



Original Research Article

A STUDY ON MENSTRUAL HYGIENE PRACTICES AMONG ADOLESCENT GIRLS IN RURAL SOUTH INDIA

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ABSTRACT

Background: Adolescence is a period of rapid physical, physiological, and behavioral changes, with menarche being a significant developmental milestone. Although menstruation is a normal physiological process, it is often surrounded by misconceptions, taboos, and restrictive socio-cultural practices that may negatively affect girls' health, education, and psychosocial well-being. Inadequate knowledge and poor menstrual hygiene practices can increase vulnerability to reproductive and urinary tract infections. **Objectives:** To assess the knowledge, perceptions, and menstrual hygiene practices among adolescent girls and identify prevailing socio-cultural restrictions.

Materials and Methods: A cross-sectional study was conducted among adolescent girls aged 12–17 years. Data were collected using a structured questionnaire covering socio-demographic characteristics, awareness about menstruation, source of information, hygienic practices, and cultural restrictions. The collected data were analyzed using descriptive statistics.

Results: Most participants (86.88%) recognized menstruation as a normal physiological process; however, 89.34% were unaware of the anatomical source of menstrual bleeding. Mothers were the primary source of information for 71.31% of girls before menarche. A large majority (96.72%) used sanitary napkins, and 54.92% changed absorbents 3–4 times daily. Regarding disposal, 50% used dustbins while 48.36% burned used absorbents. All participants reported daily bathing during menstruation, and 97.54% practiced genital hygiene, with 62.3% using soap and water. Despite good hygiene practices, cultural restrictions persisted, including avoidance of religious gatherings (55.74%), certain foods (37.7%), and physical activity (35.24%).

Conclusion: The study reveals satisfactory awareness and menstrual hygiene practices among adolescent girls; however, significant gaps remain in anatomical knowledge and persistent socio-cultural taboos. Strengthening menstrual health education, enhancing psychosocial and medical support, and improving WASH infrastructure with free menstrual products in schools are recommended to promote effective menstrual hygiene management.

Keywords: Menstrual Hygiene Practices, Adolescent Girls, Rural South India.

INTRODUCTION

Adolescence marks a period of rapid growth and development during which many changes at the physical, physiological, and behavioral levels occur. Menarche is one of the most important developmental milestones during adolescence. Although menstruation is a natural process, it is linked with several misconceptions and practices

which sometimes results into adverse health outcome.^[2]

Most of adolescent girls are uncomfortable when it comes discussing about menstruation, and thus, they do not have access to adequate information about this social taboo.^[3] Lack of practical life skills to effectively manage menstruation would reduce the adolescent girl self-esteem, impair their health and truncate their education.^[4] Moreover, the lack of knowledge further impairs a girl's daily activities,

affects her attendance in college, and thus leads to poor academic performance.^[5]

During period of Menstruation women are most vulnerable for developing any kind of reproductive tract infections, urinary tract infections, and various sexually transmitted diseases. In some cases, the consequences of RTI are severe and having significant negative impact on women's health like chronic pelvic pain, dysmenorrhea and infertility in severe cases⁶. Women who have good knowledge about menstrual hygiene are less liable to suffer from reproductive tract infections.^[7]

This study is therefore aimed at studying the knowledge and perceptions regarding menstrual hygiene among the adolescent girls so that it can be then taken as a background for designing necessary interventions in the community so as to reduce its burden in family/primary care practice.

MATERIALS AND METHODS

It was a cross sectional descriptive study carried out among adolescents girls studying in rural field practice area of Viswabharathi Medical College for 2 months during the months of January and February 2024.

Inclusion Criteria: Adolescent girls who are willing to participate in the study.

Exclusion Criteria: Adolescent girls who have not attained menarche.

Sample size was calculated to be 122 for the current study taking prevalence of menstrual hygiene among adolescent school girls in India as 77.6% according to NFHS-5, using the formula $n = (Z\alpha pq)/d^2$ where n = estimated sample size $Z\alpha = 1.96$; $p = 77.6\%$; d = relative precision 10% of p ; $q = (1 - p) = 22.4\%$

The sample size was rounded off to 122.

After obtaining approval from Institutional ethics committee, the study started taking schools as the sampling unit. Out of 5 schools in rural field practice area, 2 were randomly selected by simple random sampling. The school authorities were contacted and explained the scope of the study. The girls were explained about the study and were assured confidentiality. Thereafter 122 adolescent girls were selected from the 2 schools proportionate to their student number in respective schools and availability at the time of study.

Data Collection

A structured self-administered questionnaire was used as data collection tool which included questions related to their socio-demographic profile, about menstruation, and hygiene practiced during menstruation.

Statistical Analysis: After checking the completeness of the forms, data were compiled in MS Excel and analyzed using spss version 26. The descriptive statistics are represented with frequencies and percentages.

RESULTS

Table 1: Sociodemographic profile of the study participants

Variables		Frequency
Age	12-14	74(60.65%)
	15-17	48(39.35%)
Religion	Hindu	79(64.75%)
	Muslim	11(9.02%)
	Christian	32(26.23%)
Mother's education	Illiterate	83(68.03%)
	Literate	39(31.97%)
Mother's occupation	Unemployed	95(77.87%)
	Employed	27(22.13%)
Socioeconomic status	Lower class	64(52.46%)
	Lower Middle class	58(47.54%)

In the current study, majority of the study participants were in the age group of 12-14(60.65%).

64.75% adolescent girls were Hindus and majority of their mothers were illiterate(68.03%) and unemployed(77.87%). Out of 122 girls, majority were from lower class(52.46%).

Table 2: Knowledge of study participants about menstruation before menarche

Knowledge about		Frequency
Menarche is natural/physiological	Yes	106(86.88%)
	Don't know	16(16.12%)
Origin of blood	Don't know	109(89.34%)
	vagina	8(6.56%)
	Bladder	5(4.1%)
Materials to be used	Sanitary pad	115(94.26%)
	cloth	4(3.28%)
	Don't know	3(2.46%)
Duration of cycle	20-30 days	94(77.05%)
	30-60 days	5(4.1%)
	Don't know	23(18.85%)

In the present study, it was observed that 86.88% study participants were aware that menarche is a normal physiological process. None of the adolescent girls were aware that the source of menstrual bleeding was from uterus. 6.56% girls said it was from vagina and 4.1% girls said it was from bladder. While 94.26% girls were aware about the sanitary pads, 3.28 % believe cloth to be used during menstruation. In our study, majority (77.05%) of the study participants had knowledge about the duration of menstrual cycle.

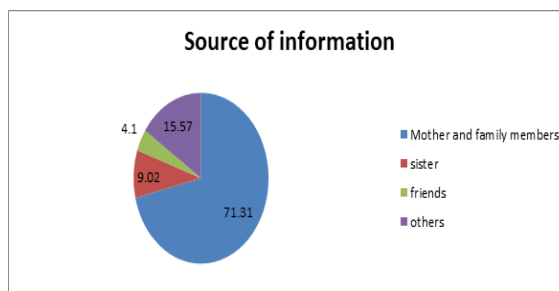


Figure 1: Source of information about menstruation to the study participants

In this study, majority (71.31%) of participant girls got information about menstruation from mother while 9.02% from sister, 4.1% from friends and 15.57% from other sources.

Table 3: Menstrual hygiene practices among the study participants

Variable	Frequency	
Absorbent	Cloth	3(2.46%)
	Sanitary pad	118(96.72%)
	Both	1(0.82%)
Changing absorbent per day	3-4 times/day	67(54.92%)
	2-3 times/day	51(41.8%)
	1-2 times/day	4(3.28%)
Method of disposal of absorbent	Dustbin	61(50%)
	Burn	59(48.36%)
	Wash the cloth and reuse	2(1.64%)
Daily bathing during menstruation	Yes	122(100%)
Cleaning external genitalia while changing pad	Yes	119(97.54%)
	No	3(2.46%)
Method used to clean external genitalia	Soap and water	76(62.3%)
	Only water	46(37.7%)

In the current study, majority of the participant girls use sanitary pads as absorbent during menstruation and nearly 54.92% girls change sanitary pads 3-4 times per day. 50% of the girls in this study have the habit of disposing sanitary pads by throwing them in

dustbin. 100% of adolescent girls have a habit of taking daily bath during menstruation. Most of the girls (97.54%) have the habit of cleaning external genitalia while changing pad and 62.3% girls use soap and water to clean external genitalia.

Table 5: Restrictions practiced during menstruation

Nature of restriction	Frequency
Avoiding religious gatherings/rituals	68(55.74%)
Food restrictions	46(37.7%)
Staying isolated	16(13.11%)
Not attending school	9(7.38%)
Avoiding physical exertion.	43(35.24%)

In the current study, there is restriction to avoid religious gatherings /rituals for 55.74% girls, food restrictions for 37.7%, 13.11% girls stay isolated during menstruation, 7.38% girls were not allowed to go to school followed by 35.24% girls avoiding physical exertion.

DISCUSSION

In the current study, the majorities of the girls were in the age group of 12-17 and belonged to Hindu religion. In a similar study by Renuka et al⁸ 51.7% of adolescent girls belong to Hindu religion whereas in a study by Kailasraj et al,⁹ 100.0% of rural girls belongs to Hindu religion. In our study 22.3% of adolescent girl's mothers were employed whereas in

a study by Kailasraj et al,⁹ 49.5% of rural girl's mothers were employed.

In the present study, it was found that 86.88% of girls were aware that menstruation is a normal physiological process, whereas 17.2% were unaware which is similar to Mamatha et al¹⁰ study where 95% of participants regarded menstruation as a physiological phenomenon, yet there remained 5% who doesn't agree this.

The present study found that 89.34% of girls were not aware of the source of the menstrual bleeding whereas 6.56% of girls said it was from vagina. Similar study done by Nagar et al,¹¹ observed that 76.23% girls were not aware of the source of the menstrual bleeding; only 2.58% were aware that the source of the bleeding was the uterus.

In our study among 71.31 % of girls, the main source of information was mother regarding menstruation before attaining menarche similar to Sreelatha et al,^[12] study wherein 78.8% of girls received information regarding menstruation from their mothers.

In the current study it was found that majority (96.72%) of the girls used sanitary napkins, only (2.46%) girls used cloth similar to findings in Renuka et al,^[8] & Mamatha et al,^[10] studies. In contrast to this, in a study conducted by Dasgupta A et al,^[13] it was observed that only 11.25% of the girls were using Sanitary pads and 6.25% of the girls were using new cloth pieces.

The present study observed that 54.92% of the girls change absorbents 3-4 times per day, 41.8% change absorbents 2-3 times a day which is similar to the findings in Renuka et al⁸ study where 50% of the girls change absorbents 3-4 times per day, 45% change absorbents 2-3 times a day.

The present study observed that 50% girls dispose the used absorbent by throwing into dustbin, 48.36% by burning, 1.64% of the girls wash and reuse the cloth. On the other hand, Thakre SB et al,^[14] conducted a study which confirmed that 60.96% of the girls burn the absorbant whilst only 12.33% of the girls throw it in the dustbin, 22.6% of the girls disposed the absorbant by flushing in the toilet.

In the present study it was observed that 100% of the girls take daily bath during menstruation, similar study by Yamin et al,^[15] observed that 85.7% of girls take daily bath during menstruation. In our study, 97.54% girls clean their external genitalia 62.3% clean external genitalia with soap and water. Whereas in Kailasrajetal,^[9] study 56.1% rural girls clean their external genitalia with soap and water.

The present study found that among study participants there is restriction like 55.74 % for attending religious gatherings, 37.7% for certain foods, 35.24% for physical exertion. These findings are consistent with Sreelatha et al,^[12] Mamatha et al,^[10] Renuka et al⁸ study. This may indicate that beliefs do not change with an increase in educational level. These beliefs and taboos remained as menstruation was not discussed and these perceptions are passed through generations

CONCLUSION

In the current study, the study participants had good understanding of menstruation and are practicing menstrual hygiene. Improved public health knowledge, Psycho-social/medical support, and WASH infrastructure with freely available menstrual products in the school could lead to more effective menstrual hygiene practices among adolescent girls

Recommendations.

Strengthen public health education: Implement school-based awareness programs on menstruation, hygiene, and related myths to sustain and build on

existing knowledge. Enhance Psycho-social and medical support: Offer counseling services and accessible healthcare consultations to address menstrual discomfort, stigma, and disorders

Improve WASH infrastructure: Ensure schools provide adequate sanitary facilities, running water, and free menstrual products to remove barriers to hygiene.

Policy and research advocacy: Policymakers should integrate these interventions into national adolescent health programs; future studies could evaluate long-term impacts using longitudinal designs.

Limitations

This study's cross-sectional design and reliance on self-reported data from a single school limit causal inferences and generalizability, while the small sample size restricts subgroup analyses. The authors declare no conflicts of interest, with no financial or personal relationships influencing the research

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