

ASSESSMENT OF UNDERSTANDING, MINDSET AND TRAINING ON MENSTRUAL HEALTH AND HYGIENE AMONG THE TEACHERS OF UTTARAKHAND

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Abstract

Introduction: Menstruation is a normal and healthy aspect of life for women. Roughly half of the female population, around 26% of the global population, are of reproductive age (UNICEF, 2018). Despite this, numerous obstacles on school campuses, including fear, shame, uneducated and unsupportive teachers, and insufficient water, disposal facilities, and privacy, can impede effective menstrual management. **Objectives:** To Assess the Knowledge, Attitudes, and Training of School Teachers in Uttarakhand Regarding Menstrual Health and Hygiene Management. **Methods:** The responses of 367 teachers were collected through Google Forms from May 2022 – May 2023. It was a cross-sectional descriptive quantitative study using simple random sampling techniques. Microsoft Excel and SPSS version 20.0 used for analysis. **Result:** Most respondents (96%) are familiar with the concept of menstruation. Seventy-one percent are aware of menstruation as a physiological phenomenon. Seventy-five percent are aware of the origin of menstrual blood (Uterus). Seventy-two percent of school teachers reported that sanitary pads are available in schools. Seventy-four percent of teachers reported that schools provide separate toilet facilities, but only 85 percent reported proper water supply within the toilets. **Conclusion:** This study demonstrate the high level of understanding, positive mindset, and good training of MHM among the school teachers of Uttarakhand. The study found the promotion of appropriate measures for the disposal of sanitary napkins used in schools, workplace and public toilets can ensure better outcomes of menstrual hygiene. Regular orientations, awareness campaigns in school regarding menstrual hygiene management is essential to successfully remove taboos, misconceptions, and negative perceptions among the population.

Keywords: Understanding, Menstruation, Training, School Teachers, Menstrual Hygiene

INTRODUCTION

Menstruation is a natural and healthy biological process for women. About half of the female population, approximately 26% of the global population, are of reproductive age. Most women experience menstruation every month, typically lasting between two to seven days (UNICEF, 2018). Menstruation is the first indicator of sexual maturity or puberty, during which physical changes transform a child's body into that of an adult, including changes in body size, shape, and proportions (Mahajan et al., 2017). The age at which menstruation begins, known as menarche, typically ranges from 10 to 16 years, with an average of 13.5 years. For women in India, the perimenopausal age is around 44.69 ± 3.79 years, and the average age at menopause is 45.59 ± 5.59 years (Ahuja, 2016). Over her lifetime, a woman will spend approximately seven years menstruating (UNICEF, 2018).

Globally, there is a strong emphasis on the menstrual health and hygiene of girls and women in both developing and developed nations. Various international and national non-governmental organizations work to improve women's health status. Ensuring menstrual hygiene for all adolescent girls and women is essential for maintaining women's health rights, public health, and dignity. Menstrual hygiene involves maintaining cleanliness during menstruation, such as washing the external genital area

thoroughly and using sanitary products like pads, tampons, or menstrual cups to prevent infections (Siddique et al., 2023).

The WHO/UNICEF Joint Monitoring Programme 2012 defines menstrual hygiene management as: "Women and adolescent girls using clean menstrual management materials to absorb or collect menstrual blood, which can be changed in privacy as often as necessary. This includes using soap and water for washing the body as required and having access to safe and convenient facilities to dispose of used menstrual management materials. They should understand the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear." Despite this, menstruation and menstrual practices still encounter numerous social, cultural, and religious barriers that impede effective menstrual hygiene management. Menstrual hygiene lacks attention and understanding in society among both males and females, especially in rural and slum areas (Upashe et al., 2015). Factors contributing to absences in educational institutions and workplaces among women include mindset, limited understanding, and misconceptions about menstruation, family restrictions, and inadequate workplace facilities (Siddique et al., 2023). Inadequate menstrual hygiene management and unsafe practices have contributed to the spread of reproductive tract infections and sexually transmitted infections. Menstrual hygiene education continues to be affected

by taboos, social isolation, and cultural restrictions, which often result in adolescent girls lacking essential knowledge about sexual and reproductive health (Mahajan et al., 2017).

The experience of menstruation for women and girls is still shaped by cultural taboos and discriminatory social norms. Insufficient information about menstruation can lead to unhealthy practices and misunderstandings, contributing to negative attitudes such as shaming, persecution, and even gender-based violence. Over generations, inadequate menstrual health and hygiene have worsened social and economic disparities, adversely affecting education, health, safety, and overall human development. (The World Bank, 2022). In India, menstruation remains a sensitive and important sanitation issue, yet adolescent girls and women often do not freely discuss menstrual hygiene and sanitary trainings (Patel et al., 2022).

The absence of educational support from health professionals and practical guidelines for implementing Menstrual Hygiene Management (MHM) in schools presents substantial barriers. Fear, shame, persistent social taboos, lack of awareness among teachers, and inadequate support, along with insufficient water, sanitation facilities, disposal options, and privacy, all hinder the creation of a safe and hygienic environment for menstrual management on school grounds. These systemic challenges have adverse effects on the sexual and reproductive health of adolescent girls, impacting their education and self-esteem (Sharma et al., 2020).

Many schools (government, semi-government, and private) lack vending machines for menstrual hygiene management. Adolescent girls, curious about their body changes during this active learning phase, often receive incomplete information due to parents' lack of time and hesitance to discuss menstruation with school teachers. This leads to health issues such as urinary tract infections, pelvic inflammatory diseases, vaginal thrush, bad odor, soiled garments, and ultimately, shame, which infringes on the girls' dignity (Sharma et al., 2019).

The rising enrollment of girls in secondary and senior secondary schools highlights the need for a comprehensive approach to create more menstrual hygiene-friendly schools, addressing issues such as school dropouts and absenteeism (Sharma et al., 2020).

The study conducted in rural India involved school students and teachers to assess their understanding, mindset, and trainings regarding menstrual hygiene management. All teachers included in the study demonstrated good understanding of menstrual hygiene management, and 100% reported a positive mindset towards menstruation and hygiene trainings (Ravindranath et al., 2023).

A comparative study conducted among adolescent girls from urban and rural areas of Uttarakhand revealed that only 64.5% of adolescent girls were aware of menstruation before reaching menarche. Rural adolescent girls exhibited greater understanding and better trainings regarding menstruation and menstrual hygiene compared to their urban counterparts (Juyal R. et al., 2012).

The objective of the current study is to assess the Understanding, Awareness, and Trainings (KAP) regarding menstruation and menstrual hygiene among school teachers in Uttarakhand.

Material and Methods

Menstrual hygiene day is a global awareness day that takes place on May 28th. It was started in 2013 by a German NGO called WASH United and was first recognized by United Nation in 2014. It was chosen to be held on May 28th due to the fact that the average period cycle of most women is 5 days and their cycle is 28 days. On May 28th, 2022, the RDI (Rural Development Institute) and State Education Department of the state of Uttarakhand launched a 3-hour online session on menstrual hygiene management for all teachers. The online session was held every Saturday and district wise teachers participated systematically. The total number of teachers took part in the session was 8,272. The program ended on May 28th, 2023. On the last day of the program, over 200 teachers and adolescents, as well as other state officials, participated in the State-level menstrual hygiene submission event.

Research Design

This is a Cross-Sectional descriptive Quantitative study. A self-administered, structured, pretested, closed-ended undisclosed questionnaire consisting of questions on understanding, awareness, and trainings regarding Menstruation and menstrual hygiene among school teachers was used as a study tool.

Research Setting

The detailed analysis of the Population Census 2011 published by the Government of India for Uttarakhand state reveals that Uttarakhand is a state with a population of approximately 1.01 crore and the density of this state is 189 per square kilometer (Census, 2011). As per the 2015 statistics of the Ministry of Education of Uttarakhand, there are 43,731 teachers in Secondary school. The number of Adolescents in Uttarakhand is about 2.2 million whereas adolescent boys are approx 1.1 Million and Adolescent girls in Uttarakhand is 1 million. Approx 8,272 teachers were trained in our training session regarding the Menstruation and menstrual hygiene management in Uttarakhand.

Duration of the Study:

The data collection for this study was performed in 1 year from May 2022 to May 2023 through an online questionnaire distributed to the study population via Google form. Later, the data was compiled and statistically analyzed, and the results were put together. The category of study population involved in this research was 21 to above 51-year-old age group.

Inclusion and exclusion Criteria:

The teachers who was participate in the training orientation of Menstrual hygiene management. Both male and female teachers involved in the study. **Exclusion Criteria:** Participants those who did not give consent. Teachers who were absent on the day of training.

Criteria for Sample Selection

The sample size is based on the inclusion and exclusion criteria. Cochran formula was used to calculate the sample size, approximately 8000 teachers got Menstrual Hygiene Management Training.

This formula is most simplified and used to calculate sample size when the population is large or unknown

$$n = \frac{z^2 pq}{e^2}$$

Whereas,

z= confidence level of 95%, so z value is 1.96

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$p =$ estimate proportion for maximum size = 50% or 0.5
 $q = 1 - p$
 $e =$ precession of the prevalence estimate = 5% or 0.05
Population = 8000
 $n =$ sample size
Therefore,

$$n = \frac{(1.9)^2 \times 0.5 \times (1 - 0.5)}{(0.05)^2}$$

$n = 367$

Using the Cochran formula, the calculation of sample size was 367.

Process of Data Collection

For the final study, data was collected through a Google form having the questionnaires involving 367 responders, who were teachers at different schools (government, semi-government,

and private). The purpose of study clearly explained to each and every responders and appropriate consent were taken prior the interview. The Simple Random sampling technique was followed, and a descriptive analysis and analytical analysis of the collected data was done.

Statistical Data Analysis

The collected responses were tabulated using Microsoft Excel and transferred to SPSS version 20. All responses were coded according to standard tools. Quantitative findings were analyzed based on data distribution. Microsoft Excel and the Statistical Package for the Social Sciences (SPSS) Windows version 20.0 were used to calculate frequency distribution, mean, and standard deviation to describe the socio-demographic characteristics and other data of the sample population. The results of the quantitative data are presented in the results section with appropriate tables, bar graphs, and pie charts.

Result/ Finding of study

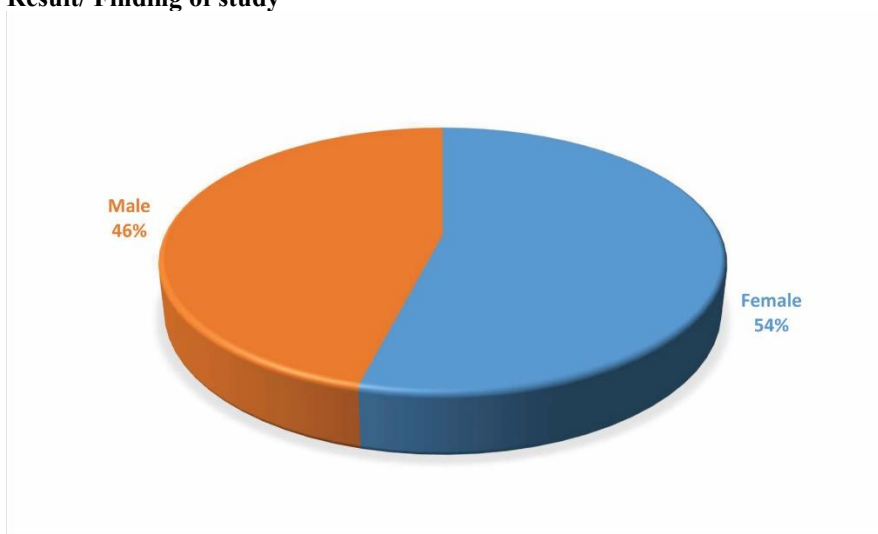


Figure 1- Gender wise distribution of teachers

Figure -1 shows the graphical representation of the gender distribution of study participants. Out of 367 participants, 46% participants were males whereas 54% participants were females.

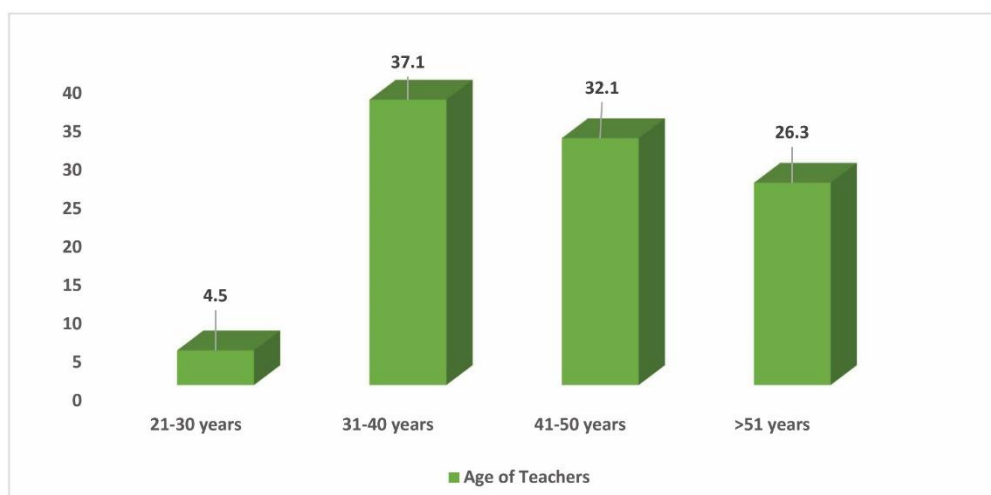


Figure -2 Age of Teachers

Figure -2 depicts the distribution of participants based on their age groups. Among the 367 participants, 4.5% participants from

the 21-30 years of age group, 37.1% were participants from the 31-40 years of age group, 32.1% participants from the 41-50 years of age group, 26.3% participants from the above 51 years of age group. This

figure shows that most participants were from 31-40 years of age and the minimum number of participants was from 21-30 years of age.

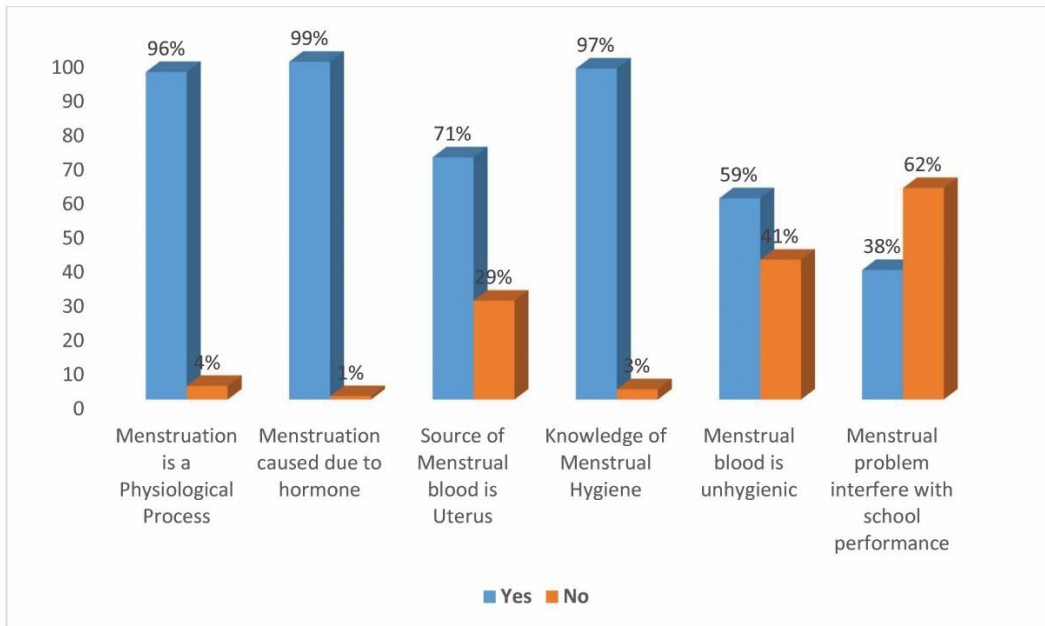


Figure 3: Understanding about menstruation and menstruation hygiene management

Understanding & Awareness about menstruation

Figure 3 shows the level of understanding and awareness about Menstruation among the study participants. 96% of respondents are aware that menstruation is a physiological process in females. 99% of respondent's responses for menstruation are caused due to hormonal changes in females. Awareness among 71% of respondents that the source of menstrual blood flow from Uterus while 15 % responds to the Fallopian tube and 13%

responds to the Vagina. 97% of study participants know about Menstrual Hygiene. 59% of respondents agree that menstrual blood is unhygienic whereas 41% of respondents have the perception that menstrual blood is not unhygienic. 38% of respondents think that menstrual problems interfere with school performance while 62% of respondents disagree with this statement.

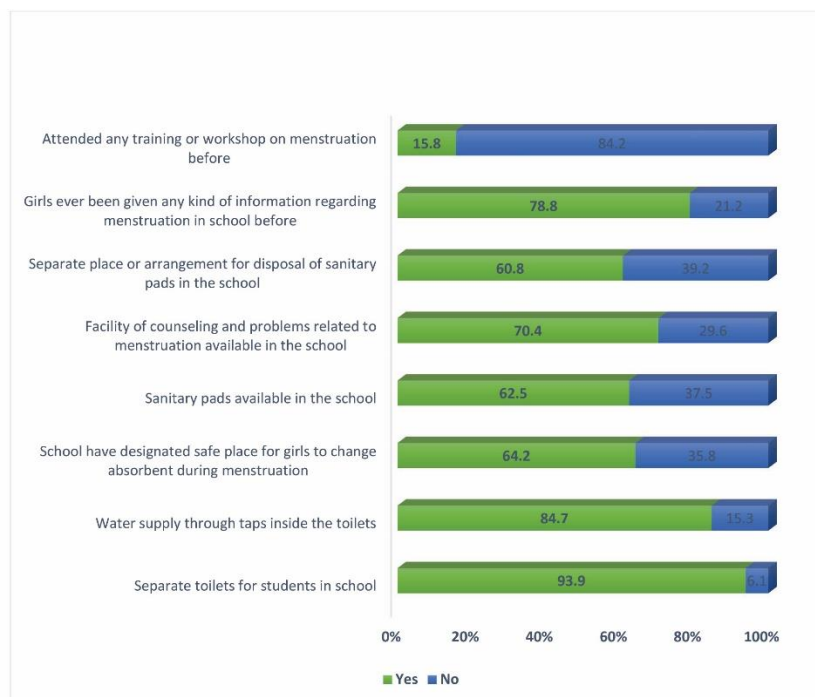


Fig.4 Facilities and services for menstrual hygiene management

Facilities and services for menstruation

Figure 4 depicts Eight-item questions with two options (e.g., yes/no) related to facilities and services regarding Menstrual hygiene Management, and some basic questions were asked to the participants (e.g., “Do you have separate toilets for girls and boys in your school?”, “facility of counseling and problems related to menstruation available in the school?”) (see details in figure 3). 84% of participants did not attend any workshop or

training on Menstrual Hygiene Management whereas only 62% of school teachers responded that there was an availability of sanitary napkins on school premises. 94% responses from teachers that schools have separate toilet facilities but only 85% indicated that proper water supply inside the toilets. Only 61% of school teachers responded that separate arrangements for the disposal of used sanitary napkins whereas other respondents do not have the facility in their school premises.

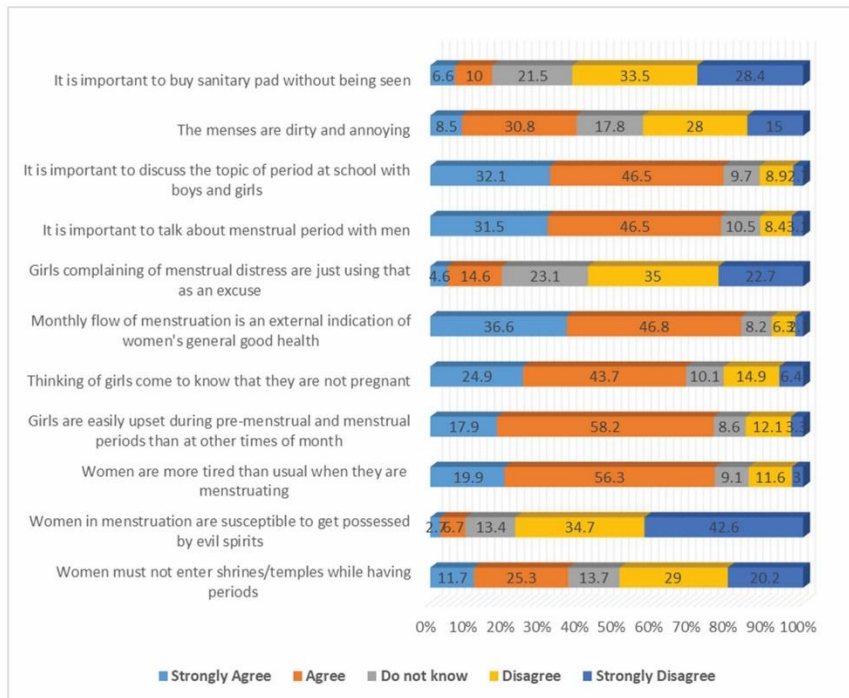


Fig. 5 Mindset Regarding the Mensuration

Mindset and Training regarding Menstruation

Figure 5 showed that Eleven-item questions with five options (e.g., Strongly Agree, Agree, Do not know, Disagree, and Strongly Disagree) related to the Mindset and training of respondents regarding Menstrual hygiene Management, and some basic questions were asked to the participants (see details in figure 4). The respondents of the study most favorably agree and strongly agree with the discussion about Menstruation and Menstrual Hygiene Management with school boys and girls as well as men. According to 19% of respondents girls who were complaining the menstrual distress are just making an excuse. 76% of respondents agree with tiredness among women during menstruation. Approximately 37% of respondents agree that menstruating women must not enter shrines/Temples while 13.7% do not agree regarding this myth and approximately 49% of respondents disagree with this statement.

DISCUSSION

Numerous studies have examined understanding, awareness, and trainings of menstrual hygiene, but most have focused on rural populations or adolescent school girls. This study aims to address a significant gap by assessing the Understanding, Awareness, and Trainings (KAP) regarding menstruation and menstrual hygiene among school teachers in Uttarakhand. Similar studies have been conducted both nationally and internationally on adolescent girls' menstrual hygiene

understanding, awareness, and trainings (Mahajan et al., 2017; Sharma N. et al., 2013; Siddique et al., 2023; Upashe et al., 2015; Patel et al., 2022; Sharma et al., 2019; Ravindranath et al., 2023).

In the present study, a total number of 367 participants were engaged. Out of 367 participants, 46% participants were males whereas 54% participants were females. In other studies only the female category was involved (Mahajan et al., 2017; Siddique et al., 2023; Upashe et al., 2015; Hagawane et al., 2021; Patel et al., 2022; Sharma et al., 2019). In this study among the 367 participants, 4.5% participants from the 21-30 years of age group, 37.1% were participants from the 31-40 years of age group, 32.1% participants from the 41-50 years of age group, 26.3% participants from the above 51 years of age group. This figure shows that most participants were from 31-40 years of age and the minimum number of participants was from 21-30 years of age. In other similar studies, only the Adolescent age group (10-19 years) was included (Mahajan et al., 2017; Siddique et al., 2023; Upashe et al., 2015; Patel et al., 2022; Sharma et al., 2019; Gebre et al., 2023).

In the present study majority (96%) of school teachers knew that menstruation is a physiological process caused due to hormones. Another study showed that 76.9 % of girls knew that menstruation was a physiological process (Upashe et al., 2015); In another study, 78.9% indicated menstruation is a physiological process, and 55.8%) knew that the cause of menstruation is hormonal (Gebre et al., 2023). In this present

study, 71% of the study population knew the source of menstrual blood was Uterus whereas a study reported 12.63% knew that it comes from the uterus (Hagawane et al., 2021). Another study reported that 60.9 % of the respondents knew the origin of the menstrual blood was from the uterus (Upashe et al., 2015).

In this study, 69% of respondents responded that 3-4 times clothes/pads should be changed in a day during menses while 22% responded 1-2 times and 8% responded 6-8 times. A comparative study showed that 60.7% of girls preferred to use absorption materials for less than four hours (Odey et al., 2022). Out of 367 study participants, 59% of respondents agree that menstrual blood is unhygienic whereas 35% of respondents have the perception that menstrual blood is not unhygienic while 80.0% were aware that menstrual blood was unhygienic (Gebre et al., 2023). 22% of respondents think that menstrual problems interfere with school performance while 62% of respondents disagree with this statement.

In the study assessment of facilities and services provided to females in school menstrual hygiene management through school teachers. 62% of school teachers responded that there was an availability of sanitary napkins on school premises and 38% of school premises did not have sanitary napkins for females. 94% responses from teachers that schools have separate toilet facilities for girls and boys but only 85% indicated that proper water supply inside the toilets. Only 61% of school teachers responded that separate arrangements for the disposal of used sanitary napkins whereas other respondents do not have the facility in their school premises. Only 1/5th of the school teachers attended any workshop or training on Menstrual Hygiene Management before the questionnaire was distributed. The trainers enhanced understanding and awareness about the causes of menstruation and the organs involved. They also promoted the use of sanitary napkins among adolescent girls and briefed the teachers on various schemes related to menstrual health. Early awareness among adolescent girls can help prevent various reproductive tract infections and other diseases at the initial stages of their lives.

In the present study, the respondents most favorably agree and strongly agree with the discussion about Menstruation and Menstrual Hygiene Management with school boys and girls as well as men. 19% of respondents responded that girls who were complaining the menstrual distress were just making an excuse. 76% of respondents agree with tiredness among women during menstruation. Approximately 37% of respondents agree that menstruating women must not enter shrines/Temples while 13.7% do not know about this myth and approximately 49% of respondents disagree with this statement. A similar type of restriction was reported in other studies also (Sharma N. et al., 2013).

In the present study, all the study participants had good understanding, positive mindset and appropriate trainings regarding menstruation and menstrual hygiene among school teachers and the comparative study showed that good understanding, mindset, and training among participants (Siddique et al., 2023; Gebre et al., 2023; Ravindranath et al., 2023) and half of the participants have good understanding, mindset, and training regarding menstruation and menstrual hygiene (Upashe et al., 2015; Siddique et al., 2023; Sharma N. et al., 2019). Some study shows that insufficient understanding of Menstrual Hygiene Management among participants

(Hagawane et al., 2021; Odey et al., 2022; Sharma S. et al., 2020). 100% of teachers had good understanding and positive mindset about menstruation (Ravindranath et al., 2023).

CONCLUSION

Menstruation and Menstrual hygiene are rarely discussed at schools, at home, and in society. The current study shows that there was 98% good understanding, positive mindset, and satisfactory training regarding Menstruation and Menstrual hygiene among school teachers. Establishment of proper arrangements for the disposal of used sanitary napkins in schools, workplaces, and public washrooms/Toilets. Teachers and peers should be trained with the correct information as well as communication skills at the school and community level so that adolescent girls get ready for physiological changes in their growth phase. Awareness campaigns or counseling sessions organized in school (involving boys, girls, and teachers also) regarding Menstruation and Menstrual Hygiene Management to successfully get rid of taboos, false beliefs, and unfavorable mindset among the population. Countless women suffer from Reproductive Tract Infections and their complications or other infections due to a lack of information regarding the maintenance of Menstrual Hygiene among them

LIMITATION

The collected responses may be subject to recall bias, response bias, and social desirability bias, potentially impacting their accuracy due to the self-reported nature of the measures. Additionally, the results might be influenced by information bias, given the sensitivity of the topic of menstruation.

ACUNDERSTANDINGMENT

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