of readiness in facing menarche.

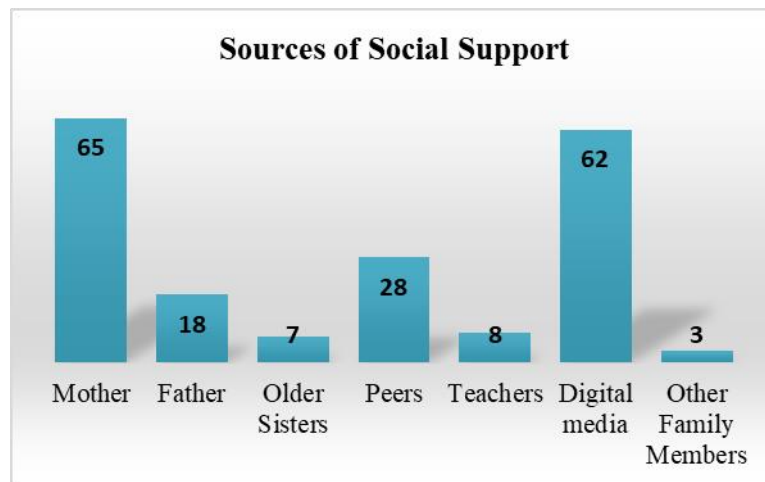


Figure 1. Frequency of sources of social support

Figure 1 shows that 65 respondents received social support from their mothers, indicating that the mother is the primary source of social support. The second most common source is digital media. Digital media platforms such as Google, social media (Instagram, TikTok), YouTube, and AI (Artificial Intelligence) provide support in the form of informational support. The digital media platforms most frequently used by respondents are presented in Figure 2 below.

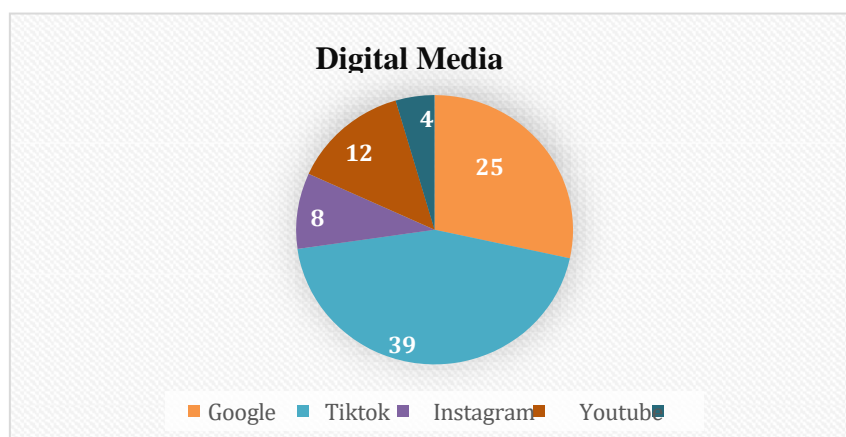


Figure 2. Frequency of digital media platforms used

Based on the respondent characteristics, 62 respondents accessed digital media to obtain information about menstruation. It was found that respondents did not rely on a single digital platform but accessed multiple digital platforms simultaneously. The data above indicates that

TikTok is the most popular digital media platform, used by 39 respondents to obtain information about menstruation.

Table 3. Frequency Analysis of menarche experience and readiness to face menarche

		Readiness				Total
		Not Ready		Ready		
		Frequency	Percentage (%)	Frequency	Percentage (%)	
Menarche	No	11	16,9	54	83,1	65
	Yes	10	27,0	27	73,0	37
Total						102

Among the 65 respondents who had not experienced menarche, 54 students (83.1%) were ready, while 11 students (16.9%) were not ready. Among the 37 respondents who had experienced menarche, 27 students (73.0%) were ready, whereas 10 students (27.0%) were not ready. Almost all respondents who had not experienced menarche felt more prepared compared to those who had already undergone it. This may be affected by various factors such as education or support from the surrounding environment.

Table 4. Analysis of the relationship between social support and adolescents' readiness to face menarche in the digital era

Social Support	Readiness				Total	P-Value
	Not Ready		Ready			
	n	%	n	%		
Absent	1	0,9	29	28,6	30	29,4
Present	20	19,6	52	50,9	72	70,6
Total	21	20,5	81	79,5	102	100

Based on Table 4, the analysis of the relationship between social support and readiness shows that among the 30 respondents who did not have social support, only 1 respondent (0.9%) was not ready, while 29 respondents (28.6%) were ready. Meanwhile, among the 72 respondents who had social support, 20 respondents (19.6%) were not ready, and 52 respondents (50.9%) were ready.

The statistical test using Chi-square on the 2x2 contingency table showed that there were no expected values less than 5. The p-value of 0.005 is lower than the significance level of 0.05. This indicates a significant relationship between social support and readiness. Respondents who had social support were more likely to be ready compared to those who did not have social support.

Discussion

The results of the study showed that the majority of elementary school girls in Surabaya received social support (70.6%), which included four main types: emotional, appraisal, informational, and instrumental support. Informational support was the most frequently received form (78.4%), indicating that adolescents obtained sufficient information about menarche from family, school, and digital media. This support helped them understand the changes and manage menstruation properly (Narsih et al., 2021). The primary source of support came from mothers (65 respondents), followed by digital media (62 respondents), including platforms such as Google, Instagram, TikTok, YouTube, and AI. This finding is in line with the studies by Cane (2022) and Widyaningrum et al. (2024), which emphasize the dominant role of mothers in providing emotional support and reproductive information. Parental involvement, particularly that of mothers, plays a pivotal role in delivering reproductive health information to adolescents (Anuril et al., 2023; Hariyadi, 2024).

A total of 62 respondents (60.8%) accessed digital media to obtain information about menstruation, with TikTok being the most popular platform (39 respondents). This finding is consistent with the study by Rahmadini and Ernawaty (2024), which indicates that social media is a

primary source of reproductive health information for adolescents due to its visual and interactive appeal. A study by Azzahra et al. (2024) also demonstrated that the use of the social media platform TikTok for health education on personal hygiene during menstruation can significantly improve adolescent girls' knowledge. The implications of this finding highlight the importance of the parents' role, especially mothers, in providing accurate information, as well as the need for education on the use of digital media, thus, adolescents can obtain valid information. Reproductive health education in schools also needs to be strengthened through interactive approaches to reduce dependency solely on social media.

The readiness of female students to face menarche was also relatively high, with 79.4% stating they were ready and 20.6% not ready. Among the 37 students who had experienced menarche, 27% reported being unprepared, while among the 65 students who had not experienced it, 83.1% felt ready. This indicates that the experience of menarche does not always correlate with psychological readiness, which may be affected by education, family support, and sources of information. Mutasya et al. (2018) stated that the level of knowledge has a significant relationship with readiness to face menarche, while Nurmawati and Erawantini (2018) highlighted the importance of the mother's role in shaping the child's emotional and psychological readiness. The study conducted by Hidayati (2018) revealed that readiness for menarche is not solely determined by age, but is also influenced by the sources of information received. Female students who obtained information from health professionals or teachers tended to be better prepared compared to those who relied solely on their peers.

The relationship between social support and readiness to face menarche was confirmed through a Chi-square test with a p-value of 0.005 ($p < 0.05$), indicating a significant relationship. Widyaningrum et al. (2024) stated that adolescents who receive education from mothers and teachers have higher levels of readiness compared to those who only obtain information from peers or digital media. The study by Mahmudah (2023) further confirmed that social support exhibits a positive correlation with adolescents' preparedness for experiencing their first menstruation.

The role of schools is crucial in puberty and reproductive health education. Teachers need to create a safe learning environment and deliver accurate information. Qomari et al. (2024) demonstrated that the EMINA program (Education for Adolescent Girls Prepared for Menarche) significantly improved students' readiness through a structured educational approach. Families, particularly mothers, also play a crucial role in shaping children's mental and emotional readiness. Maharani et al. (2024) emphasized the importance of open mother-daughter communication in preparing children to face menarche.

Peer support also affects adolescents' readiness. Peer education is an effective method because adolescents tend to more easily accept information from friends who have had similar experiences. Salihah et al. (2024) showed that audiovisual approaches delivered by peers significantly increased adolescents' knowledge and readiness. In addition, while digital media can be beneficial, it still requires supervision from parents and teachers. Hidayati et al. (2023) emphasized the importance of parental and educator involvement in guiding the use of digital media to prevent misinformation.

This study concludes that social support from family, school, peers, and digital media plays an important role in shaping adolescent girls' readiness to face menarche. This readiness is formed through appropriate social interaction and education. Therefore, an integrated educational approach through direct learning and the wise use of digital technology serves as an effective solution to prepare adolescents to undergo the puberty phase in a healthy and positive manner. The active involvement of all elements of society is key to supporting adolescents in facing menarche with confidence and emotional maturity.

CONCLUSION

Based on the results of the study on the relationship between social support and adolescents' readiness to face menarche in the digital era among female students at an elementary school in Surabaya, it can be concluded that most respondents were aged 10-12 years. Although not all had experienced menarche, they demonstrated a high level of readiness, particularly among those who received social support. The most dominant source of support came from mothers, followed by digital media such as TikTok, Google, YouTube, Instagram, and AI, as well as from peers, fathers, older sisters, teachers, and other family members. The analysis results indicated a significant relationship between the social support received and the level of adolescents' readiness to face menarche in the digital era.

To effectively respond to the challenges of navigating menstrual health information in the digital era, it is imperative that digital literacy education be systematically integrated into comprehensive reproductive health programs. These strategies should prioritize the development of critical thinking skills among adolescent girls, enabling them to evaluate the credibility, relevance, and scientific accuracy of content encountered across various digital platforms, particularly social media. Educational interventions must incorporate structured media literacy components, advocate for the use of validated health information sources, and actively engage parents and teachers as digital mentors. Such an approach not only positions adolescent girls as informed recipients but also empowers them to become discerning evaluators of online content. Consequently, this contributes to improved decision-making and strengthens their preparedness to face menarche with accurate, evidence-based knowledge.

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