

## Menstrual & Personal Hygiene Management among Adolescent Girls

Ms Pooja Yadav<sup>1\*</sup>, Dr Arti Rauthan<sup>2</sup>

<sup>1</sup>Research Scholar, School of Clinical Research,  
Pharmaceutical Sciences and Healthcare Management, Himgiri Zee University,  
Dehradun, Uttarakhand, India.

<sup>2</sup>Assistant Professor, School of Clinical Research,  
Pharmaceutical Sciences and Healthcare Management, Himgiri Zee University,  
Dehradun, Uttarakhand, India.

Email- <sup>1</sup> pooja.saturday@gmail.com

### ABSTRACT:

**Context:** Although menarche, a significant milestone, begins throughout adolescence, it has been recognized as a special time that deserves special attention. As a result, maintaining proper hygiene during menstruation is essential to maintaining a healthy life.

**Objectives:** This study identifies the level of hygiene and the restraints practiced by adolescent girls during menstruation by evaluating their knowledge, sources of information, monthly pattern and practices of menstrual hygiene.

**Design:** This study was cross-sectional.

**Setting:** The study was conducted in higher secondary schools, Dehradun in a period of 6 months from February 2022 to July 2022, including both government and private schools.

**Participants:** The study included 450 girls

**Intervention:** A self-administered and self-structured questionnaire was created specifically for the purpose of the study to collect data.

**Main Outcome Measure:** Using Microsoft Excel 2010, a proportionate analysis of the data was performed to determine knowledge, information sources, monthly patterns, and menstrual hygiene practices.

**Results:** All participants had some knowledge about adolescence and menstruation, although there were individual variations in knowledge of the menstrual cycle and hygiene management, especially in terms of their comprehension of physiology.

**Conclusions:** Discovered evidence that the schoolgirls' patterns and sources of information regarding menstruation care items were associated to their management of menstrual hygiene, with around more than half of the girls participating in effective menstrual hygiene practices.

**Keywords:** Adolescent girls, Menstruation, Hygiene Management, Menstrual Pattern.

## INTRODUCTION:

Girls who are menstruating often face a lot of challenges in their daily lives. For example, they might have to miss school because they can't afford sanitary pads. Since menarche, a significant milestone, begins throughout adolescence, it has been recognized as a unique time that demands special attention. As a result, maintaining proper hygiene during menstruation is essential to maintaining a healthy life. <sup>(1)</sup>

Menstrual hygiene management among adolescent girls is a major issue in developing countries. <sup>(2)</sup> The lack of adequate knowledge and resources can lead to health complications and increased school absenteeism. The World Health Organization (WHO) defines menstruation as "the regular uterine bleeding which occurs cyclically every month in girls and women." <sup>(3)</sup>

The first time a woman experiences her menstrual period, this is called menarche. <sup>(4)</sup> During the period, endometrial tissue is shed from the walls of the uterus along with blood. Menstrual periods usually last around four to six days but can vary greatly between women and between cycles. Women's menstrual cycles are influenced by their monthly hormonal levels, sexual activity and reproductive health.

The hygienic management of menstruation is a very important part of avoiding menstrual complications. <sup>(5)</sup> There are several ways to help manage the menstruation process, such as using sanitary pads or tampons to absorb blood or using a menstrual cup that collects the flow in a disposable container. <sup>(6)</sup> The use of sanitary products is key because they help maintain the hygiene of the body during this time period and also prevent leakage; however, most girls who live in extreme poverty that cannot afford to buy sanitary products may rely on alternative methods. <sup>(7)</sup>

Girls are encouraged to keep their bodies clean and dry by bathing frequently, using clothes or towels for modesty, and washing themselves with soap. Girls are also encouraged to keep their nails short or cut because long or dirty nails can be a breeding ground for bacteria. <sup>(8)</sup> Poor water and sanitation infrastructures, significant social and emotional difficulties, especially the humiliation and punishment of girls' menstrual and sanitation habits, which leads them to use hidden coping mechanisms, are the hallmarks of hygiene poverty. <sup>(14)</sup>

Menstruation is a natural process that impacts the lives of women and girls all over the world. However, many girls and women live in societies that do not provide adequate MHM information, which leads to unhygienic menstrual practices, menstrual taboos, and secrecy surrounding menstruation. <sup>(18)</sup>

Menstrual hygiene management (MHM) is a significant public health issue, yet research has primarily focused on adolescent girls. This research examines detailed accounts of menstruation for adolescent girls in Dehradun, Uttarakhand, India. This study identifies the level of hygiene and the restraints practiced by adolescent girls during menstruation by

evaluating their knowledge, sources of information, monthly pattern and practices of menstrual hygiene.<sup>(9)</sup>

## MATERIALS AND METHODS:

The capital city of Uttarakhand is also known as Dehradun. The Shivalik Hills and numerous rivers surround the semi-hilly region of Dehradun. In the winter and during the rainy season, the temperature here drops dramatically. Students from various states and nations come here to study.<sup>(17, 18)</sup> Uttarakhand has a total population of 1.14 million people. According to census 2021, the population of Dehradun district is predicted to be 1,968,165 people.<sup>(16)</sup> The male population is predicted to be 1,034,951, while the female population is estimated to be 933,214.

A cross-sectional study of adolescent girls in higher secondary schools was conducted in Dehradun. The study included 450 girls, and the sample size was calculated using the Standard Sample Size method.

A self-administered and self-structured questionnaire was created specifically for the purpose of the study was used to collect data. Data was collected with the help of schedule and questionnaire in a period of 6 months from February 2022 to July 2022. Data is gathered from each 6 blocks, which includes both urban and rural locations.<sup>(11, 14, 8)</sup>

The adolescent girl's guardian or the school administration gave verbal informed consent before the interview, and consent was also sought from the adolescent girl.<sup>(7)</sup> Adolescent girls were given the questionnaire in their classrooms, and the purpose of the study was described. Each girl received 90 minutes to complete the questionnaire.

The researcher read each question aloud to the girls, directing them to carefully complete it.<sup>(8)</sup> All participants received assurances that the data would be treated confidentially during the investigation. The girls obtained information about the menstrual cycle and how to keep themselves clean after the interview. They also received satisfactory answers to all of their questions.<sup>(9)</sup>

## Statistical analysis

Proportional analysis of the data was performed utilizing data that was fed into Microsoft Excel 2010.

## Result

A person who is between the ages of 10 and 19 is considered to be an adolescent.

Early adolescence (10–13 Years): Rapid expansion of secondary sex traits

Middle adolescence (14–16 years): Attempt to distance themselves from their parents; Interest in new relationships with peer groups; Excited to engage in relationships with the other sex; Experimental Desires.

Late adolescence (17-19 Years): Keep separate identities and well-developed beliefs and ideas.

### **Adolescent girls' knowledge and sources of information regarding menstruation**

According to the research, adolescent age defined by adolescent girls were 63% of girls assume that it is between 10 to 19 years, 26% agree that it is between 7 to 16 years, 10% consider that it is between 8 to 12 years, and 1% claim that it is between 9 to 20 years. Only 52% of girls were aware of menstruation before menarche, and the majority of girls experienced fear during this time. In addition, 58% of girls believe that menstruation is a natural process, and only 77% of girls are aware of their menstrual cycles. In contrast, 38% of girls were unaware of the consequences of poor management of menstrual hygiene, while 99% of girls were aware of the benefits of eating healthy foods, and 86% of mothers and 1% of fathers were the primary sources of information. In terms of their families, 50% of the girls were from nuclear families and 50% were from joint families (Table 1).

### **Adolescent girls' monthly pattern**

According to the adolescent girls' monthly cycles, only 68% of girls have regular menstrual cycles, 32% of girls' periods are irregular and last up to 5 days at most (figure), and only 36% of girls utilized public restrooms during their periods. Additionally, 94% of girls use pads and only 1% use cloth at this time (Table 2). The duration of period stays varied, with 1% of girls experienced two days, 9% experienced three days, 19% experienced four days, 34% experienced five days, 22% experienced six days and 15% experienced seven days(Figure 1)

### **Adolescent girls' hygienic practice in school**

Hygiene practices in schools have improved, with 89% of schools having a separate and clean area to change and 29% lacking save sanitary pad disposable bins in girls washrooms. Approximately 86% of schools have an experienced person for MHM programmers, but in 32% of schools, a private area is not available for MHM programmers. During menstruation, 72% of students were absent from school, and 91% of female students attempted to attend class. Only 68% of school washrooms have soap/liquid hand wash, while only 60% of schools have adequate water supply. (Table 3)

Table:1 Adolescent girls' knowledge and sources of information regarding menstruation

Parameter	Division	Quantity	Percentage
Adolescent age denotes	10-19	285	63%
	7-16	119	26%
	8-12	43	10%
	9-20	3	1%
Knowledge before Menarche	Yes	233	52%
	No	217	48%
Initial response during Menarche	Scared	209	47%
	Embarrassed	114	25%
	Cried	73	16%
	Happy	54	12%
Being menstrual is a	Physiologic process	18	4%
	Caused by hormones	77	18%
	Natural process	253	58%
	All of above	89	20%
knowing the menstrual cycle	Yes	345	77%
	No	105	23%
Aware of the consequences of poor MHM	Yes	280	62%
	No	170	38%
The benefits of food for health	Yes	446	99%
	No	4	1%
Primary Source of information	Mother	385	86%
	Teacher	30	7%
	Friend	29	6%
	Father	6	1%
Family	Joint	226	50%
	Nuclear	224	50%

Table:2 Adolescent girls' Monthly Pattern

Parameter	Division	Quantity	Percentage
Menstrual Cycles	Regular	306	68%
	Irregular	144	32%
Public restrooms during period	Yes	164	36%
	No	286	64%
Preference during menstruation	Pad	425	94%
	Cloth	15	3%
	Menstrual cup	8	2%
	Tampon	2	1%

Table:3 Adolescent girls' Hygienic practice in school

Parameter	Division	Quantity	Percentage
A separate and clean area where disposable pads/clothes can be changed during menstruation	Yes	402	89%
	No	48	11%
Sanitary pad disposal bins in girls' washroom	Yes	320	71%
	No	130	29%
Experienced person for MHM for adolescent girls	Yes	388	86%
	No	62	14%
Private area in school for MHM Programmers	Yes	307	68%
	No	143	32%
Absenteeism during periods	Yes	126	28%
	No	324	72%
School during menstruation	Yes	411	91%
	No	39	9%
Session on Menstrual health	Yes	295	66%
	No	153	34%
Providing hygiene kit (rag/cotton, sanitary pad, Dettol) during menstruation	Yes	310	69%
	No	140	31%
Soap/liquid hand wash in the girl's washrooms	Yes	307	68%
	No	143	32%
Proper water supply in washroom	Yes	268	60%
	No	182	40%

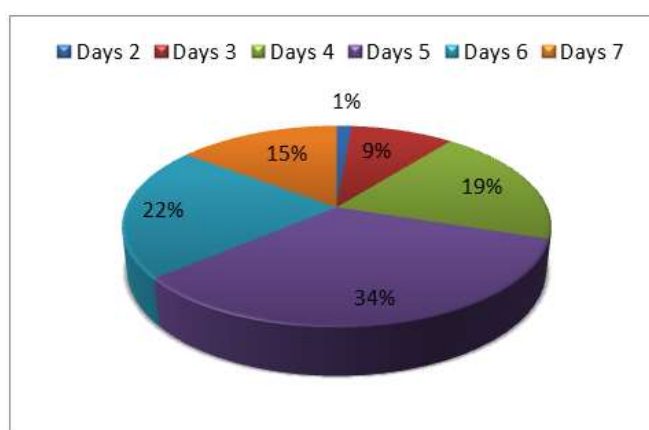


Figure: 1 Duration of the Period

### Implications for Policy & Practice

Tools that were comprehensive and culturally appropriate were used to perform this investigation. By using female data collectors to reduce social desirability bias, the study also attempted to assess the knowledge and hygiene behaviors surrounding menstruation in a



private setting. This study, however, has certain limitations. First, since the study is cross-sectional in nature, cause and effect linkages between study variables may not be evident. Second, this study does not use mixed methods for analysis; it just analyzes quantitative data. It is therefore advised to conduct additional longitudinal studies using a mixed methodology with more comprehensive and mutually exclusive categories of variables. Since the data in the study were self-reported, a lot depended on the teens' honesty and perception.

## DISCUSSION:

Adolescence is understood to be a crucial time for girls, when substantial hormonal and emotional changes, such as the arrival of their first period, occur.<sup>(11)</sup> The results of this research indicate that menstruation, which is considered to be a natural biological phenomenon, might endanger girls' social, physical, and mental wellbeing as well as their academic performance and future professional prospects.<sup>(8)</sup> Additionally, it demonstrates that each factor has a large effect on its own.<sup>(7)</sup> The current study was carried out in government and private schools located in several blocks of Dehradun.<sup>(5)</sup> This study examined the existing efforts being made by the government and outside organizations to lessen the obstacles menstruation poses for school girls in India and suggested areas where improvements might be made.<sup>(15)</sup>

All participants had some awareness of adolescence and menstruation, although there were differences in individuals' knowledge levels as well as gaps and misunderstandings, particularly in terms of their understanding of physiology<sup>(18)</sup> many girls have strong knowledge of the menstrual cycle and menstruation before menarche.<sup>(7)</sup> Prior to the menarche, those who were familiar with menstruation simply understood it to be a natural process. Scared, was the most common initial response described during menarche.<sup>(12)</sup> Every month, girls encounter the physiological phenomena of menstruation. Basic hygiene, sanitation, and reproductive health services all depend on women being able to manage their periods in a sanitary manner for their own dignity and well-being.<sup>(9)</sup>

Most adolescents are aware of nutritious eating, and poor sanitation in particular is highly connected with acute malnutrition and stunting.<sup>(4)</sup> Girls who participated in the study said they initially learned about menstruation after experiencing their period. Mothers were cited by girls as being their primary source of menstrual-related knowledge (80%), followed by teachers (7%), friends (6%) and fathers (1%). These outcomes support the conclusions drawn from the primary analysis.<sup>(18)</sup>

Only 68% of girls have normal menstrual cycles, 32% have irregular periods that last up to 5 days at most, and only 36% of girls use public facilities when they are having their periods, according to the monthly cycles of adolescent girls. Additionally, only 1% of girls currently utilize cloths, compared to 94% of females who use pads. A two-day cycle was experienced by 1% of females while a five-day cycle was experienced by 34% of females.

Everyone should take into consideration menstrual hygiene because that can help assure cleanliness, prevent toxic shock syndrome (TSS), reduce the risk of skin irritation, and let women understand they are not impure

The findings of the current study showed that adolescent schoolgirls knew a little bit more about menstruation than they had inside an Indian study that was similar to it.<sup>(10)</sup> The results of this study showed that girls had a decent housekeeping routine. 71% of schools have sanitary pad disposal bins in the girls' restrooms, and 89% have a separate, clean place where students can change.<sup>(8)</sup> The study found that having simple access to water is a key factor in reducing adolescent malnutrition. Overall 60% of the adolescent girls used an improved source of water. Only 68% of school toilets are equipped with soap or liquid hand wash, and 31% of girls still do not receive hygiene kits when they are menstruating.<sup>(14)</sup> High rates of adolescent girl school absence, repeating the same class, and school dropout were all influenced by menstruation and its associated issues. In our study, 28% of girls said they skipped tests or exams because of their menstruation.<sup>(5)</sup> Only 9% of female students failed to show up for class. The primary causes of missed school among girls during menstruation were pain, worry about leaking, and a lack of privacy.<sup>(13)</sup> Hygienic menstruation practices must start with access to accurate and useful information. Studies from various regions of the country have shown that diverse segments of society have unacceptably low awareness and understanding of menstruation as a natural biological event.<sup>(15)</sup> Additionally, very few girls sought out information about MHM from their teachers, which represents a missed chance to inform them of the best MHM practices and clear up any confusion they may have had regarding menstrual health issues.<sup>(16)</sup> Promotion of menstrual health in schools is still a problem in India. There was little research available on the various aspects of menstruation hygiene friendly schools.<sup>(20)</sup> in 68% of schools, a private space is accessible for MHM programmers, and about 86% of schools have an experienced person for them. 66% of schools offer sessions on menstruation health,<sup>(17)</sup> According to the study, school-sponsored special sessions served as the primary information source for students seeking information on menstruation.<sup>(18)</sup> This may be attributed to the fact that girls who are older have more chances to exchange information, acquire adequate understanding of menstrual hygiene, and get able to practice safe hygiene throughout their menstrual periods than girls who are younger.<sup>(19)</sup>

## CONCLUSION:

Menstruation is a crucial sign of reproductive health and development; hence various schools place a lot of emphasis on menstrual hygiene practices. Social welfare foundations, nongovernmental organisations, and anganwadi health clinics were there to raise awareness of menstrual hygiene issues. We discovered evidence that the schoolgirls' patterns and sources of information about menstrual care products were connected to their management of menstrual hygiene. Approximately more than half of the girls were involved in effective menstrual hygiene practices. It is advised that further research be done on the effects of menstruation and how to control it on adolescent schoolgirls' academic performance. In order



to completely comprehend the implications of menstrual hygiene management beyond school attendance and academic achievement, the study also suggests conducting extensive research on the effects of menstrual hygiene practices on reproductive health. Education of the mother and the adolescent girl is essential since there is a strong perception that an educated woman is a family's first instructor. However, as we currently live in a society that is dominated by men, educating men about the fundamental requirements of the women in his family during menstruation would help to promote cleaner and healthier menstrual habits.

### **Funding**

No particular source of funding was established for this study.

### **Financial Disclosure**

Nil.

### **Conflicts of Interest**

There are no conflicts of interest

### **Acknowledgements**

We would like to thank the school administration for granting us permission to conduct the study and each of the schoolgirls who took part in it.

### **Human Participant Compliance Statement**

Before the interview, the adolescent girls and the school administration gave their verbal consent after being fully briefed.

### **Supplemental Digital Content**

NA

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