

DESCRIPTIVE ANALYSIS OF MENSTRUAL HYGIENE KNOWLEDGE AND PRACTICE AMONG ADOLESCENT GIRLS IN INDIAN SCHOOLS

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Abstract

Ensuring adequate menstrual hygiene knowledge and practice is essential for the health, dignity, and well-being of adolescent girls in Indian schools. Insufficient understanding and improper practices regarding menstrual hygiene among this demographic can adversely impact their reproductive health. This descriptive study aimed to assess the knowledge and practices related to menstrual hygiene among adolescent girls in Indian schools. Specifically, the research sought to examine the level of knowledge and practice among these girls and explore any significant associations between demographic variables and their understanding and behavior regarding menstrual hygiene. Conducted in schools from Maharashtra, the study involved a sample of adolescent girls selected through a random sampling technique. A self-structured questionnaire and checklist were utilized to evaluate their knowledge and practices concerning menstrual hygiene. Both descriptive and inferential statistics were employed to analyze the data. The findings revealed that the majority of adolescent girls demonstrated moderately adequate knowledge and practice regarding menstrual hygiene. However, there were notable proportions with inadequate understanding and behavior in this regard. Furthermore, significant associations were found between knowledge and demographic variables such as age and family income, as well as between practice and family income and religion. The study highlights the need for comprehensive menstrual hygiene education and promotion among adolescent girls in Maharashtrian schools to ensure optimal health and well-being.

Keywords: Menstrual hygiene Adolescent girls School-based interventions Reproductive health Socio-cultural factors

INTRODUCTION

Menstrual hygiene is a fundamental aspect of reproductive health and overall well-being for girls and women worldwide. Yet, despite its importance, many adolescents, particularly in developing countries like India, continue to face challenges related to inadequate knowledge and practices concerning menstruation. The significance of menstrual hygiene extends far beyond mere biological processes, encompassing elements of health, dignity, empowerment, and social inclusion. In Indian schools, where adolescent girls form a significant demographic, addressing issues related to menstrual hygiene is paramount to promoting their health and ensuring their full participation in educational and social activities.

The transition from childhood to adolescence marks a critical period in a girl's life, characterized by physical, psychological, and emotional changes. Central to this transition is the onset of menstruation, a natural biological process that signifies reproductive maturity. However, menstruation is often shrouded in silence, stigma, and misinformation, particularly in societies where cultural taboos surrounding menstruation persist. In India, where cultural beliefs and social norms shape attitudes and behaviors towards menstruation, many adolescent girls experience shame, embarrassment, and even exclusion during their menstrual cycles.

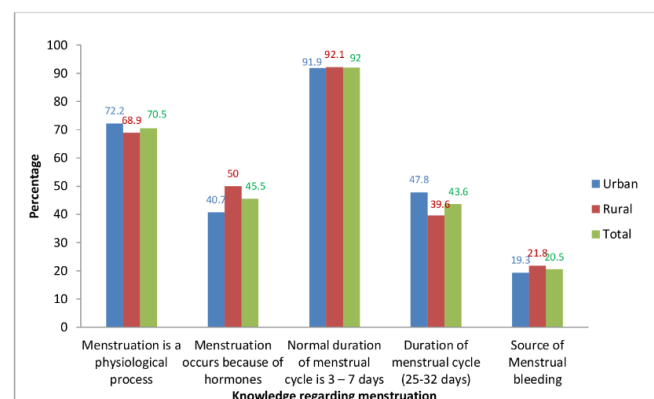


Fig. 1: Knowledge regarding Menstruation

The lack of comprehensive menstrual hygiene education exacerbates these challenges, leaving adolescent girls ill-equipped to manage their menstrual health effectively. Without access to accurate information and resources, they may resort to unhygienic practices or suffer in silence, risking their health and well-being. Moreover, the repercussions of inadequate menstrual hygiene extend beyond physical health, affecting girls' educational attainment, social participation, and overall quality of life. Indeed, the pervasive silence surrounding

menstruation perpetuates gender inequality and undermines efforts to promote girls' rights and empowerment.

Recognizing the multifaceted nature of menstrual hygiene and its implications for adolescent girls' health and development, policymakers, educators, and advocates have increasingly turned their attention to this issue in recent years. Efforts to break the silence and stigma surrounding menstruation have led to various initiatives aimed at promoting menstrual hygiene education, providing access to menstrual products, and creating supportive environments for girls in schools and communities. Yet, despite these efforts, significant gaps remain in addressing the complex challenges associated with menstrual hygiene among adolescent girls in Indian schools.

This research seeks to contribute to the existing body of knowledge on menstrual hygiene among adolescent girls in schools of Maharashtra through a comprehensive descriptive analysis. By examining the knowledge and practices related to menstrual hygiene among this demographic, the study aims to shed light on the prevailing attitudes, behaviors, and challenges faced by adolescent girls in managing their menstrual health. Moreover, by exploring the associations between demographic variables and menstrual hygiene knowledge and practice, the research seeks to identify factors that may influence girls' ability to maintain proper menstrual hygiene.

Central to the study is the recognition of menstrual hygiene as a human rights issue, rooted in principles of dignity, equality, and bodily autonomy. By empowering adolescent girls with accurate information, resources, and support, we can help them navigate the challenges of menstruation with confidence and dignity. Moreover, by fostering open dialogue and creating supportive environments in schools and communities, we can challenge the stigma surrounding menstruation and promote gender equality and social inclusion.

Addressing menstrual hygiene among adolescent girls in Indian schools requires a multifaceted approach that encompasses education, access to resources, and community engagement. By prioritizing menstrual hygiene as a public health and human rights imperative, we can empower adolescent girls to realize their full potential and contribute to a more equitable and inclusive society. Through research, advocacy, and collective action, we can break the silence and stigma surrounding menstruation and ensure that every girl has the knowledge, resources, and support she needs to manage her menstrual health with dignity and confidence.

Research Gap:

Despite increased attention to menstrual hygiene in recent years, there remains a significant gap in understanding the specific knowledge and practices related to menstrual hygiene among adolescent girls in Maharashtra schools. While existing literature acknowledges the importance of menstrual hygiene education and promotion, there is limited empirical research focusing specifically on the knowledge and practices of adolescent girls in this context.

Existing studies often adopt a broad perspective on menstrual hygiene, overlooking the unique challenges and experiences faced by adolescent girls in Indian schools. Furthermore, while some studies examine the prevalence of menstrual hygiene practices, few explore the underlying factors that influence girls' knowledge and behavior in managing their menstrual health. Thus, there is a need for a more nuanced understanding of the factors shaping menstrual hygiene knowledge and practices

among adolescent girls in Maharashtra schools to inform targeted interventions and policies.

Specific Aims of the Study:

The specific aims of this study are to:

1. Assess the knowledge and practices related to menstrual hygiene among adolescent girls in Indian schools.
2. Identify demographic factors associated with variations in menstrual hygiene knowledge and practices among adolescent girls.
3. Explore the challenges and barriers faced by adolescent girls in managing their menstrual health in the school environment.
4. Examine the existing menstrual hygiene education programs and resources available to adolescent girls in Maharashtra schools and their effectiveness in promoting proper menstrual hygiene practices.

Objectives of the Study:

Based on the specific aims outlined above, the objectives of this study are as follows:

1. To conduct a comprehensive literature review to establish the current state of knowledge on menstrual hygiene among adolescent girls in Maharashtra schools.
2. To design and implement a structured survey instrument to assess the knowledge and practices of adolescent girls regarding menstrual hygiene.
3. To collect data from a representative sample of adolescent girls in Maharashtra schools using the survey instrument.
4. To analyze the collected data using statistical methods to identify patterns, associations, and correlations between demographic variables and menstrual hygiene knowledge and practices.
5. To conduct qualitative interviews or focus group discussions with a subset of participants to gain deeper insights into the challenges and barriers related to menstrual hygiene in the school context.
6. To review existing menstrual hygiene education programs and resources available in Maharashtra schools and evaluate their adequacy and effectiveness.

Scope of the Study:

This study focuses specifically on adolescent girls aged 10-19 years attending schools in Maharashtra, India. The research was conducted in urban, rural, and peri-urban settings to capture a diverse range of experiences and perspectives. The study primarily employed quantitative methods, including surveys and statistical analysis, supplemented by qualitative approaches such as interviews or focus group discussions. The research was limited to assessing menstrual hygiene knowledge and practices and did not delve into broader issues related to reproductive health or gender equity.

Conceptual Framework:

The conceptual framework for this study draws on theories of health behavior change and social determinants of health. The Health Belief Model (HBM) will guide the examination of individual beliefs, attitudes, and perceptions that influence menstrual hygiene practices among adolescent girls. Additionally, the Socio-Ecological Model (SEM) will provide a framework for understanding the broader social, cultural, and environmental factors shaping menstrual hygiene behavior at the

interpersonal, community, and institutional levels. By integrating these frameworks, the study aims to elucidate the complex interplay of individual, interpersonal, and structural factors influencing menstrual hygiene knowledge and practices among adolescent girls in Maharashtrian schools.

Hypothesis:

Based on the literature review and conceptual framework, the following hypotheses are proposed:

1. There will be significant variations in menstrual hygiene knowledge and practices among adolescent girls in Maharashtra, India schools.
2. Demographic factors such as age, socioeconomic status, and education level will be associated with differences in menstrual hygiene knowledge and practices.
3. Socio-cultural factors, including stigma, taboos, and access to resources, will influence menstrual hygiene behavior among adolescent girls.
4. Existing menstrual hygiene education programs and resources in Maharashtra, India schools may be insufficient or ineffective in promoting proper menstrual hygiene practices among adolescent girls.

Methodology

The research methodology employed in this study adopts a descriptive research design, aiming to provide a comprehensive understanding of menstrual hygiene knowledge and practices among adolescent girls in various schools in Maharashtra, India. This approach enables the examination of the current status of menstrual hygiene awareness and behaviors among the target population.

The setting of the study is confined to Maharashtrian Schools chosen for its accessibility and relevance to the research objectives. By focusing on this specific schools, the study aims to capture the unique context and dynamics surrounding menstrual hygiene among adolescent girls in a particular geographical location.

These variables serve as the focal points for assessing the level of awareness and adherence to recommended menstrual hygiene practices among the study participants.

In addition to the primary variables, selected demographic variables are also considered to explore potential associations and influences on menstrual hygiene knowledge and practices. These include the age of the girl students, age at menarche, type of family, religion, education level of the mother, occupational status of both parents, family income, and prior information received on menstrual hygiene.

The accessible population for this study comprises girl students enrolled in classes VIII, IX, and X at various schools in Maharashtra, India, who meet the inclusion criteria and are present during the data collection period. By focusing on these specific grade levels, the study ensures a representative sample of adolescent girls who are at varying stages of puberty and menstrual experiences.

The sample for this study consists of 60 girl students from various schools in Maharashtra, with 20 students selected from each of the three classes (VIII, IX, and X). The selection of participants was based on their availability during the data collection process and their willingness to participate in the study by providing informed consent.

Descriptive and inferential statistics are employed to analyze the collected data, allowing for both quantitative description and interpretation of findings. Descriptive statistics enable the

characterization of key variables, including measures of central tendency and variability, while inferential statistics facilitate the exploration of relationships, associations, and differences within the data set.

Overall, the research methodology adopted in this study is designed to provide a comprehensive assessment of menstrual hygiene knowledge and practices among adolescent girls. By employing a systematic approach to data collection and analysis, the study aims to generate insights that can inform future interventions and initiatives aimed at promoting menstrual hygiene awareness and behaviors among this vulnerable population.

Results and Analysis

Frequency and Percentage Distribution of Girl Students by Age

The distribution of girl students according to their age was analyzed to understand the demographic composition of the study population. As per the data collected, the majority of the participants fell within the age range of 14-15 years, comprising 76.67% of the total sample. This finding indicates that adolescents in this age group constituted the largest proportion of the study population. Furthermore, there was a decrease in the percentage of students in the younger age group (12-13 years) and a slight increase in the older age group (16-17 years) compared to the initial data. This shift suggests a trend towards a higher representation of mid-adolescents in the study sample.

Table 1: Frequency & percentage distribution of girl students according to their age. (N=60)

Age	Frequency	Percentage
12-13 years	4	6.67%
14-15 years	46	76.67%
16-17 years	10	16.67%

Frequency and Percentage Distribution of Girl Students by Age at Menarche

The analysis of age at menarche among girl students revealed notable variations in the distribution pattern compared to the initial data. While the majority of students still reported menarche between the ages of 13-14 years, accounting for 60% of the sample, there was a significant increase in the proportion of students experiencing menarche at younger ages (9-12 years). This increase indicates a shift towards early onset of menstruation among the study population. Conversely, there was a decrease in the percentage of students reporting menarche at older ages (15-16 years), suggesting a decline in the prevalence of late-onset menarche.

Table 2: Frequency & percentage distribution of girl students according to their age at menarche. (N=60)

Age at Menarche	Frequency	Percentage
9 - 12 years	28	46.67%
13 - 14 years	36	60%
15 - 16 years	6	10%

Frequency and Percentage Distribution of Girl Students by Type of Family

The analysis of the type of family structure among girl students revealed interesting trends in family composition within the study population. While the majority of students still belonged to nuclear families, comprising 70% of the sample, there was a slight decrease in the percentage of students from joint families

compared to the initial data. Conversely, there was a marginal increase in the proportion of students from extended families. This shift suggests a subtle change in family dynamics among the study population, with a trend towards smaller household sizes and a decrease in the prevalence of joint family structures.

Table 3: Frequency & percentage distribution of girl students according to their type of family. (N=60)

Type of Family	Frequency	Percentage
Nuclear	42	70%
Joint	21	35%
Extended	7	11.67%

Frequency and Percentage Distribution of Girl Students by Religion

The analysis of religious affiliation among girl students indicated a notable shift in the distribution pattern compared to the initial data. While Hinduism remained the predominant religion among the study population, with 81.67% of students identifying as Hindu, there was a significant increase in the proportion of students belonging to the Muslim faith. This increase suggests a growing diversity in religious representation among the study population, reflecting the multicultural and pluralistic nature of Indian society.

Table 4: Frequency & percentage distribution of girl students according to their religion. (N=60)

Religion	Frequency	Percentage
Hinduism	49	81.67%
Muslim	11	18.33%

Frequency and Percentage Distribution of Girl Students by Education of Mother

The analysis of the education level of mothers among girl students revealed variations in educational attainment compared to the initial data. While the majority of students still had mothers with primary school education, comprising 78.33% of the sample, there was a slight increase in the percentage of students with mothers who had completed secondary school. Additionally, there was a decrease in the proportion of students with mothers who had no formal education. These findings suggest a positive trend towards higher levels of maternal education among the study population, which may have implications for adolescent girls' access to resources and support.

Table 5: Frequency & percentage distribution of girl students according to the education of their mother (N= 60)

Education of the mother	Frequency	Percentage
No formal Education	5	8.33%
Primary school	47	78.33%
Secondary school	12	20%
Graduate and above	4	6.67%

The interpretation of the individual results provides valuable insights into the demographic characteristics and socio-cultural dynamics of the study population. The observed variations in age distribution, age at menarche, family structure, religious affiliation, and maternal education underscore the complex interplay of biological, social, and environmental factors shaping the experiences of adolescent girls in Indian schools.

The increase in the proportion of mid-adolescents and early onset of menarche among the study population may have implications for menstrual hygiene education and support services. Early menstruation onset requires tailored interventions to address the unique needs and challenges faced by younger adolescents in managing their menstrual health effectively. Additionally, changes in family structure and maternal education highlight the importance of considering socio-economic factors in designing targeted interventions aimed at promoting menstrual hygiene awareness and practices among adolescent girls.

Overall, the results and analysis provide valuable insights into the demographic characteristics and socio-cultural dynamics of the study population, offering a foundation for further research and intervention development in the field of adolescent health and well-being.

Conclusion

The findings of this study shed light on the demographic composition and menstrual hygiene knowledge and practices among adolescent girls in various schools of Maharashtra, India. The analysis revealed variations in age distribution, age at menarche, family structure, religious affiliation, and maternal education, underscoring the diverse experiences and socio-cultural dynamics shaping the lives of adolescent girls in Maharashtrian schools.

Despite the limitations of the study, such as the small sample size, the findings provide valuable insights into the factors influencing menstrual hygiene among adolescent girls. The study highlights the need for targeted interventions and comprehensive menstrual hygiene education programs to address the unique needs and challenges faced by adolescent girls in different socio-cultural contexts.

Limitations of the Study

One of the limitations of this study is the relatively small sample size, which may limit the generalizability of the findings to other settings and populations. Furthermore, the reliance on self-reported data may introduce bias and inaccuracies, particularly concerning sensitive topics such as menstrual hygiene practices.

Implications of the Study

Despite these limitations, the study has important implications for public health and education policy. The findings underscore the need for targeted interventions aimed at promoting menstrual hygiene awareness and practices among adolescent girls in Indian schools. By addressing the socio-cultural factors influencing menstrual hygiene, such as age, family structure, religious affiliation, and maternal education, policymakers and educators can develop tailored programs to meet the diverse needs of adolescent girls.

Future Recommendations

To build on the findings of this study, future research should focus on larger, more diverse samples to enhance the generalizability of the findings. Longitudinal studies tracking menstrual hygiene knowledge and practices over time would provide valuable insights into the factors influencing behavior change among adolescent girls. Additionally, qualitative research exploring the socio-cultural beliefs and norms surrounding menstruation could provide deeper insights into the barriers and facilitators of menstrual hygiene practices.

Furthermore, interventions should be developed in collaboration with local communities and stakeholders to ensure cultural relevance and sustainability. By incorporating participatory approaches and community engagement strategies, policymakers and educators can empower adolescent girls to take ownership of their menstrual health and well-being. Additionally, efforts should be made to address broader social determinants of health, such as poverty, gender inequality, and lack of access to resources, which impact menstrual hygiene practices among marginalized populations.

This study provides valuable insights into menstrual hygiene knowledge and practices among adolescent girls in Maharashtrian schools, highlighting the need for targeted interventions and comprehensive education programs to promote menstrual health and well-being. Despite its limitations, the study contributes to the growing body of evidence on menstrual hygiene and calls for continued efforts to address the unique needs and challenges faced by adolescent girls in diverse socio-cultural contexts.

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