



Knowledge, Awareness and Aptitude to Menstrual Hygiene: A cross sectional study

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Abstract

Menstruation is a natural process related to the reproductive cycle of females. Changes in menstrual pattern may affect their physical and psychological wellbeing. However, it is surrounded by social taboos and supernatural beliefs. The present study is an institution-based cross-sectional study in which girls and working women in the Maharshi Dayanand University, Rohtak campus completed a self-administered questionnaire. Focus group discussions and semi-structured conversations with participants were recorded. The collected data were analysed using SPSS software and MS Excel 2010 to identify factors associated with poor menstrual hygiene practices. The majority of females (40.67%) learned menstruation related issues from their mothers, followed by social media (23.67%) and friends (19.00%). Menstruation is being treated as a burden by 53.3% of females. Also, 43.67% of females were terrified during their first period. Cotton pads are preferred to use by majority (i.e. 79.3%) of women or girls. According to the responses of participants, it was observed that lack of awareness for menstrual hygiene is prevailing in the society, and the females are facing menstrual problems regularly. But, still most women did not seek care due to personal/societal reasons, which should be addressed. The correct strategies should be enforced to manage women health.

Keywords: Amenorrhoea, Cotton pads, Menstrual hygiene, Periods, Women health.

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Introduction

Menstruation is a normal process that occurs during the reproductive cycles of women and girls (Thiyagarajan & Jeanmonod, 2019). It is a woman's monthly bleeding from the vagina, also called menses. Menstruation may be painful for some women. Changes in menstrual patterns cause numerous problems which affect women's health and cause different menstrual disorders. Dysmenorrhoea is painful abdominal cramps during menses but can increase to the lower back and thigh region. It is composed of two forms of primary and secondary dysmenorrhoea. Amenorrhoea is a menstrual absence. Oligomenorrhoea is a disease that lasts longer than 35 days for periods. These disorders can be because of hormonal variations. Many herbs such as strawberry, cinnamon, fennel, ginger, etc. are used to relieve severity of dysmenorrhoea. Aroma treatment for abdominal cramps involves applying heat to the lower abdomen and menstrual pain self-acupressure. In menorrhagia, the discharge is more

remarkable than regular vaginal leaking menses. About 80 ml of blood loss occurs in women for seven days or more during cycles. Sonohysterography, hysteroscopy, pap-test, ultrasound, and endometrial biopsy are being used for diagnosis in effective management of the disorders (Begum et al., 2016).

Unhealthy menstrual habits are continuously reported in different segments of population, viz. not frequently cleansing one's genitalia, using dirty cloth, and other. To prevent long-term adverse effects of poor menstrual hygiene practices that result in preterm births, miscarriages, infertility, and carcinoma cervix as a complication of recurrent reproductive tract infections, learning about menstrual hygiene is an essential part of health education for women. There is a disparity between rural and urban women's past knowledge of menstruation, menstrual cleanliness, and their relationship to reproductive health (Sommer et al., 2013).

In India, menstruation is considered taboo, and most people feel shy or awkward about this subject. Thus, these taboos and mystical factors influence women's lifestyle, attitude, emotional state, and health. It's also because of insufficient awareness of human physiological functions about menstruation. Such beliefs prohibit women from engaging in various household practices because they are filthy and unclean during menstruation. Women and girls are excluded from specific social and cultural aspects due to taboos around menstruation (Kumar & Srivastava, 2011). It was assumed that menses fluids could be misused for black magic (Sommer et al., 2013). They were also not permitted to visit places of worship, kitchens, etc. Education is crucial in preventing these false beliefs and regulating menstrual hygiene. It is possible to overcome certain sexist stereotypes and taboos by educating men and women about menstruation and other physiological changes related to it (Bhartiya, 2013; Choudhary & Gupta, 2019).

With this background, the current study was carried out to examine women's knowledge, awareness of menstruation hygiene, and the perception of the extent of reproductive morbidity among women and college girls. The features of the study population were examined using descriptive statistics and frequency distribution. This cross-sectional study was carried out with a two-fold objective: 1) To assess the insights and sources of information about menstruation among rural/urban adolescent girls. 2) To assess the state of menstrual hygiene among adolescent females and whether it changes with the advancement of time and technology.

The findings of this study could be of the utmost significance for aid in policy development, planning, and effective intervention strategies. The results of this study will also serve as a benchmark for future research projects, awareness programmes, and related social activities.

Methodology

Study design and sample size:

This is an institution-based cross-sectional study conducted on girl students and working women at MDU, Rohtak. The participants (n=200) were randomly selected. The current cross-sectional study used a mixed-methods approach, incorporating self-administered questionnaires and group discussions as data sources. The questionnaire (table 1) was written in English, and then their answers were analysed and compiled. Respondents who agreed with their consent to be contacted again were sent additional surveys. All the questionnaires asked if there was a presence or absence of vaginal bleeding that could cause various

symptoms. Once the questionnaires had been completed, we also discussed this topic with these females. The following parameters were investigated: knowledge of menarche before menstruation, sources of understanding, the place of bleeding, types of absorbents used, waste disposal, men's response, and lack of care during menstruation, painkillers used, and societal attitudes toward menstruation. The girls were then taught about menstruation's normal physiology, the importance of maintaining hygiene, and safe, sanitary procedures to take during menstruation. After the discussion, participants' questions and concerns were addressed.

Focus discussions:

The participants were encouraged to answer the questionnaire with honesty and to share/discuss their views/issues/concerns regarding menstruation. Participants were made comfortable to answer the questionnaire by elaborating, simplifying and translating the questions as per need. The girl students struggled to address menstruation during the debate, revealing the taboo nature on the topic. Also, working females in girls hostels get nervous and feel embarrass in discussing this topic and answer the questionnaire. At the same time, most girls become confident to frankly discuss the issue. Participants revealed that they had skipped college due to menstrual problems. The female participants in this study are acknowledged as experts on their own menstrual hygiene management (MHM) factors. Menstruation-related issues are identified, and they need to be solved. During the session, the females described their MHM experiences. Few participants were shy, but few were happy to share their experiences with menstruation. We collected the data reported in this study. The results are fairly representative of the respondents since all the survey items received a high response rate.

Statistical analysis:

The collected data were analysed using SPSS software and MS Excel 2010 to identify factors associated with menstrual hygiene practices. Results of the study were described in simple percentages, proportions, means, and standard deviations, and the Chi-square test was used to find associations. $p < 0.05$ is considered significant.

Results

The study engaged 200 female respondents, with age of 18-54 years, from both urban and rural background (**Table 1**). Menstruation is considered as a burden in 53.3% of females, while 2% took it as celebration. Also, 20% of participants observed to think that something is dirty, and 44% take it as a usual thing. The majority of females (40.67%) learned about menstruation through their mothers, followed by social media (23.67%) and friends (19.00%). School is also served as information centre for 10.33% of participants. Regarding their first menstrual cycle, 43.67% of participants were terrified, and 14.33% were annoyed and disgusted. Cotton pads are mostly preferred in 79.3% of participants during menstruation. Participants (1.40%) also found to use menstruation cups, 13.3% still using cloth pads, and 6% opt other methods. Home is observed as the place for first period in 58% of participants, 34.4% during school, and remaining in colleges (1.67%) and other places (3.33%). Painkillers are used sometimes or occasionally, to reduce menstrual cramps, by 37% of participants. While, 7% used painkillers in usual manner in each period, and 58% never use painkillers. To maintain hygiene and sanitary conditions, 62.4% of participants changed their

pad every 6 to 8 hours, 20.60% maintained clean conditions, 5.33% washed with normal water, and the remaining 14.97% used marketed products to maintain cleanliness and to prevent infections. 18% of females observed less confident during periods and 8.66% feel shy during period. 31.34% wait for self-recovery of menstruation related problems while 42% found to be confident to consult physicians. The participants felt that 85.3% of men have a positive attitude towards females during their periods, 9.33% have neutral reactions, and 5.37% still have negative attitude/responses. It is observed that most of the participants throw their used pads in dustbin by wrapping in paper (76.6%) and plastic bags (20.6%), while 2.80% follow other methods.

Table 1: Questionnaire with the responses of participants

Questions	Option 1	Option 2	Option 3	Option 4
What is your first thought about the period?	Burden-49%	Something dirty-10%	Celebration-1%	Normal-40%
Which feminine protection do you use or have you heard off?	Cloth-13.30%	Cotton pad-79.40%	Menstruation-1.40%	Other-6%(specify)
Describe pain and discomfort during periods. Has it changed over the years?	Yes-63.30%	No-36.70%		
Where do you get your first periods?	Home-58%	Workplace-2.66%	School-34.34%	College-1.67% Other places-3.33%
What extra care do you take for maintaining hygiene?	Change pad-62.40%	Maintain sanitary condition-20.60%	Normal washing-5.33%	v-wash or other marketed product-14.97%
feeling about sharing irregularities or complications in periods	Less confident-18%	Shy-8.66%	Wait for self-recovery-31.34%	Consult to physician-42%
What do you think about men's response during menstruation?	Positive-85.30%	Negative-5.37%	Neutral-9.33%	
For disposal of the used pad, which preventive measures do you take?	Wrap in paper-76.60%	Wrap in plastic bag-20.60%	Directly through in dustbin-2.80%	

Discussion

Menstruation hygiene is an alarming issue; and is considered a taboo in major parts of India since the beginning of time. Only 18% of the population has access to sanitary hygiene (Sumpter & Torondel, 2013). As per our findings, 53.3% of females believe that menstruation is a burden, 2% consider it as celebration, 20% think something is dirty, and

44% take it as usual. But, in an observation by Verma et al. (2013) 85.83% of girls believed it to be a natural phenomenon. The findings, as mentioned earlier, could be attributed to mothers' poor literacy rates and the lack of early-stage menstrual hygiene teaching programs in schools (Verma et al., 2013).

Most females acquire infection during menstruation and report white discharge, itching, and dysuria (Singh et al., 2001). In the present study it is observed that 79.3% of women or girls use cotton pads, and only 1.4% use menstruation cups. Cloth is still found to be used by 13.3% of females participated in the study; and 6% of participants found to use other methods. Use of reusable material may not be well sensitized because of its incomplete washing even with soaps, restrictions force drying indoors, away from sunlight and open air. Those who use fabric were more likely to get a various genital infections. These materials kill the soil's microbiome when buried in the ground due to their chemical makeup and delay the decay process. Different pads/absorbents available in the market are washable and can be reused, e.g. commercial sanitary pads, bamboo-fibre pads, banana-fibre pads, water hyacinth pads, tampons, reusable tampons, menstrual cups (Singh et al., 2001).

When India's economic status will shift as a whole, the menarche and menstruation situation for women will also shift in the same direction. Menstrual symptoms negatively affect the life of a considerable percentage of women, and the severity of the symptoms impacts women's quality of lives. Most women do not see a gynaecologist even when their menstruation problems are severe. According to a study conducted in rural area of Bangladesh 57% girls feel more confident at home in comparison to 7% at school to manage menstrual bleeding (Hennegan & Sol, 2020). As per our results about 18% of girls become less confident in periods while 8.66% feel shy. 31.34% wait for self-recovery, and only 42% of participants opt to consult physicians about changes during menstrual cycles. As a result, raising public awareness about newly accessible medical therapies can reduce the overall burden of menstruation issues. Usually menstrual symptoms adversely affect women's daily life by reducing productivity, performance, and work volume. In Japan, more than 70% of women reported menstrual issues, indicating that menstruation substantially affects many people's lives (Tanaka et al., 2013).

To reduce menstrual cramps, 37% of girls take painkillers sometimes or occasionally. Only 7% prefer for painkillers/muscle relaxants to reduce menstrual complexities. Majority of participants, i.e. 58%, observed to keep distance from any kind of medicines during menstruation. This is approximately similar to a study conducted at Nagpur by Kulkarni and Durge (2011) where girls seeking and not seeking health care were 33.67% and 62.33%, respectively. Despite a high prevalence of reproductive morbidities among adolescent girls, there is a standard treatment-seeking behaviour from health care (Kulkarni & Durge, 2011).

Water and soap were the most common agents used for cleaning genitalia in a study conducted by Pundkar et al. (2014), whereas, in the present study, the most common agent was not only water. To maintain hygiene and sanitary conditions, 62.4% of girls change their pad every 6 to 8 hours, 20.6% maintain clean conditions, 5.33% wash with normal water, and the remaining 14.97% use marketed products (Pundkar et al., 2014).

As per our findings, to prevent infections and maintain hygiene, 76.60% throw used pads in dustbin by wrapping in paper, 20.60% wrap in plastic bags, and 2.80% follow other methods. Some particular enclosed bins for handling menstrual waste should be installed. Manufacturing companies should include disposal bags with the color indication for disposal of such items. All schools and institutions should have access to installed incinerators to manage menstrual waste. To release fewer toxic gasses, they must be run at a specific minimum temperature of about eight hundred Celsius. They should be built at the community level in schools, agencies, and slum areas (Kaur et al., 2018).

Gender inequality is key factor responsible for considering this natural phenomenon as a taboo and the prejudice behaviour among men is a major concern. In many families men hesitate to discuss regarding menstrual issues with their wives and also avoid utilising money on products that are crucial for menstrual hygiene (Kaur et al., 2018). However, as per obtained results, 85.3% of men have a positive attitude towards women during their periods, 9.33% have neutral reactions, and 5.37% still have negative responses. Hence women's lifestyle needs to be changed regarding their reproductive and social health. In some cases, an irregularity in menstruation leads to disorders like amenorrhea, dysmenorrhea, and menorrhagia, which may be life-threatening in the latter stages. They can be treated earlier by taking the true prevalence of the particular disorder with consulting a physician. There are also various examples of NGOs, businesses, and organizations collaborating with communities to educate people about menstrual hygiene and build economic models to meet the need for sanitary napkins. Sustainable health enterprises, Natra care, AFRI pads, Kindara, Lunette, and flow apps promote menstruation hygiene. Around the world, social enterprises and several organizations are working to handle the challenges. Companies and organizations contribute periods and modify the lives of women and girls. Although, these companies are making profit from periods through different ways/products (Hennegan et al., 2017; Kiefer, 2015).

We felt good at gathering data on an important topic like this. Discussion with the teachers and health workers produced responses that could be predicted to a certain degree. Mothers may have provided more relevant answers to what they think they've done than they did. We also personally think to aware our kids before menstruation begins. We should provide details and make them confident to buy sanitary pads as well. As a result, it is critical to promote harmless and hygienic practices among adolescent girls. We must educate them about menstruation issues and break them free from traditional opinions, misconceptions, and boundaries about menstruation to protect themselves from infections and diseases. Therefore, a national survey representative of urban, rural, and tribal populations from different socio-economic groups is necessary. So, this survey form explicitly focused on sensitive topics such as cultural concerns, literacy, affordability/financing, etc., which would provide valuable data.

Conclusion

The present study concludes that young females have much more comprehensive knowledge about menstruation than adult women. From the traditional timing till now, girls still feel shy because of inadequate knowledge and orthodox thinking. This can lead to many needless limitations on young girls, and they have faced many health-related problems and concerns

that have either been overlooked or poorly handled. Hence, there is a need to improve awareness about menstrual hygiene to create a positive attitude towards managing menstruation and related problems. The transmission of vital messages regarding proper menstrual hygiene practices to today's adolescent girls can be facilitated by educational television programs, trained school nurses/health staff, committed school instructors, and informed parents.

Declarations:

Ethics approval and consent to participate:

Ethics were followed during the conduct of the study. Respondents were informed about the purpose of the study, the nature of the information being collected, and the methods of collecting data. The information of the participants are not disclosed anywhere, its with the authors only.

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