



# PREVALENCE OF HEALTHY PRACTICE OF MENSTRUAL HYGIENE AMONG FEMALE COLLEGE STUDENTS IN DELHI/NCR

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## Abstract

Menstruation is a normal physiological process, but it is still fraught with supernatural beliefs and malpractices, making it difficult for girls in developing countries. Poor knowledge of menstruation can lead to unsafe hygienic practices, which can lead to reproductive and genito-urinary tract infections. This study focused on evaluating the awareness and prevalence of healthy menstrual hygiene among female college students in Delhi/NCR. The aim of the study is to determine the prevalence of healthy menstrual hygiene practice among female college students in Delhi/NCR. A cross-sectional study was conducted on 143 subjects (n=143). Questionnaire was distributed in the form of Google form. 143 subjects were selected on the basis of inclusion criteria. Total of 146 subjects responded to the questionnaire (response rate = 97%). The analyzed data showed that (34.5%) chose "always" while (24.4%) chose "never" and (8.7%) of college girls chose not to respond to questions about "reusable and washable" menstrual materials. The results of the study indicates that majority of 18-25 year old female college students in Delhi/NCR colleges are very aware of healthy menstrual hygiene practices and have sufficient knowledge about menstruation, menstrual materials, safe disposal of materials and WASH practices.

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**Keywords:** Menstrual hygiene, college students, menstruation, menstrual materials

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## INTRODUCTION

Menstrual cycles that are regular reflect normal hypothalamic-pituitary-ovarian axis function, which is an important indicator of a woman's overall health. In women of reproductive age, irregular and long menstrual cycles, which are often attributed to a functional disruption of the hypothalamic-pituitary-ovarian axis, are common.<sup>1</sup>

Menstruation is a key indicator of women's health and quality of life: the reproductive endocrine system is linked to reproductive health, affects mental health, and leads to menopause.<sup>2</sup>

Menstruation is a normal physiological process, but it is still fraught with social stigmas, supernatural beliefs, misunderstandings, and malpractices, making

it difficult for girls in developing countries.<sup>3</sup>

Menstrual hygiene is concerned with the unique health care needs and requirements of women during their monthly menstrual cycle. As a result, increased knowledge about menstruation beginning in childhood may help to increase safe practices and reduce the suffering of millions of women. Menstrual hygiene should be a priority in healthcare. The United Nations defines menstrual hygiene as "women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water to wash the body as needed, and having access to facilities to dispose of used menstrual management materials."<sup>4</sup>

Menstrual hygiene refers to the use of



sanitary pads or clean, soft absorbents, proper genital area washing, proper disposal of used absorbents, and other specific healthcare needs of women during their monthly menstrual cycle. Good hygiene during menstruation is very important in a woman's life because it prevents negative health outcomes. Infections caused by a lack of hygiene during menstruation have been reported in several studies. Premature births, stillbirths, miscarriages, infertility issues, and cervix carcinoma have all been linked to poor menstrual hygiene.<sup>3</sup>

In Indian society, the way you react to menstruation is determined by your level of awareness and knowledge about the topic. The way a girl learns about menstruation and the changes it brings about can have an impact on her reaction to menarche. Although menstruation is a natural process, it is associated with a number of myths and practices that can lead to negative health outcomes.<sup>5</sup>

Menstrual hygiene is therefore essential for women of any age group who have reached menarche in order to maintain a healthy reproductive system and a high quality of life.

### Problem Definition

**Menstrual Hygiene:** Menstrual hygiene is defined as women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in private as often as needed for the duration of the menstruation period, washing their bodies as needed with soap and water, and having access to facilities to dispose of used menstrual management materials.<sup>4</sup>

### LITERATURE SURVEY

**Habtegiorgis et al. (2021)** examined 546 randomly selected high school students in a school-based cross-sectional study. For data collection, pretested interviewer-administered questionnaires and a school observational check list were used. Good menstrual hygiene practices were reported by 53.9 percent of women. According to the findings of the study, more than half of high school girls practiced good menstrual hygiene. Schools must prioritize making the school

environment conducive to menstrual hygiene management by increasing awareness of safe MHP and providing adequate water/sanitation facilities.<sup>6</sup>

**Tshomo et al. (2021)** conducted a cross-sectional KAP survey with a random sample of female students from all years, as well as a random sample of MHM facilities at a college and hostel. The self-administered questionnaire was completed by 1,010 participants in the survey. Participants had a limited understanding of menstruation. Menstruation affected half of the participants' daily activities. One-fifth of participants reported a lack of water in college, 80.1 percent reported a lack of soap for hand washing, and 24.1 percent reported a lack of disposal bins. According to the findings of the study, improved public health knowledge, psychosocial/medical support, and WASH infrastructure with freely available menstrual products could lead to more effective MHM practices among female college students.<sup>7</sup>

**Paul KK et al. (2020)** conducted a study to assess menstrual hygiene practices and knowledge in women aged 15 to 49 years attending a tertiary care hospital in Kolkata. This was a hospital-based cross-sectional study of women aged 15 to 49 years who attended the Gynecology out patient department. As a

Study tool, a pre-designed, pre-tested, semi-structured questionnaire was used. After receiving informed consent from the participants, the interview method was used to collect data. The majority of the subjects used ready made absorbents, followed by home made reusable and homemade disposable. Menstrual hygiene health education and awareness campaigns must be expanded. Health education can be effectively implemented through school curriculum.<sup>8</sup>

**Belayneh and Mekuriaw (2019)** used a multi-stage sampling technique to conduct an institutional-based cross-sectional study with 791 randomly selected adolescent girls. A questionnaire administered by an interviewer was used to collect data. In this study, 68.3 percent of 791 adolescent girls had a poor understanding of menstruation. Approximately 48.1 percent of school girls used absorbent



materials, while 69.5 percent cleaned their external genitalia. In general, 60.3 percent of girls practiced unsanitary menstrual hygiene. According to the findings of the study, the majorities of adolescent schoolgirls have a lack of knowledge about menstruation and practice poor hygienic practices.<sup>9</sup>

**Deshpande et al. (2018)** conducted a cross-sectional study in an urban slum with the goal of assessing adolescent girls' knowledge, beliefs, and sources of information about menstruation, as well as their hygiene. The study was conducted on adolescent girls aged 10 to 19. During the period of 1st June to 31st August 2017, data was collected using a pre-tested proforma. 72% percent of the 100 adolescent girls were between the ages of 15 and 19. Around 47% of mothers were illiterate; 27% of girls reached menarche at 14 years old, and 82% had regular cycles. Prior to menarche, approximately 76% of women had no knowledge of menstruation. In 84 percent of cases, the source of information was the mother. Approximately 60% of the girls used sanitary pads, with the remainder using cloth pieces. For hand washing, approximately 22% used water and no soap. The study concluded that adolescent girls' menstrual hygiene was inadequate. Girls should be educated on the facts of menstruation as well as proper hygienic practices.<sup>10</sup>

## METHODOLOGY

### Type of Study

Cross sectional study

### Number and Source of subjects

N= 143

Source of subjects: Female College Students in Delhi/NCR

### Inclusion Criteria

1. Delhi/NCR colleges students
2. Age group: 18-25 years
3. Voluntary participation

### Exclusion Criteria

1. Female students above 25 years age

2. Females from college outside Delhi/NCR
3. Females suffering from recent injury or trauma
4. Females whose menarche has not started
5. Females with severe mental health problems
6. Females who are not willing to participate

The form was sent to 150 students and a total of 146 subjects responded to the questionnaire thus the response rate was 97%. 143 subjects response were used in the study fulfilling the inclusion criteria.

## INSTRUMENTS AND TOOL USED

1. Menstrual Practice Needs Scale (MPNS-36)<sup>11</sup>

## OUTCOME MEASURES

Menstrual Practice Needs Scale (MPNS-36) was used to measure the outcome of the study.

## PROCEDURE

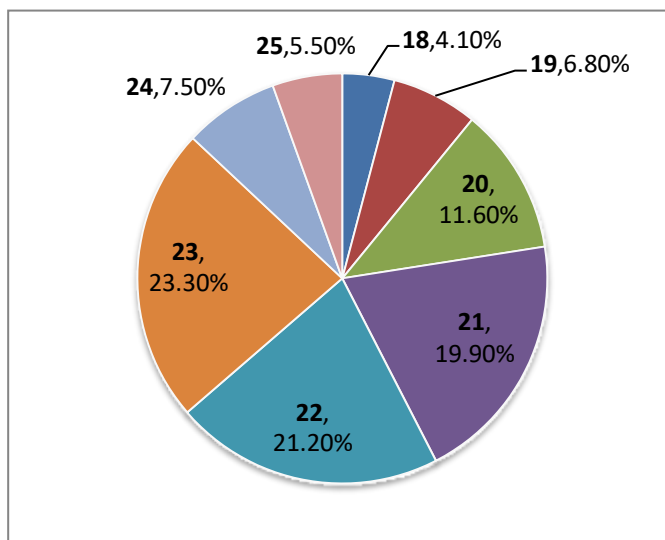
1. Female subjects were selected as per the inclusion and exclusion criteria.
2. The survey was explained to them and the purpose of it.
3. Written informed consent was taken from the subjects.
4. Menstrual Practice Needs Scale (MPNS-36) was distributed in the form of Google Form by social media platforms like Email, Whatsapp, etc.
5. Selected subjects used the MPNS-36 and filled the form thoroughly.
6. The Menstrual Practice Needs Scale (MPNS-36) assessed the knowledge, attitude and practice of menstrual hygiene.

## DATA ANALYSIS

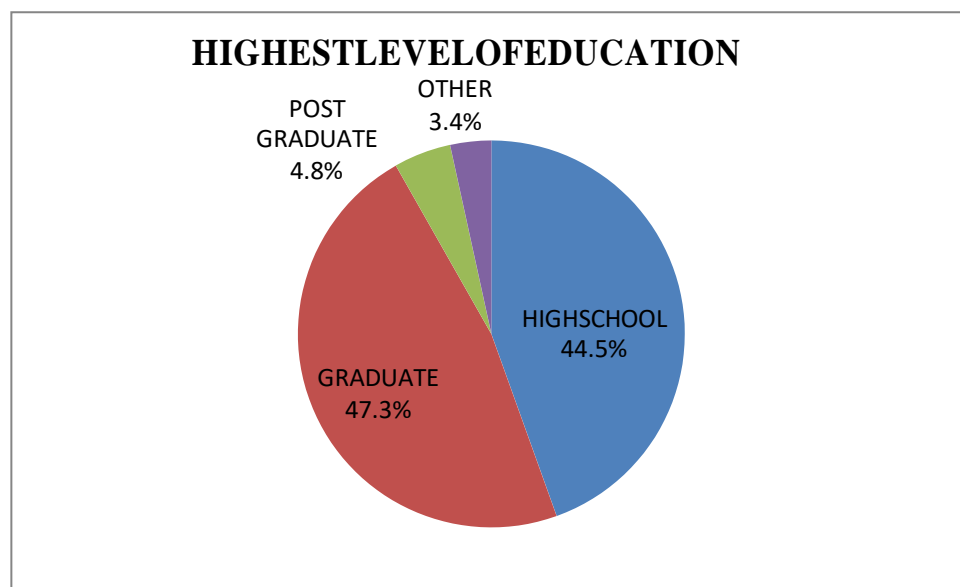
The data was collected through responses of MPNS-36 filled by female college going students.



### SOCIO-DEMOGRAPHICS CHARACTERISTICS



**Graph 4.1** Percentage of females of age group 18-25



**Graph 4.2** Highest level of education of females who participated in the study

The form was sent to 150 students and a total of 146 subjects responded to the questionnaire thus the response rate was 97%.

143 subjects response were used in the study fulfilling the inclusion criteria of age between

18-25 and studying in Delhi/NCR colleges. All of them participated voluntarily.

Most responses were from age 23 (23.3%) and 22 (21.2%) females and least responses were from females of age 18(4.1%) and 25



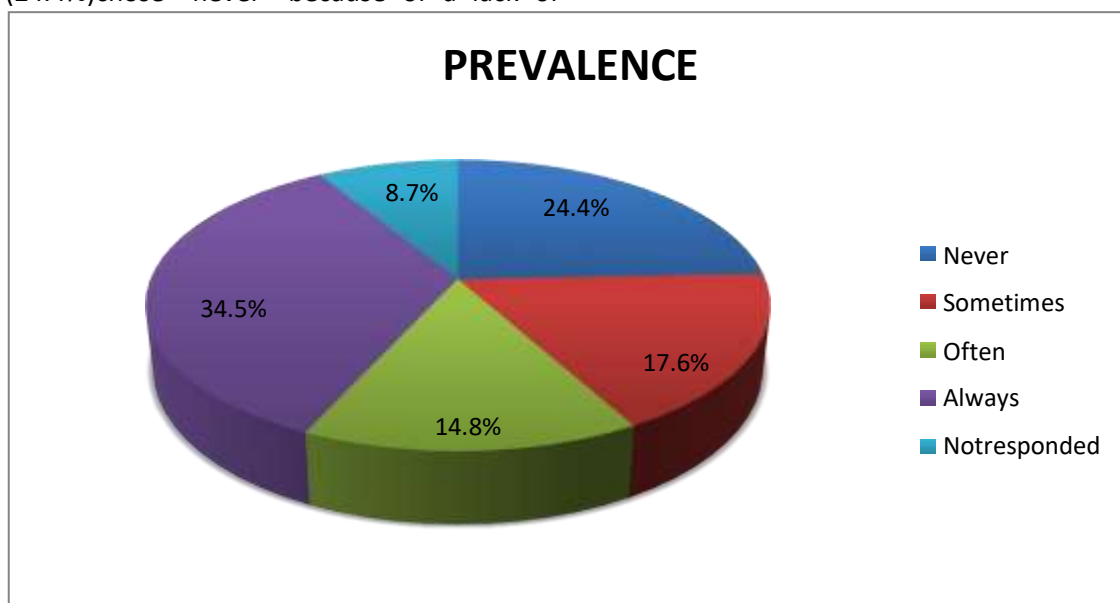
(5.5%) as showing graph 4.1

Maximum responses filled in highest level of education by females were from Graduates (47.3%) and minimum responses were from females from others (diploma, certificate) level of education (3.4%) showing graph 4.2 High school (44.5%) and Post-Graduate (4.8%) were also recorded.

**OVERALL RESULT**

Among the 143 girls, (34.5%) chose "always" because they were satisfied with their menstrual hygiene management and healthy practices associated with it, while (24.4%) chose "never" because of a lack of

awareness about menstrual hygiene, an illiterate mother, a lack of resources, improper disposal of menstrual materials, missing tap water in college toilets, unavailability of safe place to change menstrual materials in college and a lack of cleanliness while menstruating, which led to urinary tract infections [UTIs] and reproductive tract infections [RTIs]. (8.7%) of college girls chose not to respond to questions about "reusable and washable" menstrual materials due to a lack of information about these materials, a lack of availability, and a lack of knowledge about reusable materials. (shown in graph4.3)



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**Graph4.3** Overall result showing prevalence of menstrual hygiene among female college students in Delhi/NCR

**DISCUSSION**

According to our research, majority of girls between the ages of 18-25 in Delhi/NCR are aware of healthy menstrual hygiene management. A total of 146 girls completed the questionnaire, with 143 of them being used in the study based on inclusion criteria. Among the 143 girls, 34.5% chose "always" because they were satisfied with their menstrual hygiene management and healthy practices associated with it, while 24.4% chose "never" because of a lack of awareness about menstrual hygiene, an illiterate mother, a lack of resources, improper disposal of menstrual materials, and a lack of cleanliness while

menstruating, which led to urinary tract infections [UTIs] and reproductive tract infections [RTIs]. 8.7 percent of college girls chose not to respond to questions about "reusable and washable" menstrual materials due to a lack of information about these materials, a lack of availability, and a lack of knowledge about reusable materials. One study from Dang District, Nepal, stated that the practice level of menstrual hygiene of school-going adolescent girls, among 406 girls, 272 (67.0%) practiced good menstrual hygiene whereas 134 (33.0%) practiced poor menstrual hygiene citing various reasons such



as 23.6 percent of the respondents' mothers were unable to read and write and 47.5 percent of them others were homemakers. The majority of the girls, 363(89.4%), had used absorbents during their menstruation. 45.1 percent of respondents did not dry wash reusable clothes in direct sunlight, and the majority of the girls, 83.7 percent, disposed of used pads in dustbins or pit latrines. Only 16.5 percent of school girls bathed daily during menstruation. They concluded that the primary contributors to good and poor menstrual hygiene among school-age adolescent girls are mother's education, father's education, family size, and children's living situation.<sup>7</sup>

In an urban slum study of adolescent girls' menstrual hygiene, it was discovered that 76% had no knowledge of menstruation prior to menarche, and 84% learned about menstruation from their mother. 60 percent of the girls used sanitary pads, 19 percent used old household cotton, 16 percent purchased new cloth from the market, and only 5 percent used both pad and cloth. 51.67 percent of the girls disposed of sanitary pads that were wrapped in paper. 18.4 percent discarded their pads in the open. This was due to a lack of education and in correct assumptions about the menstrual cycle. Parents who are well-informed play a critical role in promoting hygienic practices among adolescent girls.<sup>9</sup>

A study from Bhutan on Menstrual Hygiene Management among Female College Students was reviewed, and it was discovered that comprehensive knowledge of menstruation was low, at 35.5 percent among participants. 50.3 percent cited their mother as a source of information, and 96.9 percent of absorbents were wrapped before disposal. The study concluded that there are insufficient physical and psychosocial facilities to support these students practices, which leads to absenteeism.<sup>12</sup>

In a study conducted in North Karnataka, India, it was discovered that 70.7 percent of the girls used commercial sanitary napkins, 12.7 percent used cloth, and 15.3 percent used both. 57.1 percent of the females

washed their genitals more than twice a day. 93.8 percent bathed during menstruation, and 87.2 percent used soap in addition to water. 37.7 percent of the girls burned their pads, 50.8 percent tossed them in the trash, and 4.9 percent buried them. 8.6 percent of the girls reported being completely absent from school during their periods. 76.1 percent said their school provided adequate water and sanitation. 22.3 percent of those polled said there was enough space at school to change their pads. 73.2 percent reported being able to obtain a spare pad at school. Inadequate school facilities cause school absenteeism, and cultural beliefs practiced reduce the number of days a girl attends school.<sup>13</sup>

According to a study conducted on degree college students in Andhra Pradesh, India, more than half of the girls have more than 50% of their menstruation knowledge. 59% of the girls said they got their information from their mother, 14% from friends, and only 9.1% from their teacher. With mothers who had a high school diploma or higher, 85 percent of the girls knew about menstruation. According to the study, 13.4 percent of the girls used cloth, while 6.3 percent used both pad and cloth. The majority of students only use sanitary pads and carry them in their bags at all times. It was also observed that most of the time, girls do not have privacy and their dresses become stained. It's reassuring to know that there's plenty of water. 29.1% of the girls dispose of their pads in the toilet, 31.5% in house hold waste, and 39.4% burn them.<sup>14</sup>

Menstrual hygiene practices were discovered in one study from Tamale, Ghana, where 73.4 percent of respondents were aware of menstruation before the onset of menarche. Mothers were the first source of information about menstruation for 61.8 percent of women. Other sanitary materials were used by 20.8 percent of women to absorb their menstrual blood rather than disposable sanitary pads. All respondents, however, use sanitary pads to manage their menstrual flow. 57.7 percent changed their sanitary pads twice a day, and 69.3 percent cleaned their genitals after urinating during menstruation,





with the majority, 46.8 percent, using only toilet tissue. 59.0 percent of participants disposed of used sanitary pad in trash cans. On the first day of menstruation, 4.8 percent did not bathe with soap and water. According to the study students age and course of study influenced their knowledge of menstruation, whereas religion and year of study were associated with their practice of safe menstrual hygiene.<sup>15</sup>

According to one study from Uttar Pradesh, half of the girls (52.7 percent) were unaware of menstruation. Only about a quarter of them used a 'sanitary napkin' as a menstrual absorbent. During menstruation, 31% of women felt impure, 20% felt isolated, and 24% felt irritated. Two-thirds of the girls reported menstrual management constraints, and nearly one-quarter reported low menstrual autonomy. 53% of girls with access to a separate bathing area used it to change menstrual material.<sup>29</sup>

A study from Belgaum was reviewed, and it was discovered that 62 percent of the 303 respondents were aware of menstruation prior to reaching menarche. During menstruation, 56.4 percent used a sanitary pad, 28.7 percent used new cloth, 13.2 percent used old cloth, and 1.7 percent used a tampon. 88.18 percent of total respondents who used a cloth as a pad used the correct cleaning method (i.e. soap and water). Similarly, 23.62 percent correctly dried the cloth used as a pad. Similarly, there was a significant improvement in correct pad disposal (i.e. in dustbin) from 66.7 percent. There was a significant increase in genital cleaning, from 24.8 percent to 25.8 percent. In addition, bathing increased by 39.6 percent. The study discovered that students have inadequate knowledge, various misconceptions, and inadequate practices regarding menstruation and its management.<sup>16</sup>

According to one study conducted in Mumbai, India, 30–40% of young girls did not receive any information about menstruation prior to menarche. Both young and adult women agreed that the source of information was untrustworthy. Because of a lack of knowledge, the young girls engaged in certain unsanitary practices, resulting

in poor menstrual hygiene.<sup>17</sup>

#### LIMITATION OF THE STUDY

- The study sample was drawn solely from colleges in Delhi/NCR.
- The questionnaire was a little lengthy, and subjects had difficulty understanding it.
- It was a self-administered questionnaire with no evidence of how the questions were interpreted by participants.

#### SCOPE FOR FUTURE RESEARCH

- Research can be carried out in other cosmopolitan cities such as Mumbai, Bangalore, Chennai, Kolkata, and soon.
- A study on the prevalence of menstrual hygiene among rural women could be conducted.

#### CONCLUSION

Our study of 18-25 year old female college students found that the majority of females in Delhi/NCR colleges are very aware of healthy menstrual hygiene practices and have sufficient knowledge about menstruation, menstrual materials, safe disposal of materials, WASH practices, and some of them also have knowledge about reusable and washable materials like menstrual cups, reusable pads, implying that women in Delhi/NCR are environmentally conscious. Healthy Menstrual Hygiene practices will help women avoid

UTIs, RTIs, premature births, stillbirths, miscarriages, infertility issues, and cervical carcinoma, allowing them to live a healthier life

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