



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

ASSESSMENT OF KNOWLEDGE AND CREATING AWARENESS FOR THE USE OF MENSTRUAL CUP AND ITS RELATED ASPECTS DURING MENSTRUATION AMONG YOUNG ADULTS: AN ENVIRONMENT FRIENDLY APPROACH

KEY WORDS: Menstrual cup, Environment friendly, Cost effective, Menstruation

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ABSTRACT

An advancement in the field of menstrual management products is the menstrual cup that act by collecting the menstrual blood which needs to be emptied every 6 to 12 hours and can last for up to 5 to 10 years, thereby decreasing the environmental impact caused by one-time use products. Thus, this research was conducted to assess the knowledge among young adult females about the use of menstrual cup and to further spread awareness about its use as an environment friendly and cost-effective device. The present study was a cross-sectional descriptive study conducted in, IMCHRC, Indore with 230 participants.

INTRODUCTION

Menstruation is a natural and normal biological process that marks the transition from girlhood to womanhood. It is a regular part of the menstrual cycle and shows that the reproductive organs are functioning correctly. Even though menstruation is an important phenomenon in the life of every woman, it is surrounded by various cultural taboos and stigmas. There is use of terms such as "time of the month", "period", or "on the rag" to describe menstruation.¹ Karen Houppert has correctly described menstruation as the reality of concealment as females constantly go through discomfort during menstruation.¹ Acknowledging and discussing menstruation helps to normalize female physiology, reduce stigma, and promote a healthier attitude towards women's health. Menstrual management products are used to handle menstrual flow and maintain personal hygiene during menstruation. They offer convenience, comfort, and help to prevent leakage. Proper menstrual management also contributes to the overall well-being and allows individuals to go about their daily activities with confidence and ease. Menstrual management products are of two types. The first category of products is the one used externally. They include sanitary pads, panty liners, and menstrual panties. Whereas the second category of products includes those that are used internally. These products are inserted into the vagina and include sanitary tampons and menstrual cups.² Among women aged 13 to 51 years who menstruate, the average period lasts three to seven days per month which accounts for 2,280 days over a lifetime. During that time, over 10,000 sanitary pads and tampons are used.³ Further, menstrual management product usage tends to be significantly greater among individuals experiencing heavy menstrual bleeding as indicated in community surveys.⁴ According to the State of India's Environment 2019 Survey, the Menstrual Hygiene Alliance of India (MHAI) has estimated that there are 336 million menstruating women in India, out of which 36 percent use disposable menstrual management products such as sanitary pads and sanitary tampons. This accounts for a total of 121 million women. This means that a total of 12.3 billion disposable sanitary pads and tampons are used every year and dumped in landfills. The majority of which are not biodegradable or compostable.⁵ Sanitary pads and tampons once used are disposed of and dumped in open landfills. These landfills can be breeding grounds for a wide variety of infection-causing microorganisms. Sanitary pads and tampons use plastic and this plastic takes hundreds of years to degrade. Thus, causing a negative impact on the environment.⁵ An advancement in the field of menstrual management products is the menstrual cup. Menstrual cups are bell shaped intravaginal devices. They act by collecting

the menstrual blood which needs to be emptied every 6 to 12 hours. A single menstrual cup can be used for multiple menstrual cycles and last for up to 5 to 10 years, thereby decreasing the environmental impact caused by one-time use products. Menstrual cups are also a cost-effective alternative to one-time-use menstrual management products. Thus, this study was conducted to assess the knowledge about the availability of various menstrual management aids aiming at the menstrual cup as an alternative, cost effective, and environment friendly device.

CASE STUDY

Study design and site After taking ethical approval, a cross-sectional study was conducted at IMCHRC, Indore. The hospital is affiliated to It is a tertiary care teaching hospital catering healthcare needs of urban as well as rural areas in the vicinity.

Study period The duration of the study was from December 2025 to January 2026.

Sample size The sample size was calculated by using Statulator software by taking a proportion 82% from a study. The sample size was 227 at 95% confidence level and 5% precision.

$$n = z^2 pq / d^2$$

The sample size was rounded off to 230.

Inclusion criteria Menstruating females who are willing to be a part of this study, educated at least up to high school and having smartphones were included.

Exclusion criteria Females who are pregnant or planning to conceive and females with known congenital anomaly of genital tract were excluded.

Questionnaire was developed based on questions taken from published research articles.

The questionnaire was pre-validated before the commencement of the study.

RESULT

The study was conducted on participants drawn from IMCHRC, Indore. A total of 246 participants responded out of which 230 met the inclusion criteria of the study. The distribution of the sample was done based on demographic details such as age, residence, marital status, menstrual flow, and duration of menstruation.

Basic characteristics of the participants

The age of the respondents varies from 19 years to 29 years. The majority of the study population, that is 47.8% (110) lies in the age group of 19 years to 21 years. 86.1% (198) of the respondents were unmarried. 135 (58.7%) participants had their menstruation for a duration of 3 to 5 days. Out of the total 230 respondents, 30 (13%) had light menstrual flow, 145 (63%) had medium flow, 43 (18.7%) had heavy flow, and 12 (5.3%) had very heavy flow. Knowledge about availability of various menstrual management aids. Out of the total 230 participants, 66.9% (154) of respondents were aware of using tampons as a menstrual management product and 68.6% (158) females were aware of menstrual cups.

the respondents' opinion on how the used sanitary pads are disposed-off. 67% (154) said that the used pads are dumped in landfills, while 33% (76) believe sanitary pads are degraded. 66.1% (152) do not feel that the disposal is environmentally friendly. Knowledge about the menstrual cup as an alternative aid to menstrual hygiene management. study shows that out of the 230 respondents, only 31 (13.5%) have used the menstrual cup before. Study shows how the respondents grade their knowledge about the menstrual cup. Only 9.1% (21) had very good knowledge of the menstrual cup. 47.8% (110) of the respondents think that the menstrual cup is a safe device for the management of menstrual flow. Out of the 230 respondents, 170 (73.9%) knew about the correct mechanism of action of the cup, that is by collecting blood. When asked whether the use of sanitary pads is necessary with the menstrual cup, only 7.8% (18) of the respondents said yes. 75.2% (173) of respondents said that the menstrual cup can be used by virgins. Only 54.3% (125) respondents believed that the cup can be used after normal vaginal delivery. 62.2% (143) said that it can be used while swimming and bathing. 15.7% (36) believe that the menstrual cup can be used as a method of contraception. 38.2% (88) of the respondents believe that the menstrual cup is more hygienic than sanitary pads. 10.4% (24) of the respondents would only wash the cup under water, while 11.7% (27) would wash with soap and water. 40.9% (94) would wash the cup in boiling water. Only 37% (85) of the respondents would clean the menstrual cup using all three methods. 36.5% (84) think the cup should be emptied every 6-12 hours. 24.8% (57) of the respondents believe that the menstrual cup can be used for 5-7 years.

The chief concern that most of the respondents reported is that the menstrual cup may cause discomfort, 38.7% (89). While 14.3% (33) believed that menstrual cup may cause allergies. However, 16.1% (37) of the respondents thought that the menstrual cup may cause leakage. Only 9.6% (22) chose latex, while 28.7% (66) didn't know the material with which the menstrual cup is made up of. Knowledge about menstrual cup as a cost-effective and environment-friendly device. 49.6% (114) of the respondents spend 100-200 rupees per month on menstrual management products. 27% (62) spend 200-300 rupees per month, while 14.3% (33) spend more than 300 rupees monthly. 9.1% (21) of the respondents were not aware of the money they spend on menstrual management products. 57.8% (133) of the respondents believe that the menstrual cup will be a cost-effective alternative to sanitary pads and sanitary tampons. 66.5% (153) believe that menstrual cup is an environment friendly.

CONCLUSION

This study concluded that majority of the young adult female population has average knowledge about the use of menstrual cup. A large number of the study participants acknowledged the environment friendly aspect of menstrual cup. However, there is still scope for educating the masses about this sustainable advancement in the field of menstrual management products. For this, the younger population should be targeted as they are more open to the idea of environment-friendliness. There is still confusion among the

masses regarding the pocket-friendly aspect of menstrual cup. Therefore, the use of menstrual cup as a cost-effective device should be advertised, especially in the rural areas and areas of high poverty. The menstruating population should be educated that the menstrual cup is made up of high-quality, medical-grade silicone and is non-allergic and non-toxic if used properly. It is seen that after watching the informative video about menstrual cup, the level of knowledge of the study participants improved thereby emphasizing on the importance of awareness campaigns. With the help of female health care providers like Asha, Aanganwadi Workers and ANM, the policy makers can help educate the menstruating population about the use of menstrual cup.

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