

## ASSESSMENT ON THE KNOWLEDGE AND PRACTICE OF MENSTRUAL HYGIENE AMONG ADOLESCENT GIRLS

Mrs. P. Sheela<sup>1\*</sup>, Inder Singh<sup>2</sup>, Indhumathy<sup>2</sup>, Irin Joshy<sup>2</sup>

1. Assistant Professor, Department of Sociology, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Chennai 602105
2. Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Chennai 602105

\*Corresponding Author: Mrs. P. Sheela

<https://doie.org/10.65985/jbse.2025691733>

### Abstract

**Background:** Menstrual hygiene is a vital aspect of adolescent health, often neglected in low- and middle-income countries. Adolescents face social taboos, misinformation, and restrictive practices that hinder knowledge and proper hygiene, impacting their health and well-being. **Methods:** This quantitative descriptive study assessed menstrual hygiene knowledge and practices among 100 adolescent girls in a selected secondary school using a structured self-administered questionnaire. Data on demographic variables and menstrual hygiene understanding and practice were collected and analyzed. **Results:** Most participants (56%) had moderate knowledge, while only 26% showed adequate knowledge. Practice levels were lower, with just 13% demonstrating adequate menstrual hygiene practices. Age, education, and religion did not significantly affect knowledge, but earlier menarche was associated with lower knowledge. **Conclusion:** Despite moderate knowledge levels, menstrual hygiene practices are inadequate due to socio-cultural and economic barriers. Early, targeted educational interventions and family-centered programs are essential to improve menstrual hygiene management among adolescent girls.

**Keywords:** menstrual hygiene; adolescent girls; knowledge; practice; menarche; educational intervention

### 1. Introduction

Menstrual hygiene is a crucial aspect of adolescent health, yet it remains a neglected topic in many societies, particularly in low- and middle-income countries [1,2]. Adolescence is a transition period marked by significant physical and psychological changes for girls, with menarche representing a key milestone in their reproductive development [3]. Despite its importance, menstruation is frequently surrounded by taboos, misinformation, and restrictive practices that hinder open discussion and education about menstrual hygiene [4]. Many adolescent girls enter this phase with inadequate knowledge, often resorting to improper hygiene practices that can adversely affect their health and overall well-being [5].

Evidence indicates that social and cultural barriers, compounded by economic constraints and limited access to menstrual hygiene products, present substantial challenges for adolescent girls [6]. Inadequate menstrual hygiene is associated with increased risk of infections and school absenteeism, ultimately compromising the health, academic performance, and dignity of young

women. The role of mothers and family members as primary sources of information further underscores the need for comprehensive, community-based educational interventions.

This study aims to assess the knowledge and practices concerning menstrual hygiene among adolescent girls in a selected secondary school. By identifying gaps in understanding and practice, the research seeks to inform targeted educational strategies and policy measures that bridge the divide between knowledge and behavior. Improving menstrual hygiene management is essential to cultivating a healthier, more empowered generation of young women.

## **2. Methods**

### ***Research Approach and Design***

This study employed a quantitative research approach with a descriptive research design. The aim was to assess the level of knowledge and practice regarding menstrual hygiene among adolescent girls.

### ***Study Setting***

The study was conducted in a selected secondary school setting. Formal permission was obtained from the school principal to conduct the research.

### ***Population and Sample***

The population included adolescent girls studying in the selected school who were present during the data collection period.

A total sample of 100 adolescent girls was recruited for the study.

### ***Inclusion Criteria***

- Adolescent girls who were willing to participate in the study.
- Girls who were able to speak and read Tamil or English.
- Girls regularly menstruating and available during the period of data collection.

### ***Exclusion Criteria***

- Girls unwilling to participate in the study.
- Those with irregular menstruation cycles.

### ***Variables***

- Dependent variables: Knowledge level and practice of menstrual hygiene.
- Independent variables: Age, age at menarche, educational status, religion, father's occupation, family income, family type, and source of information.

## *Data Collection Tools*

Data were collected using a structured, self-administered questionnaire designed in the local language. The questionnaire consisted of 20 knowledge-based items on menstrual hygiene practices. Each correct answer scored one mark; incorrect answers scored zero. The total score was classified into inadequate, moderate, and adequate knowledge levels.

Additional demographic information was collected through a demographic data sheet including age, education, family income, and other relevant factors.

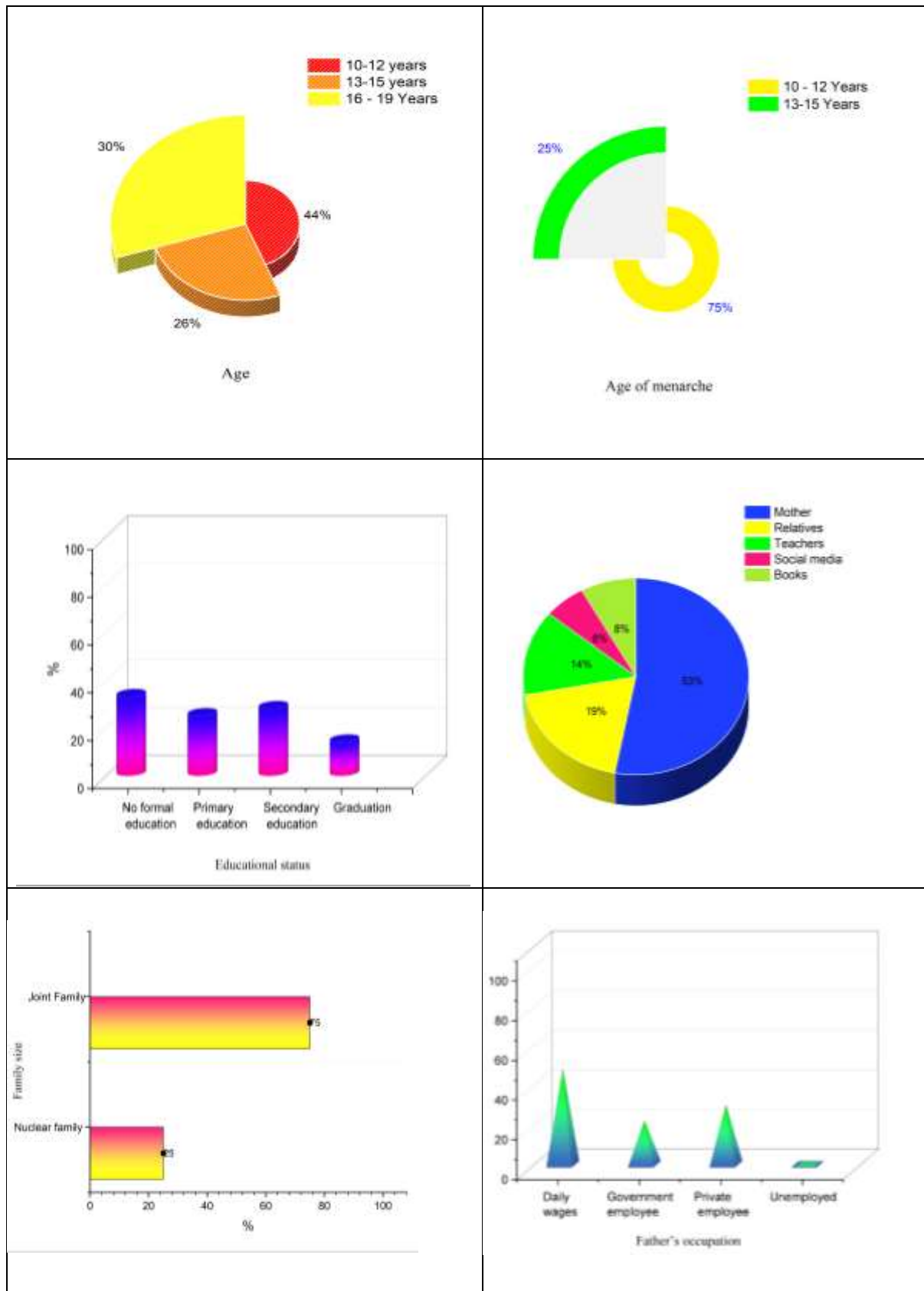
## *Data Collection Procedure*

The investigator introduced herself and explained the purpose of the study to participants. Oral consent was obtained, emphasizing confidentiality. The questionnaire was administered, and the time taken to complete it was 20 to 30 minutes per participant. Data were coded and organized for analysis.

## **3. Results**

### *3.1 Demographic Profile of Adolescent Girls*

The majority of participants were within the age group of 10–12 years (44%), with the age of menarche predominantly occurring between 10–12 years as well (75%), suggesting a trend toward early onset of menstruation among this population. Educational status varied, with 33% having no formal education, while only 14% had attained graduation, highlighting a considerable proportion with limited educational exposure. In terms of religion, most girls identified as Hindu (53%), followed by Muslim (19%), Christian (14%), and other faiths (14%), reflecting the diverse religious background of the sample. The occupation of fathers was primarily daily wage labor, accounting for 48%, and a significant number were employed in private (30%) and government (22%) sectors, with no reported unemployment. Family income was mainly distributed in the lower brackets, with 44% having income up to ₹5,000 and only 13% earning above ₹20,000, indicating a predominance of economically disadvantaged households. Additionally, a majority of participants belonged to joint families (75%), and most had no previous history of menstrual hygiene practice (70%), underscoring gaps in awareness and practice. Among those who had received information on menstrual hygiene, mothers were cited as the primary source (53%), signifying the important role of maternal guidance in imparting reproductive health knowledge.



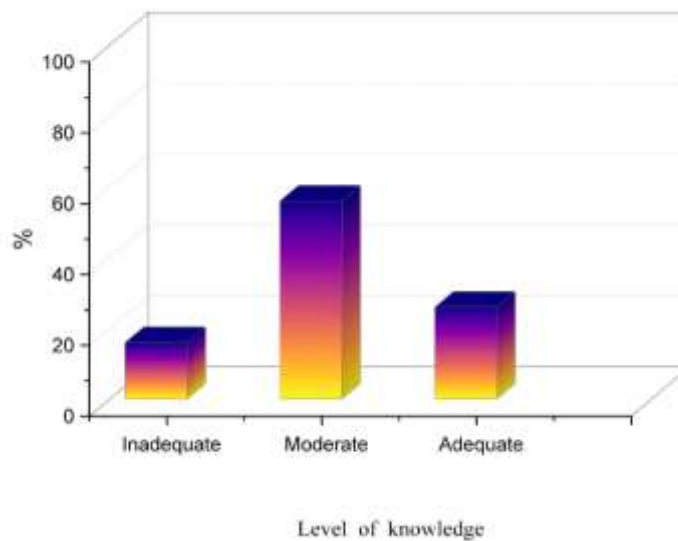
**Fig. 1 Demographic variables of the participants**

**3.2 Assessment of level of knowledge and practice of menstrual hygiene among menstrual hygiene**

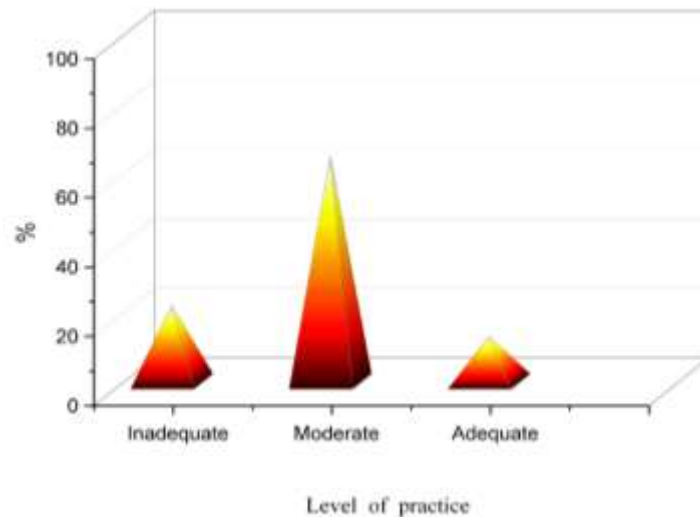
**Table 1: Frequency and Percentage Distribution of Knowledge Levels Regarding Menstrual Hygiene Among Teenage Girls**

	Inadequate		Moderate		Adequate	
	No.	%	No.	%	No.	%
<b>Level of knowledge</b>	16	16	56	56	26	26
<b>Level of Practice</b>	22	22	65	65	13	13

The analysis of the frequency and percentage distribution of knowledge levels pertaining to menstrual hygiene among teenage girls revealed that, prior to any intervention, only 26% demonstrated adequate knowledge, while a majority (56%) exhibited moderate knowledge and 16% had inadequate knowledge, as assessed during the pretest. In terms of menstrual hygiene practice, 13% of the participants displayed adequate levels of practice, with 65% categorized as moderate and 22% as inadequate. These findings suggest that while most teenage girls possessed moderate awareness and practice regarding menstrual hygiene, there remains a significant proportion with inadequate understanding and practice, emphasizing the imperative for targeted educational interventions to improve both knowledge and practical adherence to menstrual hygiene among this demographic.



**Fig. 2 Pre-test level of knowledge on menstrual hygiene among teenage girls**



**Fig. 3 Pre-test level of practice on menstrual hygiene among teenage girls**

**3.3 Levels of Knowledge and Practice: Descriptive Statistics**

**Table 3 Mean and Standard Deviation of Knowledge and Practice Scores**

Level of knowledge and practice	Mean	S.D
<b>Knowledge</b>	1.83	0.83
<b>Practice</b>	0.73	0.69

In the present study, the levels of knowledge and practice among participants were assessed using their respective mean scores and standard deviations. Table 3 shows that the mean score for knowledge was 1.83 with a standard deviation of 0.83, indicating a moderate level of knowledge with considerable variability among respondents. In contrast, the mean score for practice was 0.73 with a standard deviation of 0.69, suggesting that practical application was less frequent and demonstrated less variability within the group. The difference between knowledge and practice scores was statistically significant (\*\*p<0.001), highlighting a meaningful disparity between participants’ understanding and their ability to implement that knowledge in practice. These findings suggest that while a certain level of knowledge is present, its translation into consistent practical behaviors remains limited.

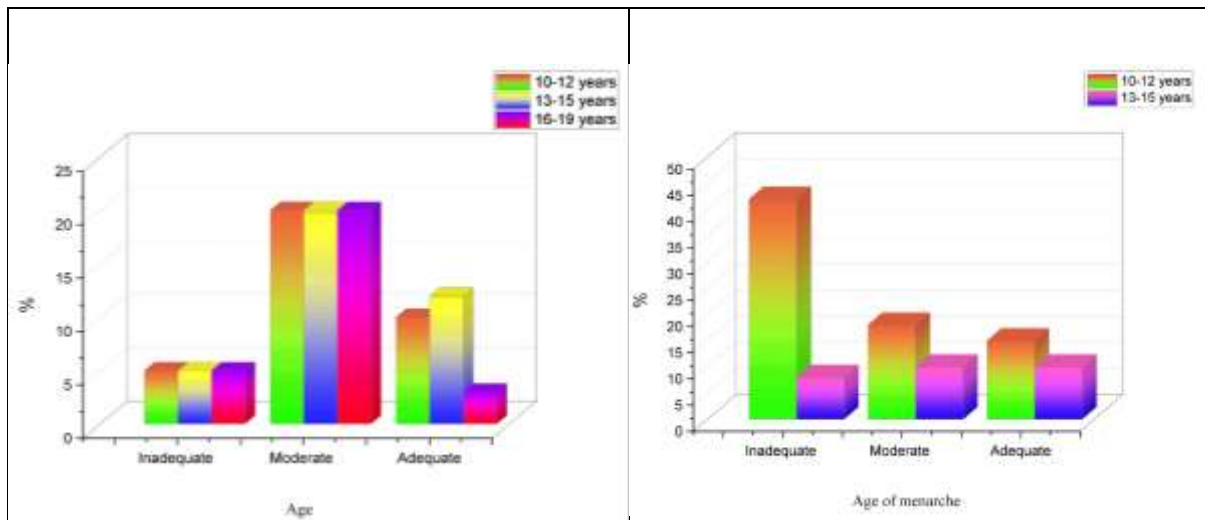
**3.3 Association of posttest level of knowledge with selected Demographic variables among the teenage girls**

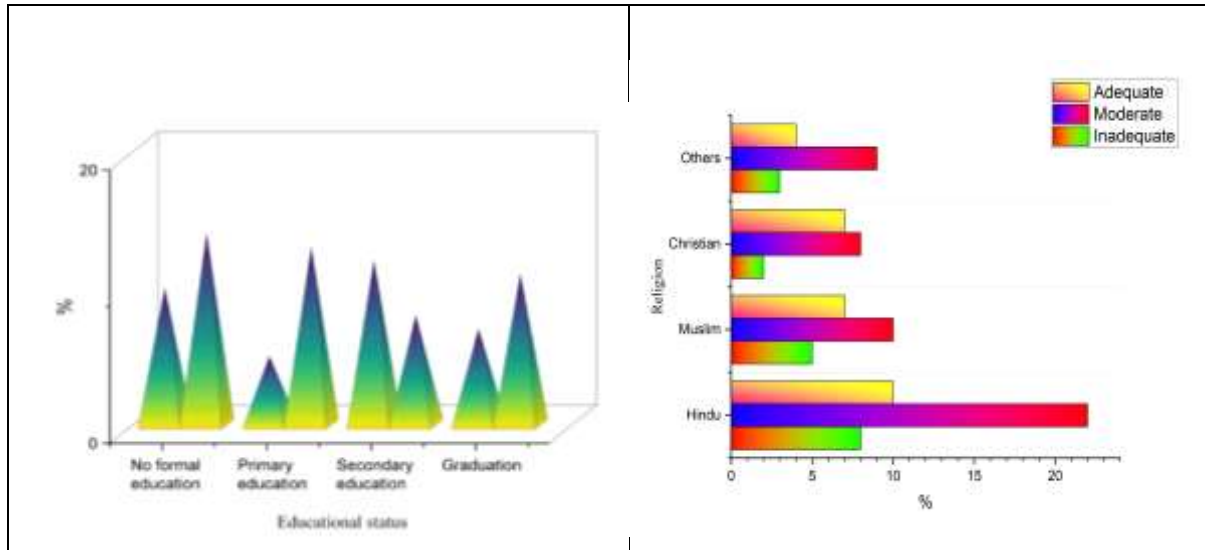
The association between the posttest knowledge levels and selected demographic variables among teenage girls was analyzed using the Chi-Square test. The findings revealed no statistically significant association between age and posttest knowledge levels ( $\chi^2=0.158$ , p=0.984), as well as between educational status and knowledge levels ( $\chi^2=1.178$ , p=0.555), and

religion ( $\chi^2=2.550$ ,  $p=0.466$ ), indicating that these variables did not significantly influence the knowledge acquired. However, age of menarche showed a statistically significant association with the posttest knowledge levels ( $\chi^2=8.148$ ,  $p=0.043$ ), suggesting that girls who attained menarche earlier (10–12 years) had a different pattern of knowledge adequacy compared to those with later menarche. Specifically, the majority of girls in the 10–12 years menarche group demonstrated moderate or inadequate knowledge, while the 13–15 years group displayed relatively balanced distributions between moderate and adequate knowledge. These results underscore the impact of physiological developmental factors over sociocultural and educational backgrounds in influencing post-intervention knowledge levels related to the studied topic.

**3.4 Association Between Post-Test Knowledge and Demographic Variables**

The association between selected demographic variables and the posttest knowledge levels among teenage girls, as evaluated by chi-square analysis. The results show no statistically significant association between age and posttest knowledge levels ( $\chi^2 = 0.158$ ,  $p = 0.984$ ), indicating that age does not have a substantial impact on knowledge gain in this cohort. However, there is a significant association between the age of menarche and posttest knowledge levels ( $\chi^2 = 8.148$ ,  $p = 0.043$ ), suggesting that girls who experienced menarche at an earlier age displayed different knowledge levels compared to those with later onset. Educational status and religion did not demonstrate significant associations with posttest knowledge levels ( $\chi^2 = 1.178$ ,  $p = 0.555$  and  $\chi^2 = 2.550$ ,  $p = 0.466$ , respectively), as evidenced by non-significant p-values, implying that these factors were less influential in shaping post-intervention knowledge outcomes within this sample size.





**Fig. 4 Association of level of posttest level of knowledge with selected Demographic variables among the teenage girls**

#### 4. Discussion

The findings demonstrate that while a majority of participants exhibited moderate knowledge (56%) prior to intervention, only a minority (26%) had adequate knowledge, and a significant proportion (16%) showed inadequate understanding. This pattern was more pronounced in menstrual hygiene practices, with only 13% demonstrating adequate practice, highlighting a critical gap between theoretical knowledge and practical implementation. The mean knowledge score was significantly higher than the practice score, suggesting a discrepancy between awareness and behavior. This gap may originate from socio-cultural barriers, lack of access to adequate menstrual hygiene products, or limited parental and community support [4,5,7,8]. These results align with existing literature that indicates knowledge alone is insufficient to ensure proper menstrual hygiene practices without supportive environments and resources [4,5,7,9].

Demographically, no significant associations were found between knowledge levels and factors such as age, education status, or religion. Interestingly, the age of first occurrence of the menstrual cycle showed a significant association with knowledge, where girls experiencing menarche at an earlier age tended to have moderate or inadequate knowledge compared to those with later onset. This finding underscores the need for early educational interventions tailored to younger girls entering menarche, to bridge the knowledge gap during this critical developmental phase [3,10]. The predominance of economically disadvantaged households and joint family structures in the sample suggests that economic constraints may also influence menstrual hygiene practices [10]. Mothers, identified as the primary source of information, play a vital role in shaping adolescent girls' understanding, emphasizing the potential impact of family-centered educational programs [1] [7].

## 5. Conclusion

The study on menstrual hygiene knowledge and practices among adolescent girls reveals that despite a moderate level of awareness (56% exhibiting moderate knowledge), only a minority (26%) demonstrated adequate knowledge, and even fewer (13%) practiced adequate menstrual hygiene. This significant gap between knowledge and practice underscores the complexity of translating awareness into behavior, likely influenced by socio-cultural barriers, economic constraints, and limited access to menstrual hygiene products. Demographic factors such as age, educational status, and religion did not significantly affect knowledge levels, but the age of menarche showed a meaningful association, with girls who attained menarche earlier tending to have lower knowledge levels. Mothers were identified as the primary source of information, highlighting the potential of family-centered educational programs. The findings point to the urgent need for targeted, early educational interventions and community support systems to improve menstrual hygiene practices, especially in economically disadvantaged households. Such efforts are crucial to bridge the gap between knowledge and practice, promoting health and well-being among adolescent girls during this critical development phase. This study emphasizes the importance of a comprehensive approach that addresses not only knowledge dissemination but also the socio-economic and cultural factors impacting menstrual hygiene management.

**Funding:** This research did not receive any funding from any government or private institutions.

**Data Availability:** Data will be made available upon request made to the corresponding author.

**Ethical statement:** The ethical clearance is obtained from the Institutional Ethical Committee.

**Patient Consent for Publication:** Not applicable.

**Competing Interests:** All authors confirm that they do not have any conflicts of interest to disclose.

## References

- [1] A. Ayele, M. G/Mariam, H. Beyene, A. Tolcha, D. Tediso, T. Shalamo, T. Belayneh, Menstrual hygiene practice and associated factors among adolescent primary school females in Dale Woreda, Sidama, Ethiopia: a cross sectional study, *Frontiers in Reproductive Health* 7 (2025) 1458132. <https://doi.org/10.3389/FRPH.2025.1458132/BIBTEX>.
- [2] S.S. V., A. Johnson, J. Amalan, Perceptions and practices of menstrual hygiene management among adolescent girls and young women in an urban underprivileged area of Bengaluru, India: a qualitative study, *Int J Community Med Public Health* 12 (2025) 2639–2643. <https://doi.org/10.18203/2394-6040.IJCMPH20251705>.
- [3] A. Sarvade, R.G. Nile, Menstrual hygiene: awareness and practices amongst adolescent girls attended school health camp in Mumbai, Maharashtra, India, *Int J Community Med Public Health* 3 (2016) 3022–3025. <https://doi.org/10.18203/2394-6040.IJCMPH20163903>.

- [4] S. Anne, V. K., Menstrual hygiene and its awareness among adolescent girls-a study from an urban area, *Int J Reprod Contracept Obstet Gynecol* 13 (2024) 2869–2874. <https://doi.org/10.18203/2320-1770.IJRCOG20242825>.
- [5] K. Pandit, M.J. Hasan, T. Islam, T.M. Rakib, Constraints and current practices of menstrual hygiene among Rohingya adolescent girls, *Heliyon* 8 (2022) e09465. <https://doi.org/10.1016/J.HELIYON.2022.E09465>.
- [6] C. Vijay, N. Ramesh, K.P. Gonsalves, Impact of parenting style and upbringing on menstrual stress in adolescent South Indian girls, *Int J Reprod Contracept Obstet Gynecol* 9 (2020) 3688–3696. <https://doi.org/10.18203/2320-1770.IJRCOG20203841>.
- [7] S.K. Borkar, A. Borkar, M.K. Shaikh, H. Mendhe, R. Ambad, A. Joshi, Study of Menstrual Hygiene Practices Among Adolescent Girls in a Tribal Area of Central India, *Cureus* 14 (2022) e30247. <https://doi.org/10.7759/CUREUS.30247>.
- [8] D. Roy, N. Kasemi, M. Halder, M. Majumder, Factors Associated with Exclusive Use of Hygienic Methods during Menstruation among Adolescent Girls (15–19 Years) in Urban India: Evidence from NFHS-5, *Heliyon* 10 (2024) e29731. <https://doi.org/10.1016/J.HELIYON.2024.E29731>.
- [9] K.B. Rajput, V. Mangla, A. Bhargava, S. Tawar, P.M.P. Singh, Menstrual hygiene knowledge and practices among high school girls in urban central India: a cross-sectional study, *Int J Community Med Public Health* 12 (2025) 3143–3151. <https://doi.org/10.18203/2394-6040.IJCMPPH20252109>.
- [10] S. Karjee, M. Rahaman, P.C. Biswas, Contextualizing the socio-economic and spatial patterns of using menstrual hygienic methods among young women (15–24 years) in India: A cross-sectional study using the nationally representative survey, *Clin Epidemiol Glob Health* 20 (2023) 101253. <https://doi.org/10.1016/J.CEGH.2023.101253>.