

Knowledge, Attitude and Practices of Menstrual Hygiene among High School Girls in Government Medical College Higher Secondary School, Thiruvananthapuram

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ABSTRACT

Published on 1st July 2024

Menstrual hygiene encompasses practices and knowledge essential for maintaining cleanliness and health during menstruation. A cross sectional study was done to appraise the understanding of menstrual hygiene among 103 adolescent girls (grades 8-12) at Government Medical College Higher Secondary School in Trivandrum, conducted between July and September 2023. Socio-demographic factors, knowledge acquisition, and comprehensive KAP (Knowledge, Attitude, Practice) scores pertinent to menstrual hygiene were captured using a semi structured questionnaire. This encompassed pre-menstrual awareness, comprehension of menstrual blood's origin, identification of hormonal triggers, familiarity with diverse menstrual products, preferred sanitary provisions, ablution rituals, and disposal methodologies. While 62.1% demonstrated prior knowledge of menstruation, a mere 50.5% understood the genesis of menstrual blood. Despite a commendable understanding of hormonal triggers (86.4%), recognition of items like tampons (34%) and menstrual cups (74.8%) displayed notable variability. Sanitary pads were the predominant choice (95.15%), with minimal utilization of cloth pads (1.94%) or alternative materials (2.91%). Approximately 58.3% conscientiously adhered to using soap and water for ablution, while 66.99% opted for incineration as the disposal method for used items. The study revealed critical disparities in menstrual hygiene comprehension among adolescents, necessitating bespoke educational initiatives to elevate practices and instill heightened awareness.

Keywords: Menstrual Hygiene, Hormonal Triggers, Sanitation

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BACKGROUND AND RATIONALE

Every month, 1.8 billion women across the world menstruate. Millions of these girls and women are unable to manage their menstrual cycle in a dignified, healthy way.

Many adolescent girls face stigma, harassment and social exclusion during menstruation. Gender inequality, discriminatory social norms, cultural taboos, poverty and lack of basic services like toilets and sanitary products can all cause menstrual health and hygiene needs to go unmet.^{4,5}

WHO calls for three actions:⁷

Firstly, to recognize and frame menstruation as a health issue, not a hygiene issue.

Secondly, to recognize that menstrual health means that women and girls who menstruate, have access to information and education about it; to the menstrual products they need; to study and work in an environment in which menstruation is seen as positive and healthy.

Thirdly, to ensure that these activities are included in the relevant sectoral work plans and budgets, and their performance is measured.

A proper study on this issue can throw light into the possible preventive strategies aimed at increasing

Cite this article as: Mohan M, Sunilkumar M, Thambi MS, Nizar MN, Ali M, Gopakumar S, et al. Knowledge, Attitude and Practices of Menstrual Hygiene among High School Girls in Government Medical College Higher Secondary School, Thiruvananthapuram. Kerala Medical Journal. 2024 Jul 1;17(2):67-74.

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awareness, early screening and lifestyle modifications to decrease the rising burden of diseases associated with unhygienic menstrual practices.^{2,3}

OBJECTIVES

Primary Objective:

To assess the Knowledge, Attitude, Practices of menstrual hygiene among adolescent high school girls in Trivandrum.

Secondary Objective

To assess the proportion of menstrual hygiene related problems like UTIs, Bacterial vaginosis.

METHODOLOGY

- **Study Design:** School Based Cross Sectional Study.
- **Study Setting:** Government Medical College Higher Secondary School, Trivandrum
- **Study Period:** July 2023-September 2023
- **Study Subjects:** Adolescent high school girls
- **Inclusion criteria:** Students of classes 8-12 studying in Government Medical College Higher Secondary school.
- **Exclusion criteria:** Students who are unwilling to participate in the study.
Those who are absent on the day study is to be conducted.

Sample size: n= 103

Sampling technique: Participants who meet the study criteria will be consecutively recruited to the study till the sample size is met.

Study Variables:

Outcome variable: Knowledge, Attitude and Practice of menstrual hygiene

Independent variable: Age, Religion, level of education, mother's education, socioeconomic status etc.

Study Tools: A semi structured questionnaire will be administered to collect data, which will consist of two parts.

- Part 1 will deal with the socio-demographic characteristics.
- Part 2 will include questions to assess basic knowledge, attitude and practices of students

regarding menstrual hygiene practices.

Data collection procedure: The Principal of Government Medical College Higher Secondary School, Trivandrum will be approached, introduced to the objectives of the study and seek the permission to conduct a study based on Menstrual Hygiene.

After obtaining permission the study procedure will be explained to the adolescent girls of classes 8,9,10 following which a consent for the study will be obtained from the parent through Part 1 of the questionnaire which also includes their biodata.

After taking consent, a questionnaire with questions appropriate to the survey will be provided to the group of students and their responds will be taken up.

Data Analysis:

- Data will be entered in MS excel and analysed using SPSS version 27.
- All qualitative variables will be expressed as percentage and quantitative variables using mean and standard deviation.
- Menstrual hygiene practices and knowledge will be expressed as percentage. Menstrual hygiene related health issues and irregularities will be expressed as percentage.

ETHICS CONSIDERATIONS

- Permission will be obtained from the School authority prior to the study .
- Prior to the study the procedure will be explained assuring them that participation will be voluntary.
- Written assent from study participants and consent from parents will be obtained.
- No financial burden will be incurred on the study participants.
- The study process does not involve any harm to the participants.
- Confidentiality of the individual will be ensured and maintained throughout the study

RESULTS

The study was conducted as a school based cross sectional study at Government Medical College Higher Secondary School, Trivandrum. The study subjects were adolescent high school girls of classes 8-12 during the period July 2023 -September 2023.

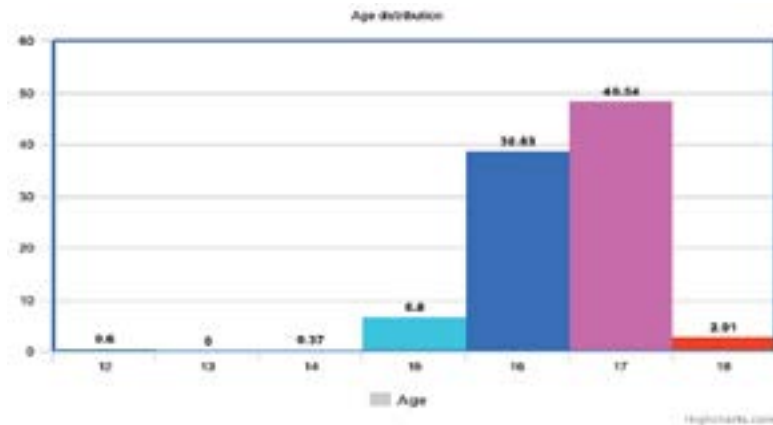


Figure 1. Showing histogram of age distribution among the study participants (n=103)

Estimated Sample size-100 and we collected data from 103 students.

A semi structured questionnaire was administered to collect data which consisted of 2 parts.

Part 1 dealt with socio demographic characteristics and Part 2 included questions to assess basic knowledge, attitude and practices of students regarding menstrual hygiene.

The results were analyzed under the following domains:

DOMAINS

1. Socio demography
2. Knowledge
3. Attitude and practice
4. KAP Score
5. Univariable analysis

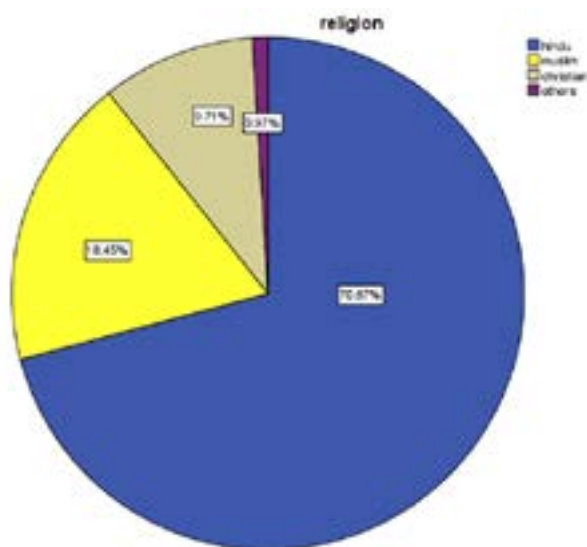


Figure 2. Diagram showing the details of religion among the study participants (n= 103)

1. Socio demography

• Age: The mean age was 16.38 years (0.941). The maximum and minimum age was 18 years and 12 years respectively. Please refer to **Figure 1**.

• Religion: Our study population comprised of Hindus (70.87%), Muslims (18.45%), Christian (19.71%) and other religions (0.97%). Please refer to **Figure 2**.

• Education Status of Mother: About 25.3% have pursued post high school education while 74.7% have education at or below high school level. Please refer to **Figure 3**.

• Type of Family: 95.1% of the study population reside with their parents. The remaining 4.9% stay at hostel. Please refer to **Table 1**

• Age of Attaining Menarche (n= 103)
 Mean=12
 Standard deviation=1.358
 N=103. Please refer to **Figure 4**

2. Knowledge regarding

- Knowledge about Menstruation before Attaining Menarche
 - 62.1% did know about menstruation before attaining it.
 - 37.9% did not know about menstruation before attaining it.

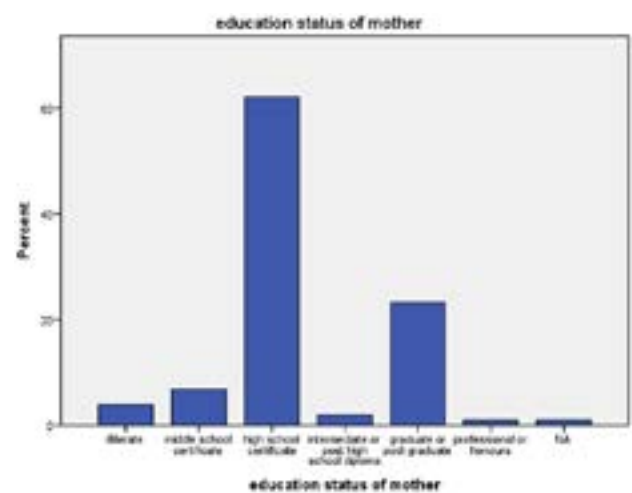


Figure 3. Education status of mothers of study subjects (n=103)s (n= 103)

Table 1. Type of family		
Type of family	Frequency	percent
Nuclear	82	79.6
Extended	13	12.6
Mother only	6	5.8
Grandparents only	1	1.0
NA	1	1.0
Total	103	100

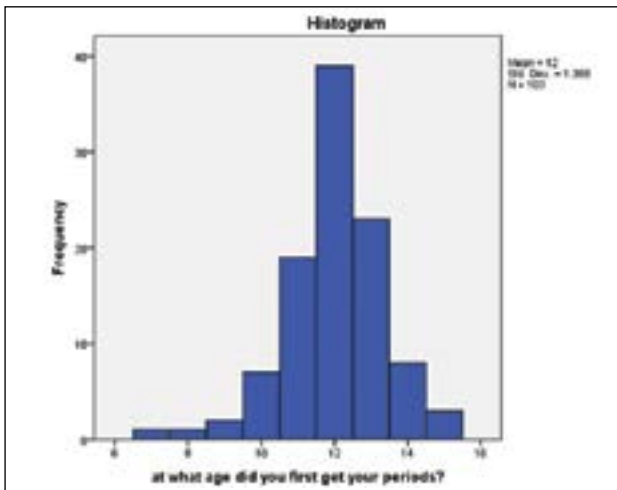


Figure 4. Histogram showing the age of attainment of menarche

- **Source of Information about Menstruation.**
Please refer to **Figure 5**
- **Is it normal to have periods?**
88.3% thinks it is normal to have periods.
11.7% finds it abnormal.
- **Source of menstrual blood?**

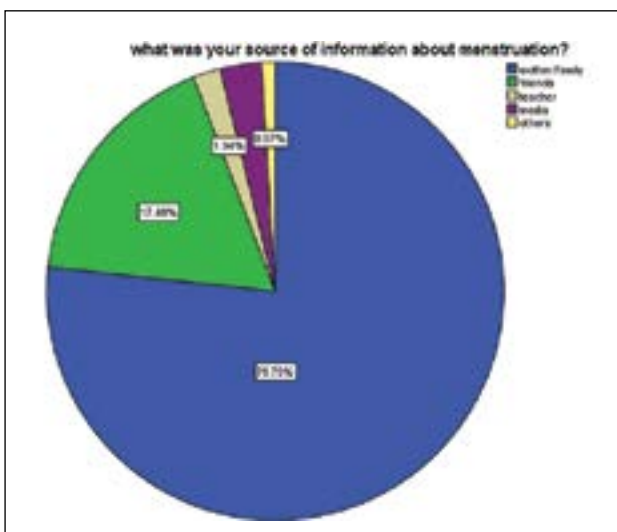


Figure 5. Source of information about menstruation among the study participants (n=103)

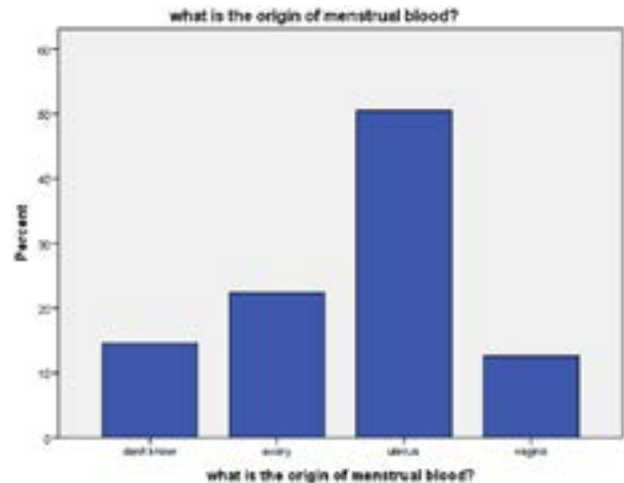


Figure 6. Source of menstrual blood according to study subjects (n=103)

Only 50.5% of the study population knew the correct origin of menstrual blood. Please refer to **Figure 6**

- **What is the cause of menstruation?**
86.4% knew that hormonal changes led to menstruation while 13.6% did not.
 - **Knowledge about other Menstrual Products**
34% were aware of tampons and 74.8% were aware of menstrual cups.
- 3. Attitude and Practice**
- **Type of Sanitary Material Used**
95.15% of the study population used sanitary pads.
1.94% used cloth pads
And the remaining 2.91% used other materials like menstrual cups. Please refer to **Figure 7**

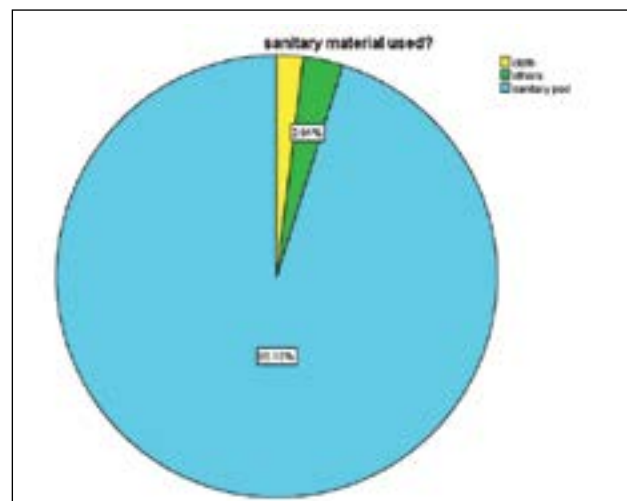


Figure 7. Types of sanitary material used (n= 103)

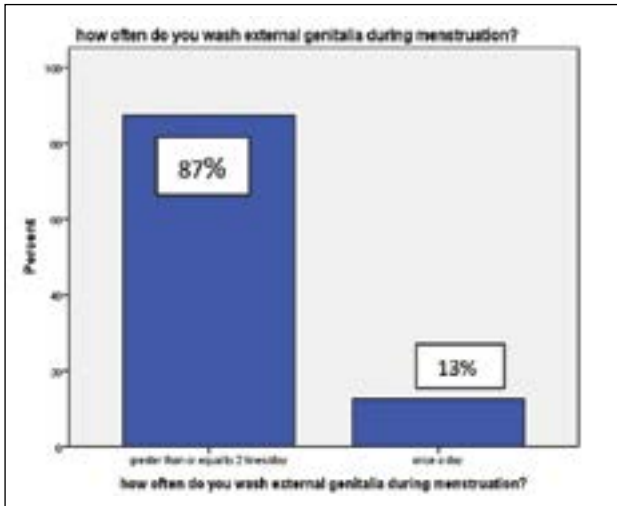


Figure 8. Frequency of washing external genitalia during menstruation (n= 103)

- **Frequency of Washing External Genitalia during Menstruation.** Please refer to **Figure 8**

- **Material used to wash external genitalia.**

58.3%of the study population used soap and water to wash their external genitalia while 33.1%used only water. Please refer to **Figure 9**

- **Method of Disposal of Sanitary Pad after Use**

About two-thirds of the study population burned the used sanitary material.

23.3% wrapped the used sanitary material and threw it in a garbage can. Please refer to **Figure 10**

4. Total KAP Score

The maximum score attained was 11 out of 11.

The minimum score attained was 4 out of 11.

The mean score was 7.82 with standard deviation 1.412.

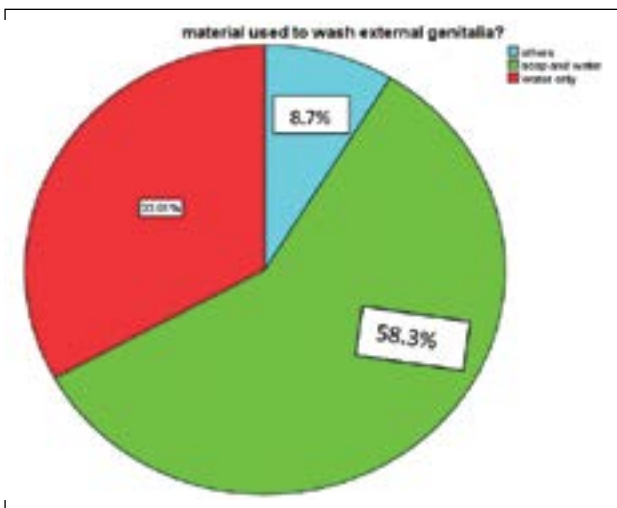


Figure 9. Material used to wash external genitalia (n= 103)

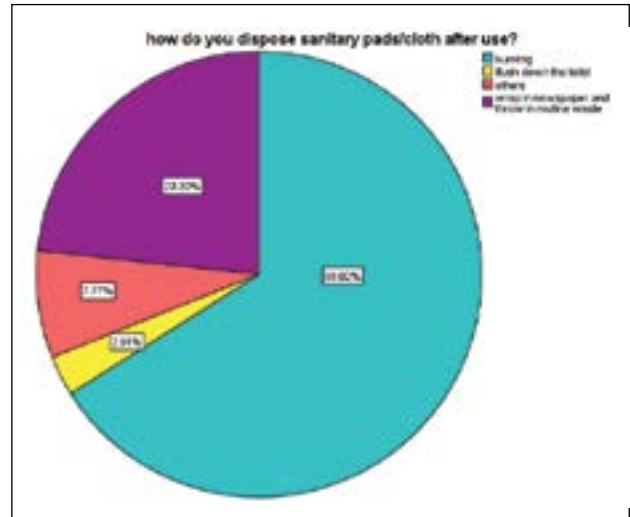


Figure 10. Method of disposal of sanitary pads (n= 103)

Among the study participants 38.8% had a good KAP score. Please refer to **Figure 11**

5. Univariable analysis

There was no association between educational status of parents and KAP score on menstrual hygiene. Please refer to **Table 2**

There was no statistically significant association between KAP scores on menstrual hygiene and symptoms of itching in genitalia or symptoms of Urinary tract infection. Please refer to **Table 3**

There was no statistically significant association between KAP score and symptoms of vaginal discharge or pustules over genitalia. Please refer to **Table 4**

DISCUSSION

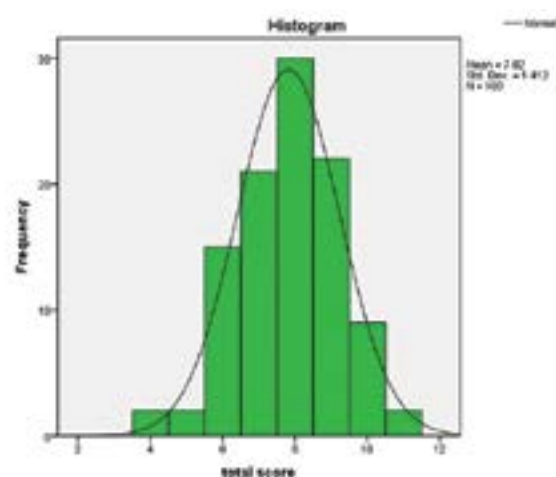


Figure 11. Histogram showing KAP scores of study population

Table 2. Chi Square analysis for association between educational status of parents and KAP scores

Factor		Good KAP score n (%) N=40	Poor KAP score n (%) N =63	Chi square value	P value
Education of mother	Lower	43 (41.7)	33(32)	2.56	0.109
	Higher	20(19.4)	7(6.7)		
Education of father	Lower	48(46.6)	36(34.9)	3.10	0.07
	Higher	15(14.5)	14(13.6)		

Table 3. Chi Square analysis for association between KAP scores and symptoms of itching in genitalia and difficulty/burning sensation on urination

Factor		Good KAP score n (%) N=40	Poor KAP score n (%) N =63	Chi square value	P value
Itching in genitalia	Yes	40 (38.83)	19 (18.44)	2.55	0.11
	No	23 (22.3)	21 (20.38)		
Difficulty/burning sensation on urination	Yes	10 (9.7)	4 (3.88)	0.71	0.39
	No	53(51.45)	36 (34.95)		

Table 4. Chi Square analysis for association between KAP scores and symptoms of vaginal discharge and pustules over genitalia

Factor		Good KAP score n (%) N=40	Poor KAP score n (%) N =63	Chi square value	P value
Vaginal discharge	Yes	23 (22.3)	30 (29.12)	0.17	0.67
	No	40 (38.83)	27 (26.21)		
Pustules over Genitalia	Yes	2	5	3.35	0.06
	No	61	35		

Improving menstrual hygiene among school-going children in India requires a comprehensive strategy involving various aspects:⁸

Majority of the study subjects got information from the mother / family regarding menstruation. Only 1.94 % got the information through schools. Education and Awareness: Implementing comprehensive menstrual health education programs that cover topics like reproductive health, menstrual hygiene, and debunking myths and taboos surrounding menstruation. These programs aim to empower both girls and boys with accurate information.^{2,3}

Engagement of Parents and Teachers: Involving parents, guardians, and teachers in discussions and educational sessions can help create a supportive environment at home and in schools. This ensures that girls feel comfortable discussing menstrual issues and seeking help when needed

Access to Sanitary Products: in our study 2.91% used options other than sanitary pads. They were unaware on other environment friendly options like menstrua cups. Ensuring access to affordable and quality sanitary products is crucial. Initiatives providing free or subsidized sanitary pads or menstrual cups can significantly impact girls’ ability to manage their periods hygienically.

Sanitation Facilities: about 13 % of the study subjects did not frequently wash genital area. Schools should have adequate, clean, and private sanitation facilities. Access to clean water, disposal systems for sanitary waste, and private toilets are essential for maintaining good menstrual hygiene.⁶

Community Involvement: Engaging community leaders, local organizations, and NGOs in awareness campaigns and initiatives can help in breaking cultural taboos and promoting a supportive atmosphere for menstrual hygiene management. Monitoring and Evaluation: Continuous monitoring and evaluation of these interventions are crucial to assess their effectiveness and make necessary adjustments for better outcomes. By addressing these factors comprehensively, the aim is to create an environment where menstruation is understood as a normal biological process, and girls have the necessary resources, knowledge, and support to manage their periods hygienically and confidently¹

CONCLUSION

The study highlights a varied landscape of knowledge, attitudes, and practices regarding menstrual hygiene among the school-going population. While a significant proportion had prior knowledge about menstruation, gaps existed in understanding the physiological aspects. Despite diverse practices, the majority maintained good hygiene practices during menstruation. However, there’s a need for enhanced education, especially regarding the physiological aspects of menstruation, proper disposal methods, and awareness about alternative menstrual products. The study didn’t find a direct link between parental education levels and menstrual hygiene scores, suggesting the need for broader interventions beyond family educational background. Additionally, the absence of statistically significant associations between KAP scores and health-related symptoms indicates a need for further investigation or a larger-scale study to elucidate potential correlations or causes. Overall, this study underscores the importance of comprehensive menstrual health education and practices tailored to address the identified knowledge

QUESTIONNAIRE

'Knowledge, attitude and practice of good menstrual hygiene among adolescent high school girls in Trivandrum'
(please answer all questions honestly)

Part 2

1. At what age did you first get your periods?
2. Did u know about menstruation before you first got them?
Yes No
3. What was your source of information about menstruation?
Mother/family Friends Teacher Media Others
4. Is it normal to have periods?
Yes No Don't know
5. What is the origin of menstrual blood?
Ovary Uterus Vagina Don't know
6. What is the cause of menstruation?
Disease God's will Hormones Don't know
7. Is it important to take care of personal hygiene?
Yes No Don't know
8. Sanitary material used?
None Sanitary pad Cloth Other
9. Are you aware of the following menstrual hygiene products?
Tampons Menstrual cups
10. How often do u change pads/cloth per day?
 ≤ 2 times/day 3 times/day ≥ 4 /day
11. How often do you wash external genitalia during menstruation?
Never Once a day ≥ 2 /day
12. Material used to wash external genitalia?
Water only Soap and water Others
13. Where do you store pads/cloth?
Bathroom Cupboard Others
14. How do you dispose off sanitary pads/cloth after use?
Wrap in newspaper and throw in routine waste
Flush down the toilet Burning Others
15. Have you experienced the following after attaining menstruation? (tick all that are applicable)
Itching in genitalia Pain in lower abdomen
Pain in lower back Difficulty/burning sensation during urination
Discharge from vagina Pustules over genitalia

gaps and ensure better menstrual hygiene management among school-going individuals

LIMITATIONS OF THE STUDY

Studying menstrual hygiene knowledge in a single school setting has its limitations:

- **Limited Generalizability:** Findings may not represent the broader population due to the unique socio-economic, cultural, or geographical characteristics of that particular school.
- **Temporal Constraints:** Factors influencing menstrual hygiene can vary over time. A single-school study might not reflect changes or trends in knowledge and practices that occur over different periods.
- **Context-Specific Factors:** The school's environment, policies, or specific initiatives might influence the students' knowledge and practices, which might not be applicable in other settings.
- **Inadequate Comparison:** Lack of comparative data from other schools or regions could limit understanding variations or identifying best practices for menstrual hygiene management.

To gain a more comprehensive understanding and make broader conclusions about menstrual hygiene knowledge, conducting studies across multiple schools or regions with diverse demographics and socio-economic backgrounds would provide a more nuanced and representative view.

END NOTE

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Financial support and sponsorship: Nil.

Conflicts of interest: There are no conflicts of interest.

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