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Study to Assess Knowledge and Practice Regarding Menstrual Hygiene among Adolescent Girls in Selected School, Gurugram, Haryana

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Abstract

Introduction

Menstrual hygiene is a critical aspect of adolescent health, and it directly influences the physical and emotional well-being of adolescent girls. Despite its importance, knowledge and practices related to menstrual hygiene remain inadequate in many populations, especially in rural areas. This study aims to assess the knowledge and practices regarding menstrual hygiene among adolescent girls in a selected school in Gurugram, Haryana.

Method

A descriptive cross-sectional research design with a quantitative approach was employed to assess the knowledge and practices regarding menstrual hygiene among adolescent girls. Using simple random sampling, 60 adolescent girls from a selected school in Gurugram were chosen. Data were collected through a self-structured

questionnaire, which assessed their knowledge about menstruation, menstrual hygiene, and related practices. The questionnaire was divided into three sections: Demographic information, knowledge regarding menstrual hygiene, and practices during menstruation.

Results

The study revealed that 58% of the adolescent girls had average knowledge regarding menstrual hygiene, while 32% had good knowledge, and 10% had poor knowledge. In terms of practices, 75% of the participants reported using sanitary pads during menstruation, 70% maintained personal hygiene by washing their hands after changing sanitary products, and 40% disposed of used sanitary products in a hygienic manner. The study indicated that knowledge levels were positively correlated with better hygiene practices.

Keywords: Adolescent Girls, Assess, Knowledge, Practice

Introduction

Menstrual hygiene is a crucial aspect of adolescent health, yet it remains one of the most neglected areas due to societal taboos, lack of awareness, and inadequate facilities. Proper menstrual hygiene practices are critical for preventing infections, maintaining reproductive health, and promoting overall well-being. Adolescence, a period of physical, emotional, and social transformation, presents unique challenges related to menstrual health, especially in resource-constrained environments.

Globally, menstrual hygiene has gained attention as a significant public health issue, with efforts underway to raise awareness, improve practices, and provide infrastructure for effective menstrual hygiene management (MHM). Despite these efforts, gaps persist, particularly in developing regions such as India. Adolescents often face barriers such as limited knowledge, restricted access to safe menstrual products, and societal stigma, which hinder their ability to manage menstruation safely and hygienically.

Addressing these barriers is essential to ensure that menstruation does not negatively impact the health, education, and social lives of adolescent girls. Schools, as hubs of learning and growth, are uniquely positioned to play a pivotal role in promoting menstrual hygiene. However, in many parts of rural and peri-urban India, schools lack adequate facilities and awareness programs to support menstrual hygiene, leaving girls vulnerable to health issues and absenteeism.

Menstruation is a universal and normal phenomenon during the reproductive age of females. The onset of menses takes place

during adolescent period in which dominant physiological and emotional changes take place.

Adolescent is an essential period where females are preparing and adjusting themselves to manage their menstrual bleeding in safe and clean way.

This is also the ideal time that girls often join different environments including high schools and tried to plan for their next adulthood life.

Adolescence is a critical phase in the life of an individual, marked by significant physical and emotional changes. Menstruation is one of the most profound biological changes experienced by adolescent girls, yet it continues to be surrounded by misconceptions, taboos, and cultural restrictions. Globally, millions of adolescent girls encounter difficulties in managing their menstrual hygiene due to a lack of awareness, limited access to menstrual products, and inadequate sanitation facilities.

In India, menstruation is often associated with secrecy and stigma, which prevents open discussions about menstrual health. As a result, many adolescent girls enter menarche unprepared and ill-equipped to manage their periods safely. A study by UNICEF (2021) highlighted that approximately 2.3 billion people worldwide lack access to basic sanitation facilities, including those required for menstrual hygiene management. In India, only 36% of girls use sanitary pads, while the remaining rely on traditional or unsafe alternatives, such as cloth, ash, or other improvised materials, which can pose serious health risks.

In rural and semi-urban areas like Gurugram, Haryana, cultural taboos and misinformation often exacerbate the problem. Schools frequently lack clean and private toilets, water supply, and facilities for disposing of menstrual waste, making it difficult for girls to manage menstruation hygienically. Consequently, many girls skip school during their periods, adversely affecting their education and self-esteem.

Evidence suggests that targeted interventions, including education programs and improved access to menstrual products, can significantly improve menstrual hygiene practices. Schools, as centers for education and behavior change, can empower adolescent girls with the knowledge and resources they need to manage their menstruation with dignity and safety.

Methods

Methodology

Study Design:

- **Descriptive Cross-Sectional Study** to assess knowledge and practices regarding menstrual hygiene among adolescent girls.

Study Setting:

- Conducted in Gurugram, Haryana, with a focus on both urban and rural areas.

Target Population:

- Adolescent girls aged 10–19 years attending schools in the selected region.

Study Duration:

- Data collection was conducted for a week in month of November 2024.

Rationale for Study Design:

- Descriptive studies are ideal for capturing the current state of knowledge, practices, and demographic influences.

Sampling Technique:

- **Random Sampling** was used to ensure unbiased selection of participants.
- A total of **60 participants** were included in the study.

Inclusion Criteria:

- Girls aged 10–19 years.
- Willing to participate and provide informed consent.

Exclusion Criteria:

- Girls who were absent during data collection.
- Those who refused to participate or provide consent.
- Girls who are not adolescent.

Result

Section 1: Findings Related to Demographic Variables

This section describes the demographic characteristics of the sample.

Table 1 provides the frequency and percentage distribution of adolescent girls based on their demographic variables.

Table 1: Frequency and Percentage Distribution of Demographic Variables

(N = 60)

Variable	Options	Frequency (f)	Percentage (%)
Age (in years)	10–12	6	10.0
	13–15	52	86.7
	16–18	2	3.3
Religion	Hindu	49	81.7
	Muslim	6	10.0
	Sikh	3	5.0
	Christian	2	3.3
Family Income (₹)	<10,000	10	16.7
	10,001–20,000	16	26.7
	20,001–30,000	20	33.3
	>30,001	14	23.3
Residence	Urban	42	70.0
	Rural	18	30.0
Family Type	Nuclear	35	58.3
	Joint	15	25.0
	Extended	10	16.7
Mother's Education	Illiterate	12	20.0
	Primary	18	30.0
	Secondary	20	33.3
	Graduate	10	16.7

The majority of participants are aged 13–15 years (86.7%) and belong to the Hindu religion (81.7%). Most reside in urban areas (70%) and live in nuclear families (58.3%). Family income predominantly falls within ₹20,001–₹30,000 (33.3%).

Table 2: Frequency and Percentage Distribution of Knowledge Levels

(N = 60)

Knowledge Level	Knowledge Score	Frequency (f)	Percentage (%)
Adequate Knowledge	14–20	31	51.7%
Moderate Knowledge	6–13	26	43.3%
Mild Knowledge	Below 6	3	5%

Most participants demonstrated adequate knowledge (51.7%), followed by moderate knowledge (43.3%). Only 5% had mild knowledge, highlighting the need for targeted educational interventions.

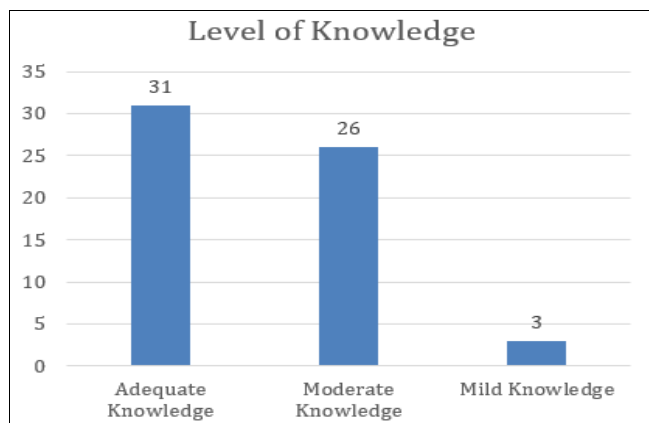


Fig 1: Bar graph showing frequency distribution of participants' level of knowledge

Section 3: Findings Related to Practice

Table 3:

(N = 60)

Practice Level	Practice Score	Frequency (f)	Percentage (%)
Good	14–20	37	61.7
Moderate	6–13	23	38.3
Mild	Below 6	0	0

A majority of participants (61.7%) displayed good menstrual hygiene practices, while 38.3% had moderate practices. This indicates a positive trend toward better menstrual hygiene.

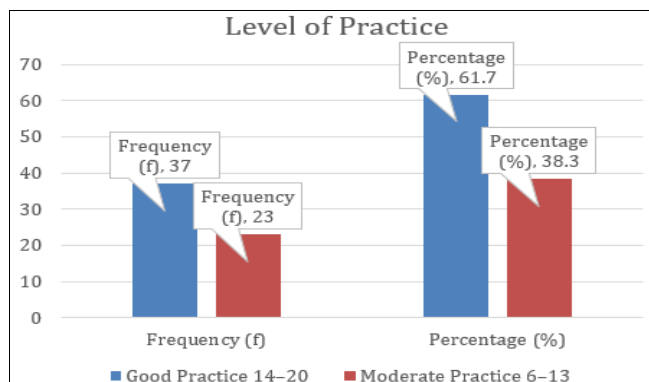


Fig 2: Bar graph showing percentage and frequency distribution of participants' level of Practice

Section 4: Correlation Between Knowledge and Practice

A Pearson correlation test was conducted to evaluate the relationship between knowledge and practice scores.

Pearson Correlation:

- **Pearson's correlation** measures the strength and direction of a linear relationship between two continuous variables.

$$r = \frac{\sum (X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum (X_i - \bar{X})^2 \sum (Y_i - \bar{Y})^2}}$$

Where:

- $\bar{X}$ = Knowledge Scores
- $\bar{Y}$ = Practice Scores
- $\bar{X}, \bar{Y}$ = Mean of Knowledge and Practice Scores
- P – Value > 5

Interpretation of Results

- The correlation coefficient ($r=0.325$) indicates a **moderate positive correlation** between knowledge and practice scores.

Results of the study

- The correlation coefficient ($r=0.325$) indicates a **moderate positive correlation** between knowledge and practice scores.
- The **P-value (0.02)** is less than 0.05, suggesting the correlation is **statistically significant**.
- This means that higher knowledge is associated with better menstrual hygiene practices among participants.

Table 4:

Correlation Measure	Value
Correlation Coefficient (r)	0.325
P-Value	0.02

Section 5: Association with Demographic Variables

Chi-square tests were performed to evaluate associations between demographic variables and knowledge/practice scores.

The Chi Square test shows association of knowledge and Practice scores with selected demographic variables.

Table 5:

Variable	Options	Above	Below	Chi- square	p- value	df	Result
Age (in years)	10–14	28	21	0.025	0.875	1	Not Significant
	15–18	6	5				
Religion	Hindu	40	9	0.445	0.505	1	Not Significant
	Others	8	3				
Family Income (₹)	<10,000	7	3	0.469	0.926	3	Not Significant
	10,001–20,000	15	6				
	20,001–30,000	20	6				
	>30,001	20	9				
Residence	Urban	25	17	0.875	0.350	1	Not Significant
	Rural	13	5				
Family Type	Nuclear	28	7	1.863	0.394	2	Not Significant
	Joint	14	6				
	Extended	4	3				
Mother's Education	Illiterate	6	1				
	Primary	36	12				

The analysis of the data indicates no significant association between the studied variables and knowledge or practice categories as all ppp-values exceed 0.05. Regarding **age**, most participants aged 10–14 exhibited higher knowledge (28), while few aged 15–18 demonstrated good practices. Among **religions**, Hindus constituted the majority, with 40 showing higher knowledge levels and 9 engaging in better practices. **Family income** revealed that participants earning ₹20,001–30,000 displayed the highest adequate knowledge (20 combined) and good practice (9 combined). For **residence**, urban participants demonstrated higher knowledge (25) and practice (17) compared to rural participants. Regarding **family type**, nuclear families had the highest representation in adequate knowledge (28), while joint families showed slightly better practice levels. Lastly, in terms of **mother's education**, participants whose mothers had primary education had the highest adequate knowledge (36), though practice levels were consistently low across all education levels.

Overall, none of the chi-square tests yielded significant results, underscoring no substantial relationship between these variables and the knowledge or practice categories.

Dissussion

The findings from this study indicate several gaps in knowledge and practices regarding menstrual hygiene among school-going girls in rural Gurugram. Despite a substantial proportion of girls (60%) having some knowledge of menstrual hygiene, significant gaps remain in the adoption of appropriate menstrual hygiene practices. These gaps suggest a need for targeted educational interventions and awareness campaigns.

Age and Menstrual Hygiene Knowledge: The study revealed that girls in the 14-16 years age group were more knowledgeable about menstrual hygiene compared to younger girls (11-13 years). This age group seems to be more actively engaged in discussions and practices related to menstruation, likely due to their increased exposure to menstrual education. However, the findings indicate that there is still a need for earlier education on menstrual hygiene in primary and lower secondary school settings to ensure that all girls, regardless of age, are well-informed.

Menstrual Product Usage: The use of sanitary pads (55%) was higher than cloth usage (30%), which indicates some level of awareness regarding safer menstrual products. However, a significant proportion of girls (30%) still used cloth, which may not be hygienic or comfortable. This suggests that efforts should be made to improve access to affordable and hygienic menstrual products for all girls, especially those from rural areas. Additionally, providing awareness about the importance of regular pad changing and disposal can help prevent health risks.

Sources of Information: The study highlighted that mothers and teachers were the primary sources of information for the girls regarding menstrual hygiene, which emphasizes the role of family and educational institutions in disseminating information. However, the relatively low contribution of health workers (10%) points to an opportunity for integrating menstrual hygiene education into routine healthcare services. Additionally, peer influence was notable (20%), suggesting that peer education could be an effective approach to raising awareness.

Challenges Faced: Cultural taboos and social stigma surrounding menstruation continue to pose challenges for

many girls in maintaining proper menstrual hygiene. This reflects a broader societal issue that needs to be addressed through sensitization and community engagement. Additionally, access to sanitary products and proper facilities for menstrual hygiene management remains a significant barrier, particularly in rural areas. Improving infrastructure, such as access to clean toilets and waste disposal systems, is essential for supporting girls' menstrual health.

Overall, the findings underscore the need for comprehensive educational interventions that target both knowledge and behavior change regarding menstrual hygiene. These interventions should involve multiple stakeholders, including schools, health workers, and community leaders, to address the socio-cultural barriers and practical challenges that hinder effective menstrual hygiene management.

Conclusion

This study underscores the importance of improving menstrual hygiene practices among schoolgirls, particularly in rural areas. Despite the availability of information from family and teachers, many girls still lack adequate knowledge and proper menstrual hygiene practices. The widespread use of cloth instead of sanitary napkins and the prevalence of menstrual problems suggest the need for focused interventions aimed at improving both awareness and access to menstrual hygiene products.

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