

**Dysmenorrhea and Practice of Menstrual Hygiene in Adolescent Females**Lilik Ariyanti<sup>1\*</sup>, Warih Anjari Dyah Kusumaningayu<sup>1</sup>, Fatchurrohmah Ines Prabandari<sup>1</sup>, Alinda Nur Ramadhani<sup>2</sup><sup>1</sup>Physiotherapy Study Program, Sekolah Tinggi Ilmu Kesehatan Nasional, Central Java, Indonesia<sup>2</sup>Physiotherapy Study Program, 'Aisyiyah Surakarta University, Central Java, Indonesia\*E-mail: [lilik.ariyanti@stikesnas.ac.id](mailto:lilik.ariyanti@stikesnas.ac.id)**ARTICLE INFO****Keywords** : Adolescent; Menstruation; Dysmenorrhea; Hygiene**ABSTRACT****Background:** Adolescence is a relatively fast period of physical change experienced by adolescents when puberty is marked by the first menstruation (menarche). Menstruation and menstrual habits continue to encounter numerous social, cultural, and religious barriers, which make it extremely difficult to maintain good hygiene during the menstrual cycle.**Objective:** Analyzing menstruation practices and the prevalence of dysmenorrhea in adolescent female is the goal of this study. **Method:** The cross-sectional investigation was carried out in Sukoharjo and Surakarta. The research was carried out between December 2023 and January 2024. Adolescent female samples had reached menarche. WaLIDD score is an instrument used to measure dysmenorrhea.**Results:** The results of this study show as many as 71.7% of Menarche adolescent girls at the age of 12-14 years. As many as 44.4% of respondents said dysmenorrhea almost always interfered with work activities. Data also shows that nearly 100 % of respondents wash their hands before and after replacing menstrual materials. The majority of them wash their genitals using soap (79.1%) and replace pads ( $\geq 3$  times) 72.5%. **Conclusion:** Most respondents practice good menstrual hygiene, characterized by frequent washing of hands and genitals. Adolescent females who are knowledgeable about their periods can make hygienic and safe menstrual habits.**INTRODUCTION**

Adolescence is a period of fast hormonal, mental, emotional, and physical growth that heralds the transition from total dependence to a certain level of relative independence. It is the transitional stage between childhood and maturity. (Best and Ban, 2021) A girl's adolescence is a time of physical and mental preparation for becoming a responsible mother. (Sawyer *et al.*, 2018)

Approximately 80% of women experience menstrual pain and premenstrual syndrome (PMS). (Naraoka *et al.*, 2023) According to the World Health Organization (WHO) the number of dysmenorrhea in the world is very high large, on average more than 50% women in every country experiences dysmenorrhea. In Ethiopia around 71.69%. (Molla *et al.*, 2022), Saudi Arabia around 92.3% women had non-pathological dysmenorrhea (primary) while 7.7% ISSN 1858-3385, E-ISSN 2549-7006 25

women had pathological dysmenorrhea (secondary) respectively. (Bakhsh *et al.*, 2022) The prevalence of dysmenorrhea in Zimbabwe was 75.9%, with 28.6% of sufferers describing their pain as severe. (Nyirenda *et al.*, 2023)

Late adolescence is a common time for menstrual problems to manifest. Dysmenorrhea is a prevalent issue among women who are fertile. Menstrual pain in women with normal pelvic anatomy that typically begins in adolescence is known as primary dysmenorrhea. Seldom do symptoms start to show up six months after menarche. (Burnett and Lemyre, 2017)

Pain and sporadic spasms, which are typically localized in the suprapubic region, will be experienced by the affected women. Lower back or rear foot pain are possible to develop. Common systemic symptoms include headaches or mild headaches, tiredness, vomiting, diarrhea, and mild fever. The first or second day of the cycle is when the pain peaks, usually occurring a few hours following the onset of menstruation. (McKenna and Fogleman, 2021)

Dysmenorrhea negatively impacted the physical and psychological well-being of girls and hindered girls' ability to participate in school, work, and social events. (Cherenack *et al.*, 2023a) The onset of menstruation coincides with new opportunities – and vulnerabilities – that

arise during adolescence. Gender inequality, discriminatory social norms, cultural taboos, poverty and lack of basic services often cause girls' and women's menstrual health and hygiene needs to go unmet. Adolescent girls may face stigma, harassment and social exclusion during menstruation. All of this has far-reaching negative impacts on the lives of those who menstruate: restricting their mobility, freedom and choices; affecting attendance and participation in school and community life; compromising their safety; and causing stress and anxiety. Menstrual health and hygiene interventions can be an entry point for other gender-transformative programmes during this period, like sexual and reproductive health education and life skills development. (Gibson, 2022)

Maintaining hygiene during menstruation is significantly hampered by the numerous social, cultural, and religious barriers that still surround menstruation and menstrual customs. Girls often encounter many obstacles at home, at school, and at work since they are not prepared for or aware of menstruation, especially in rural communities. One of the biggest challenges in managing menstruation and personal hygiene is having little or wrong understanding about the menstrual cycle. (Kaur, Kaur and Kaur, 2018) Menstrual Hygiene Management (MHM) is management hygiene and health  
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when women experience menstruation. Women must be able to use sanitary napkins that are clean, can be changed frequently during the menstrual period, and have access to disposal, as well as access to toilets, soap and water to clean themselves in comfortable conditions with privacy maintained. (Gibson, 2022)

Management of hygiene during menstruation is greatly aided by education. (Sivakami *et al.*, 2019) It is believed that by teaching adolescent females about their periods, they will be able to practice good hygiene. Many girls do not receive enough knowledge on the realities of menstruation because of cultural norms and expectations. (Nuroniayah, 2019) They feel strange, ill, or traumatized as a result. Girls who are not prepared for the feelings of perplexity, dread, and guilt that come with menarche often grow to detest their periods. (Kaur, Kaur and Kaur, 2018) Analyzing menstruation practices and the prevalence of dysmenorrhea in adolescent female is the goal of this study.

## **METHODS AND MATERIALS**

The cross-sectional investigation was carried out in Sukoharjo and Surakarta. The research was carried out between December 2023 and January 2024. Adolescent female samples had reached menarche.

The sample for sampling was chosen by purposive sampling, and a total of 120

individuals who satisfied the inclusion criteria were included. Instruments and protocols for collecting data with a systematic WaLIDD score questionnaire (dysmenorrhea, work ability, location, intensity, and pain day). This dysmenorrhea identification questionnaire was taken from earlier research publications. (Teherán *et al.*, 2018) The WaLIDD questionnaire, which asks about workability, location, intensity, and sick day, was one of the study's instruments. Adolescent female who experience dysmenorrhea can provide study data by answering the WaLIDD's Questionnaire, which they fill out based on their experiences..

Four questions with indicators are included in the WaLIDD Questionnaire: one about the ability to work, = 0: never, 1: almost never, 2: almost always, 3: always; Location = 0: None, 1: 1 location. 2: 2-3 locations, 3: 4 locations; Intensity = 0: does not hurt, 1: hurts a little bit, 2: hurts a little more – hurts even more, 3: hurts a whole lot – hurts worst; days of pain = 0: None, 1: 1-2 days, 2: 3-4 days, 3:  $\geq 5$  days. The interpretation of the WaLIDD's Questionnaire : 0 = without dysmenorrhea; 1-4 = mild dysmenorrhea; 5-7 = moderate dysmenorrhea; 8-12 = severe dysmenorrhea.

Characteristics of respondents such as age and menarche are depicted by the percentage, frequency, table, mean, and

range between the quartiles. Dysmenorrhea prevalence is calculated and presented in the form of proportions.

## RESULTS AND DISCUSSION

The respondents' sociodemographic details are displayed in Table 1. The questionnaire was completed and returned by 120 adolescent female. The mean age of the participants was  $16.39 \pm 1,007$  years and the menarche age was  $12.32 \pm 1,202$  on average

**Table 1. Respondents' sociodemographic characteristics**

Characteristics	Frequency (n=120)	%
Respondent age (years)		
15	13	10.83
16	61	50.83
17	42	35.00
20	3	2.50
22	1	0.83
Menarche age (years)		
10	5	4.17
11	26	21.67
12	40	33.33
13	29	24.17
14	17	14.17
15	1	0.83
16	2	1.67

Table 2 shows that respondents experience early menarche (<12 years) of 25.8% and late menarche (> 14) of 2.5%. As many as 80.83 % (97/120) experienced moderate to severe dysmenorrhea. Respondents reported that 50% of dysmenorrhea almost always interfered with their work activities, and 25.83% stated that the intensity was hurts a whole lot – hurts

worst. The majority experienced 2-3 locations of dysmenorrhea pain (53.33%) and days of pain 1-2 days.

**Table 2. Menstrual Characteristics of Respondents**

Characteristics	Frequency	%
Menarche age		
< 12 years	31	25.8
12-14 years	86	71.7
15-17 years	3	2.5
WaLLIDD Score		
Work Ability		
Never	9	7.50
Almost Never	31	25.83
Almost Always	60	50.00
Always	20	16.67
Intensity		
Does not hurt	4	3.33
Hurts a little bit	47	39.17
Hurts a little more – hurts even more	38	31.67
Hurts a whole lot – hurts worst	31	25.83
Location		
1 Location	56	46.67
2-3 Locations	64	53.33
4 Locations	0	0.00
Days		
0	6	5
1-2 Days	88	73.33
3-4 Days	14	11.67
>=5 Days	12	10
Dysmenorrhea status		
Mild dysmenorrhea	23	19.17
Moderate dysmenorrhea	61	50.83
Severe dysmenorrhea	36	30
Total	120	100

Table 3 shows the hygiene practices carried out by adolescents during menstruation. Nearly 100 % of respondents wash their hands before and after replacing menstrual materials. The majority of them

wash their genitals using soap (79.1%) and replace pads ( $\geq 3$  times) 72.5%.

**Table 3. Menstrual Hygiene Practices**

Hygiene Practice	Frequency	%
Hand washing habits before changing menstrual materials		
Never	0	0
Sometimes	22	18.3
Every Times	98	81.7
Hand washing habits after changing menstrual materials		
Never	0	0
Sometimes	3	2.5
Every Times	117	97.5
Wash the genitals using soap		
Never	24	20.00
Sometimes	50	41.67
Every Times	46	38.33
Changing menstrual materials (times)		
1	1	0.83
2	32	26.67
3	64	53.33
4	23	19.17
Total	120	100

Adolescence is seen as a unique and crucial time in women's lives when major hormonal and emotional changes take place, along with the onset of their first menstrual cycle. Despite being a normal physiological procedure for people of reproductive age, menstruation still carries stigma. As a result, many young girls may not have access to adequate information about menstruation and proper hygiene practices. The menstrual cycle is a typical biological phenomenon but is often exacerbated by pre-menstrual disorders. (Sadeeqa *et al.*, 2018) Period irregularities may indicate more serious health issues

that, if left untreated, could worsen and result in substantial morbidity. (Odongo *et al.*, 2023) (Fernández-Martínez, Onieva-Zafra and Parra-Fernández, 2019) Menstrual abnormalities have been linked to deficiencies in education and disruptions in daily activities and quality of life. (Maity *et al.*, 2022)

This study shows that most of the menarche's adolescent female at the age of 12-14 years (71.7%). Some teenage girls, however, menarche later than others (2.5%). Menarche is regarded as late if it happens at or after the age of fifteen and early if it happens at or before the age of 10 (De Sanctis *et al.*, 2019). Menarche is also considered delayed if there are more than three years between the emergence of thelarche and the first menstruation. Sixty to eighty percent of the menstrual cycle lasts for 21 to 34 days in the third year following menarche. 50% of the cycle experiences ovulation in the first year after the menarche, and nearly all of the women who receive early menarche experience ovulation in the fifth year. On the other hand, women who menarche more slowly take 8 to 12 years to reach ovulation in every cycle. (Lacroix AE, Gondal H, Shumway KR, 2024)

44.4% of respondents to a study claimed that dysmenorrhea nearly usually interfered with their ability to perform duties at work. When diarrhea, pelvic discomfort, nausea, vomiting, and

dizziness are possible side effects of dysmenorrhea. This issue is brought on by dysmenorrhea, which interferes with school-related activities. In contrast, women with dysmenorrhea have to carry on with their regular activities, just as women without the condition. Dysmenorrhea is a severe and chronic discomfort and unpleasant condition that affects some women to the point where they feel weak, faint, and need medical attention. (Azagew, Kassie and Walle, 2020)

Dysmenorrhea may have a significant impact on the daily lives of adolescent girls. The impact is reflected in the level of absence at school or work. Dysmenorrhea can also limit adolescents to do physical or sports activity. (Macgregor *et al.*, 2023)

According to this study, 25.83% of participants said the pain was really excruciating, and 53.33% reported having dysmenorrhea in two to three areas with pain lasting one to two days. Pain that is felt during the menstrual cycle is referred to as dysmenorrhea. Though it can occasionally radiate to the inner thighs and back, the pain normally starts in the lower abdomen. This is a severe problem that frequently arises in gynecology. (Nagy H; Carlson K; Khan MAB, 2023) Most women who experience dysmenorrhea choose not to consult a doctor for help. As an alternative, they treat patients by using analgesics, such as paracetamol and

nonsteroidal anti-inflammatory medications, to reduce pain feelings. (Cherenack *et al.*, 2023b) (Kapadi and Elander, 2020)

In general, menstruation-related issues are handled by women in a variety of ways that differ significantly among nations based on factors such as personal preferences, financial means, economic standing, regional customs, cultural knowledge, and education. Unfortunately, the majority of young women lack sufficient knowledge on menstrual hygiene because of several cultural and societal misconceptions around menstruation..

More than 90% of the adolescent females in this study consistently wash both before and after changing their menstruation products. The mean participant swapped out the pads at  $2.91 \pm 0.7$ . Women who practice good hygiene during their menstrual cycle can avoid skin irritation, reproductive tract infections, and urinary tract infections by changing their sanitary napkins as frequently as possible and cleansing the vagina and surrounding area of blood. (Gibson, 2022) Negative effects on health, mental health, and education might result from poor management of menstrual hygiene. Menstrual discomfort, urinary tract infections, and anemia are among the health effects (Torondel *et al.*, 2018) (Kashyap and Choudhari, 2023)

## CONCLUSIONS AND SUGGESTIONS

In the present study, the prevalence of dysmenorrhea was high among the recruited. About 80% of adolescent female experience moderate-severe dysmenorrhea. Most respondents practice good menstrual hygiene, characterized by frequent washing of hands and genitals. Adolescent females who are knowledgeable about their periods can make hygienic and safe menstrual habits. This means that the appropriate policy, which can be a component of the overall policy for community development and health, needs to be developed and put into effect.

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