



DETERMINANTS OF MENSTRUAL HYGIENE PRACTICES IN RURAL ADOLESCENTS: A SYSTEMATIC REVIEW

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ABSTRACT

According to a 2017 WHO report, more than 2.3 billion women and girls worldwide face serious challenges in managing their periods. According to a UNICEF report, 10% of girls in African schools miss their periods. The limited hygiene facilities in schools, the lack of hygienic sanitary napkins, and the use of unhygienic materials make them stressed, anxious, and skip classes because they are worried about unpleasant Odors. Research shows that unhygienic practices during menstruation increase the risk of infections in the reproductive tract and genitourinary tract. The purpose of this systematic literature review is to find out what factors are obstacles for adolescents in the practice of menstrual hygiene. The research is in the form of a systematic literature review by identifying all published literature using relevant keywords. The selected articles are those published in the last 5 years which are complete texts, then selected based on titles and abstracts, which in the end found 17 articles that meet the inclusion criteria and have high quality. The low level of knowledge among the participants was seen in their unpreparedness when entering the menarche period and their strong view of menstruation as a socially taboo and can be judged by the various restrictions they have, due to strong socio-cultural beliefs and practices. So there is a relationship between age, maternal education, culture and beliefs, economic status and the practice of menstrual hygiene in adolescents. The factors hindering adolescents in practicing menstrual hygiene are interconnected. Age, maternal education, cultural and belief factors, as well as economic status, all play a role in influencing menstrual hygiene practices among adolescents.

Keywords: menstrual hygiene practices and adolescent and infections; rural; school

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INTRODUCTION

Menstruation is a natural biological process experienced by 1.8 billion women of childbearing age every month (Mohammed Gena, 2020). Effective menstrual hygiene management (MFM) involves the use of clean materials to absorb blood, personal hygiene with soap and water, and access to adequate disposal facilities (Anaba et al., 2022). However, more than 2.3 billion women and girls face serious challenges in managing their periods due to limited facilities, high costs, and lack of knowledge (Mulugeta Demmu et al., 2023). In developing countries, many girls are forced to use less hygienic materials such as used cloths, tissues, or use nothing at all, increasing the risk of infection. Inadequate water, sanitation, and hygiene facilities in schools exacerbate the situation, causing stress, anxiety, and truancy (Shumie & Mengie, 2022). In a survey in Sub-Saharan Africa, the majority of adolescent girls reported not having safe access to MKM facilities (Mulugeta Demmu et al., 2023).

In addition, myths, taboos, and socio-cultural norms limit adolescent girls' access to correct information about menstruation, negatively impacting their self-esteem, reproductive health, and education. Although the importance of good menstrual hygiene practices has been recognized, many opportunities to improve this condition are still untapped in low- and middle-income countries. Unhygienic menstrual hygiene (MHA) practices increase the risk of

reproductive tract and genitourinary tract infections. Problems related to MKM have an impact on school attendance and school performance for girls, with an average of 49% of students in Sub-Saharan Africa skipping four school days per month, and 41% of students in Bangladesh and Indonesia missing an average of 2.8 days per month. Many students also experience difficulty concentrating and limited participation in class due to shyness and discomfort during menstruation. Poor MKM practices affect the achievement of the Sustainable Development Goals (SDGs), especially in health, education, gender equality, and women's empowerment.

METHOD

The methodological design of this research is a literature review study.

Inclusion Criteria.

The inclusion criteria for systematic review articles using PICOS are as follows:

P (Population): Student adolescents.

I (Intervention): None specified.

C (Comparative Intervention): Students attending school in rural areas.

O (Outcomes): Factors influencing menstrual hygiene practices in adolescents.

S (Studies): Quantitative and qualitative studies, except Systematic Literature Reviews (SLR) and Randomized Controlled Trials (RCT).

Exclusion Criteria

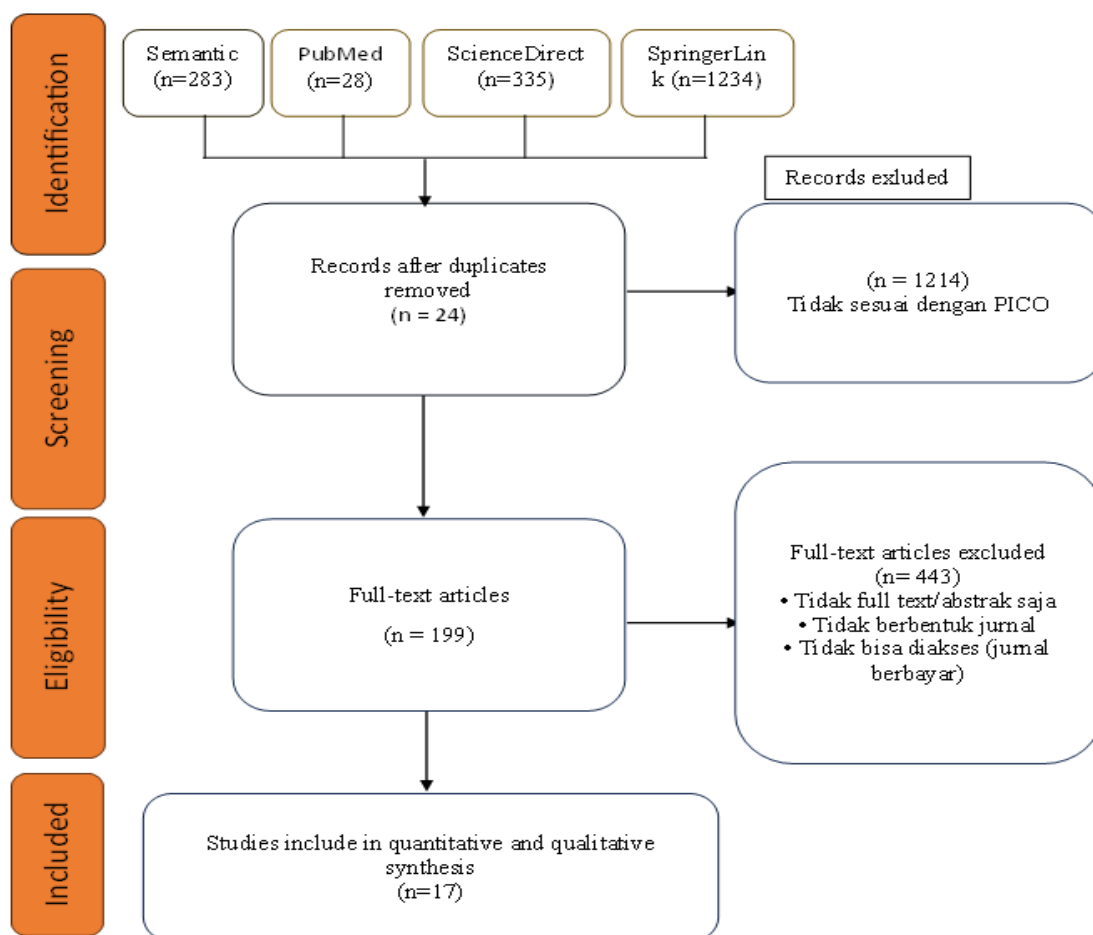
The exclusion criteria are as follows:

Language other than English. Restricted access. Only abstract available. Articles published from 2018-2023. Research design limited to qualitative and/or quantitative methods in randomized controlled trials and systematic literature review designs. Articles that do not meet the inclusion criteria will be excluded.

Search Strategy

This study is a systematic literature review with literature search conducted in four electronic databases (PubMed, Semantic Scholar, Springer Link, and Science Direct) published within the last 5 years, from January 1, 2018, to December 2023. The search is limited to articles in English, full-text articles from scholarly journals using the keywords "Menstrual hygiene practices AND Adolescent AND Infections, School, Rural." All identified references were managed using the Mendeley software. Data extraction and analysis from each article were performed by the author. The outcome was 17 selected articles, and their suitability was measured using the kappa statistic ($\kappa = 0.64$), confirming that the 17 selected articles met the criteria. To assess the quality of the articles, the author applied specific standards from the Center for Evidence-Based Medicine (CEBM). The author examined errors in the classification method, selection, and reporting of results in these articles. Some of the evaluated aspects included the sampling method, sample size, efforts to avoid errors, the focus of the research, how the analysis was conducted, and the use of appropriate statistical tests. The author also examined how the research procedures were explained, the criteria used for participant selection, limitations of the study, and the reporting of data results.

The search results are presented using the Preferred Reporting Items for Systematic Review & Meta-Analysis (PRISMA) and a flow diagram constructed based on the PRISMA 2009 checklist guidelines, (Liberati et al., 2009). Sequentially, irrelevant articles were eliminated following the criteria of identification, screening, eligibility, and finally downloading relevant articles. Out of the 1,880 identified articles, 17 articles were obtained, and the article selection process is illustrated in Figure 1.



RESULT

The search results identified 17 articles originating from 7 countries, namely Gambia, India, Nepal, Bangladesh, Sierra Leone, Ghana, and Ethiopia. The research designs employed included Cross-Sectional and Descriptive Cross-Sectional. The characteristics of the obtained articles are provided in Table 2

Table 2.
Article Analysis

Author(s)/ Year	Title	Aims	Results	Conclusion
Vishna Shah et al (2019)	A rite of passage: a mixed methodology study about knowledge, perceptions and practices of menstrual hygiene management in rural Gambia	to explore the knowledge, readiness, and practices of menstruation and its management among adolescents, mothers, and teachers in rural Gambia.	All participants had different levels of knowledge about menstruation. Knowledge scores were higher among post-menarche girls compared to pre-menarche girls ($p = 0.0001$). All groups expressed difficulties, embarrassment and discomfort related to the discussion of menstruation. Two-thirds of the girls surveyed reported having learned about menstruation before menarche, but at the time of menarche most felt unprepared. Teachers are the primary source of information, but when asking for advice most girls prefer to ask	This study shows that knowledge about menstruation is better for students who have experienced menstruation, but menstrual hygiene practices are still influenced by limited access and cultural factors. The majority of female students' knowledge scores remain low, emphasizing the need for more comprehensive health education.

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			their mothers. Mothers reported facing difficulties in discussing menstruation with their children and felt that boys did not need to be taught about it, but boys were very curious about it. Most girls use reusable cloth unless they are given free sanitary napkins from school.	
Sonika Sangra et al. 2019	Assessment of knowledge, attitude and practice about menstruation and menstrual hygiene among adolescent girls in rural area of district Kathua, Jammu and Kashmir	to evaluate the knowledge, attitudes, and practices of young women regarding menstruation and menstrual hygiene.	A total of 300 young women were included in this study. The majority of adolescent girls have a sufficient to good knowledge and practice score regarding menstruation, menstrual hygiene, and its management, but their attitude scores are low due to several cultural taboos such as prohibitions in the kitchen, places of worship, etc.	A positive picture of adolescents' practices and knowledge related to menstruation, although there are a number of adolescents who do not have knowledge before experiencing menstruation.
Pramodha, M. S et al., 2021	Knowledge, attitude and practice of menstrual hygiene among adolescent schoolgirls of rural area, Dakshina Kannada, India	The aim of our study was to assess knowledge, attitudes and practices about menstrual hygiene among adolescent schoolgirls from the rural area of Dakshina Kannada.	In our study, most students had their first period by the age of 12. As many as 86.15% did not have basic knowledge about menstruation, and 80% of our participants had good knowledge about underwear hygiene, and 65% of students knew that menstruation is a physiological phenomenon and 71% of the participants, still believed in taboos and myths related to menstruation and 30% were embarrassed to bring sanitary pads to school. A total of 63.85% of participants still used cloth pads and the most worrying finding from our study was that 63% of our students did not feel comfortable contacting their families/parents/healthcare workers to resolve their questions about menstruation.	The low level of knowledge among the participants can be seen from their unpreparedness when entering the menarche period and their strong view of menstruation as a socially taboo can be judged from the various restrictions they have, due to strong socio-cultural beliefs and practices.
Ranabhat D et al. 2019	Menstrual Hygiene Practice and School Absenteeism among Rural Adolescent girls of Kalikot district	to assess menstrual hygiene practices and school absenteeism among adolescent girls attending rural schools.	In this study, students had poor menstrual hygiene practices. Only 4% of respondents used sanitary napkins. 69.8% throw away cloth or sanitary napkins in open areas. The age of the respondents had a significant relationship with menstrual hygiene practices (p=0.002). Family type was also significantly related to menstrual hygiene practices (p=0.017).	The findings show that there are serious challenges related to menstrual hygiene practices among students.

Author(s)/ Year	Title	Aims	Results	Conclusion
Mehedi Hasan et al. 2021	Menstrual hygiene practices and school absenteeism among adolescent girls in Bangladesh: A cross-sectional study	to assess the prevalence of school absenteeism during the menstrual cycle and to explore the relationship between menstrual hygiene practices and school absenteeism among adolescent girls attending school in Bangladesh.	The prevalence of school absenteeism was (35.1%) among teenage girls attending school in Bangladesh. Factors associated with school absenteeism included older adolescent girls (AOR=2.97; 95% CI: 1.66–5.24, p<0.05), with illiterate mothers (AOR=5.36; 95% CI: 1.91–12.44, p<0.05) and illiterate fathers (AOR=4.66; 95% CI: 1.79–11.24, p<0.001), from single-family families (AOR=2.54; 95% CI: 1.45–4.47, p<0.001), who were unaware of the menstrual cycle before menarche (AOR=2.14; 95% CI: 1.32–3.48, p<0.001) and who practiced poor hygiene management (AOR=5.66; 95% CI: 2.73–15.32, p<0.001). Poor hygiene management including the absence of sanitary napkins, washing reusable fabrics without soap/antiseptics, and lack of bathing and cleaning of external genitalia, are factors associated with absenteeism at school.	It can be concluded that there is still a great need for reproductive health education programs to improve the knowledge, hygiene practices, and health of adolescent girls in this context. Suggestion Providing counseling about menstruation, waste management, the choice of hygiene products, and the importance of nutrition during menstruation.
Jyoti Parle et al. 2019	Knowledge, attitude, practice and perception about menstruation and menstrual hygiene among adolescent school girls in rural areas of Raigad district	to assess knowledge, attitudes, practices, and perceptions about menstruation and menstrual hygiene.	Overall, more than half of the respondents (53.3% and 52.8%) had poor knowledge and practices about menstruation and menstrual hygiene. Despite their poor knowledge, most respondents (55.2%) had heard about menstruation before experiencing menarche. The factors that were significantly related to knowledge about menstruation and menstrual hygiene were adolescent age ($X^2 = 267,294, p = 0.00$), maternal education ($X^2 = 77,331, p = 0.00$) and practice about menstruation ($X^2 = 111,745, p = 0.00$).	Health education strategies and awareness programs about menstruation and menstrual hygiene should be developed to improve the health of adolescent girls
K. Nimithamohan et al. 2022	A cross sectional study on menstrual hygiene and associated factors among high school girls in rural Mysuru	to estimate menstrual hygiene practices, and related factors among rural high school girls in Mysuru.	The average age of the study participants was 13.8±0.9 years. Of the 200 adolescent girls, 107 (59.4%) had experienced menarche by the age of 10-12 years. 61.7% of them reported experiencing abdominal pain during menstruation. 71.1% of the girls reported that their diet changed during menstruation. Only 37.5% of the study participants exercised regularly.	The study showed that most of girls' diet and physical activity changed after menarche and during menstruation. Focused interventions such as behavioural change communication involving the importance of fruit and vegetable consumption, foods rich in iron and calcium, avoiding skipping meals,

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Augustus Osborne et al. 2020	Assessment of Perceptions and Practices on Menstruation among Adolescent Girls in Five Schools in bo district, Sierra Leone	to assess their perceptions, problems, and practices about menstruation	The majority of students are 15-18 years old. 29.1% of girls reach menstruation by the age of 14. 57.3% of girls believe that the normal monthly menstrual interval is 28 days. 33% of girls say menstruation bothers them. Stains on clothes and unpleasant odors at 30.1% are the biggest embarrassment girls face during menstruation. 64.1% of girls said fear was their reaction to menstruation. 78.6% of adolescent girls said worry is what they feel when their period doesn't come on time. Menstrual problems were most often discussed with their mothers (68%), and least often with their fathers (1.9%).	and eating healthy foods should be encouraged. Adolescent girls have a variety of experiences and perceptions related to menstruation. There is a level of uncertainty and The majority of respondents had poor knowledge about menstruation, hygiene and menstrual practices. Perceptions about menstruation are bad, and practices are often inappropriate.
Maxwell Tii Kumbeni et al. 2020	Menstrual hygiene among adolescent girls in junior high schools in rural northern Ghana	to investigate the management of menstrual hygiene among adolescent girls in junior high schools in rural northern Ghana.	The prevalence of good menstrual hygiene is 61.4%. Maternal education and parental socioeconomic status are significantly related to menstrual hygiene management. Inadequate sanitation facilities are a major challenge in the management of menstrual hygiene in schools. The use of sanitary napkins was significantly related to school attendance ($p < 0.0001$).	The level of menstrual hygiene among adolescent girls in northern Ghana is average. Although most schools have toilet facilities, they do not have clean water, soap, privacy, and trash cans necessary for menstrual hygiene management
Suresh Kotwal et al. 2022	Knowledge and Practice of Menstrual Hygiene and Reproductive Tract Infection in Adolescent Girls in Doda District of Jammu and Kashmir Territories, India	To assess knowledge and practices regarding menstrual hygiene and reproductive tract infections in adolescent girls in Doda District, Jammu and Kashmir Region, India.	A total of 450 young women from public and private schools in Doda, Jammu and Kashmir districts were included in the study. Most of the participants were 14-16 years old. The most common sources of information about menstruation identified in this study were mothers (56.2%), sisters (13.1%), teachers (12.7%), and friends (9.6%). In terms of menstrual hygiene, 53.1% of girls used pads, 24% of girls used dry cloths/towels, and 10.7% of girls used homemade pads and sanitary napkins during their menstrual periods. About 42% of participants did not attend school during menstruation and most participants showered daily during menstruation.	Awareness about menstruation and menstrual hygiene needs to be increased with an emphasis on providing accurate and adequate information on this topic to young women. Information and provision of affordable sanitary napkins or sanitary napkins during menstruation is also important for these young women.
Zainab	Assessment of	The purpose	60.5% of female students used	A significant association

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Khan. et al. 2019	menstrual hygiene management practices and associated socio-cultural restrictions among adolescent school girls in a rural area of North India	of this study was to assess menstrual hygiene management practices and related sociocultural restrictions among school adolescent girls.	sanitary pads, and 71.4% took a bath during menstruation. 41.3% of female students changed sanitary napkins at school. Unsatisfactory menstrual hygiene management practices were significantly higher among female students who came from low socioeconomic classes ($p < 0.001$) and had illiterate mothers ($p < 0.001$). 82.8% of female students face religious restrictions.	was found between menstrual hygiene management practices in adolescent girls in school and their mothers' education level and socioeconomic status. Proper menstrual hygiene management practices are essential for every young girl to live a healthy life and should be achieved at the beginning of their menarche through enhanced information, education, and communication (KIE) programs.
Mst. Rokshana Rabeyaet al. 2022	Menstrual hygiene practices among adolescent schoolgirls in the rural area of Bangladesh	To check menstrual hygiene practices	The data showed that the average age of menarche in 422 adolescents was 12.71 ± 0.97 . According to the data, 47% have good hygiene practices and 53% have poor hygiene practices. In a multivariable logistic regression analysis, the educational status of respondents' mothers at the secondary school level [AOR=2,023, 95% CI: 1,159-3,532], fathers at the graduate level and above [AOR=3,150, 95% CI: 0.883-11,238], high levels of household income [AOR=2,580, 95% CI: 1,480-4,495], and knowledge of complications of poor hygiene practices among girls [AOR=2,286, 95% CI: 1,160-4,504] significantly related to the level of hygiene practices.	Poor menstrual hygiene practices are found among more than half of girls. Attitudes towards safe menstrual materials must begin to improve good hygiene practices. Awareness campaigns for parents and teachers to help their children will be an important strategy to ensure good hygiene practices.
Wondimagegn Gebre et al. 2022	Assessment of menstrual hygiene management knowledge, practice, and associated factors among girls in Boset District, Ethiopia: a school-based cross-sectional study	This study aims to assess the knowledge, practices, and factors related to menstrual hygiene management among girls in Boset district, Ethiopia.	Of the total study participants, 51.2% (95% CI: 46.6-55.8%) had good menstrual hygiene practices and 57.9% (95% CI: 53.3-62.5%) had a good knowledge status about menstrual hygiene management. Living in an urban area (AOR = 1.84, 95% CI: 1.20-2.80), having a mother with an upper-secondary education level (AOR = 3.4, 95% CI: 2.07-5.57), having a fixed income in the form of an allowance (AOR = 2.19, 95% CI: 1.45-3.313), and discussing menstrual problems with parents and friends (AOR = 3.65, 95% CI: 2.327-5.727) are	In this study, almost half of the schoolgirls had good practices and knowledge about menstrual hygiene management.

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			related to good menstrual hygiene practices.	
Kumar Chinta et al, 2018	Menstrual hygiene patterns and practices among rural adolescent school girls	This study is to find out the practice of menstruation in adolescent girls in rural areas	Of the 169 girls who had experienced menarche, 154 (91.12%) experienced regular menstruation. Among the 154 girls with regular menstrual cycles, the majority (55.2%) had cycles of 28-31 days. Of the 169 girls who had experienced menarche at the time of the study, 76.9% reported that they used sanitary pads to absorb blood during menstruation. The most common method of disposing of materials used to absorb blood during menstruation is to burn it (91.7%) and 65.7% use soap to wash the private parts.	The study concluded that the majority of adolescent girls had regular menstrual cycles and the majority of respondents used pads.
Pooja Chauhan et al. 2018	A study to assess knowledge, attitude, and practices related to menstrual cycle and management of menstrual hygiene among school-going adolescent girls in a rural area of South India	This study aims to assess knowledge, attitudes, and practices related to the menstrual cycle and the factors that affect it.	A total of 226 girls were studied. Overall, knowledge about the menstrual cycle is very poor. Awareness about menstruation was found in 35.8% of girls. The source of knowledge for most girls is the mother, followed by friends. 97% use sanitary pads. Menstrual hygiene practices have been found satisfactory but need to be improved in the disposal of menstrual waste.	Knowledge of the menstrual cycle was found to be particularly poor with schools playing no role in its improvement. Schools need to be encouraged in providing correct information and encouraging girls to speak up.
Miti Dwijen Bhatta et al. 2019	Knowledge, attitude and practice regarding menstrual hygiene among adolescent girls in a rural private school	This research was conducted to spread awareness and eliminate taboos that are considered this topic.	83 girls (96.51%) were aware of their menstrual cycle. 49 (56.98%) girls consider menstrual blood to be dirty. 72 (83.72%) knew that it was a physiological process. 85 (98.84%) are also aware of menstrual hygiene. 85 (98.4%) felt that girls should be informed about the menstrual cycle, hygiene before reaching menarche. 50 (58.14%) girls follow taboos during menstruation.	The findings of the current study emphasize the need to address the physiology of the menstrual cycle as well as the myths and misconceptions associated with it.
Neerja Agarwal et al. 2018	Knowledge and practice regarding menstrual hygiene among adolescent girls of rural field practice area of RIMS, Raipur (C.	To assess the level of knowledge and practice of menstrual hygiene among adolescent girls in the rural region of RIMS,	The majority of young women who attend school are 13 and 14 years old. A total of 50.95%, 21.67% and 12.93% of female students reported that they experienced menarche at the age of 13 years, 12 years and 14 years respectively. The majority of female students used cloth (49.81%) and only 17.87% used sanitary napkins. External genital	Knowledge about menstruation is still not optimal and the practices carried out are not in accordance with good hygiene standards among the study subjects. Menstrual hygiene is an important issue that needs to be ensured.

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	G.), India	Raipur, India, as well as to identify the factors that affect their menstrual hygiene practices	hygiene was unsatisfactory in 32.70% of female students. Only 58.17% of female students used soap and water to clean their genitalia. Pain in the abdomen (59.70%) was found to be the most frequent complaint during menstruation.	

DISCUSSION

In general, based on the article that has been studied, the prevalence of menstrual hygiene practices in adolescents in developing countries is still much lower. Many factors hinder adolescents from improving hygiene practices during menstruation. This is in line with a report from the WHO 2017, which stated that more than 2.3 billion women and girls around the world face serious challenges in managing their periods. (Mulugeta Demmu et al., 2023). According to Tapparan (2013) as quoted in, (Wahyudi et al., 2018) Overall health starts with maintaining cleanliness. This applies to the health of the sexual organs, including the vagina. The correct way to clean the female genitals regularly is to clean the remaining sweat around the genital area with clean water, preferably warm water, and mild soap, especially after defecation (BM) and urination. Washing a woman's genitals properly involves moving from the front (vagina) to the back (anus), avoiding reversals, as bacteria around the anus can be carried into the vagina. After cleaning, use a clean towel or dry tissue to dry it.

Several significant factors inhibit menstrual practice in adolescents, such as adolescent age, which are significantly related to hygiene practices in adolescents. In this study, it was found that the age of the respondents was significantly related to menstrual hygiene practices ($p < 0.002$). (Ranabhat et al., 2019; Parle & Khatoon, 2019; Rabeya et al., 2022), Similar findings were reported in a study conducted in Western Ethiopia in 2018, where age played an important role in menstrual hygiene practices ($p < 0.005$). (Shallo et al., 2020). In terms of hygiene practices in this study, the results are still not optimal. Only 34.5% of female students used sanitary napkins, while 63.85% of participants still used cloth. The low number of students who use sanitary pads during menstruation may be due to the embarrassment of buying them and the inability to buy them due to their high cost (Ranabhat et al., 2019; Hasan et al., 2021; Kotwal et al., 2022; Chinta et al., 2018; Bhatt & Kadam, 2020; Agarwal et al., 2018). This is consistent with research conducted in Bihar, India (Chowdhury & Chakraborty, 2017), which stated that the frequent non-use of sanitary napkins among adolescents is hampered by economic constraints.

The majority of students showed poor menstrual hygiene practices, accounting for 86.9% of participants. Information about menstruation was mostly obtained from participants' mothers. About half of the girls in the study did not receive information about their period before experiencing it themselves, with 555 (92.4%) (Shah et al., 2019; Sangra et al., 2019; S. & D., 2021; Ranabhat et al., 2019; Parle & Khatoon, 2019; Leone et al., nd2020; Kotwal et al., 2022; Agarwal et al., 2018), This is in line with research (Shallo et al., 2020). stated that the source of information significantly influenced menstrual hygiene practices with $p = < 0.001$. The study found a link between religious beliefs and cultural practices and menstrual hygiene. This is consistent with research conducted by (Amanda & Ariyanti, 2020) which states that there is a significant relationship between myths and menstrual hygiene practices (p -value=0.003). The level of maternal education was significantly related to menstrual hygiene

practices in adolescents with $p < 0.013$, similar to the study conducted in Ethiopia (Daniel et al., 2023) It shows that mothers with higher education have better menstrual hygiene practices.

In this study, many students showed negative attitudes and perceptions when facing menstruation. 5% stated that menstruation is a disease, 64.1% of adolescent girls feel afraid of menstruation, 30.1% of adolescent girls experience the greatest embarrassment due to stains on clothes and unpleasant odors during menstruation, and 78.6% feel worried when they do not get their periods (S. & D., 2021; Leone et al., nd2020; Agarwal et al., 2018). Research conducted in Indonesia by (Wihdaturrahmah & Chuemchit, 2023), supports these findings, suggesting that when respondents' attitudes are positive, there is a greater likelihood of having better menstrual hygiene practices. Family type was significantly associated with menstrual hygiene practices ($p < 0.017$) (Ranabhat et al., 2019; Rabeya et al., 2022), This was also shown by another study in Bihar, India (Geetika Singh, Animesh Gupta, Nipendra Anand, 2017), stating that teens who live with larger families (more than 4 members) have poorer menstrual hygiene practices.

CONCLUSION

From the analysis of 17 articles obtained in the last 5 years, various factors that hinder menstrual hygiene practices among adolescents were identified. These factors include age, practice, parental education, knowledge, perception and attitude, culture and religion, family type, and economic factors or parental income. All of these factors are interconnected and influence each other.

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