

**A Study on Acceptability and Adaptability for Using Menstrual Cups amongst Reproductive Aged Females****Garg P<sup>1\*</sup>, Gupta R<sup>2</sup>, Agrawal H<sup>3</sup>, Verma A<sup>4</sup>**<sup>1</sup>Associate Professor, Department of Obstetrics & Gynecology, Rama Medical College, Hospital & Research Centre, Hapur, Uttar Pradesh, India,<sup>2</sup>Consultant Obstetrics & Gynecology, Ghaziabad, Uttar Pradesh, India<sup>3</sup>Assistant Professor, Department of Pharmacology, GS Medical College, Hapur, Uttar Pradesh, India<sup>4</sup>Past Vice President FOGSI, Consultant Obstetrics & Gynecology, Ghaziabad, Uttar Pradesh, India

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Conflict of interest: Nil

**Abstract:****Aim:** A Study on Acceptability and Adaptability for Using Menstrual Cups amongst Reproductive Aged Females**Materials and Methods:** A sample of 30 females who were pregnant and delivered by caesarean section was used; they were supplied with a questionnaire to collect information about their knowledge about menstrual cups and were educated regarding the benefits of using menstrual cups. Each participant was followed for 2-3 months through regular visits.**Results:** 26 patients were willing to use menstrual cup. Maximum females did not experience any pain in insertion and removal of cup and were confident about inserting, removing, washing and sterilizing the cup.**Conclusion:** There is scope for improving awareness regarding promotion of menstrual health and hygiene amongst the healthcare providers and to advocate use of menstrual cup for the same as this is more eco-friendly. Social media also plays a major role in imparting knowledge, hence qualitatively researched data should be made available to propagate the use of this cheap, safe, eco-friendly and sustainable product for MHM. More awareness campaigns and better availability of menstrual cups should be there in community.**Keywords:** Menstrual Cup, Menstrual Hygiene, Awareness.

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**Introduction**

Menstruation is a normal phenomenon in females and it is their sign of reproductive health. On an average, approximately 1.9 billion women (26% of the total world population) are in menstruating age group around the globe spending on an around 65 days per year managing their menstrual blood flow.[1] According to some estimates, >300 million women worldwide are menstruating on a single day. Of these, approximately 500 million women lack proper access to menstrual products and adequate facilities for safe disposal of menstrual hygiene management (MHM). In developing countries, most females, particularly school-girls experience lack of water, sanitation, hygiene, along with inadequate education and poor disposal facilities, which is of great concern for public health.[2,3]

During menstruation, leakage may occur and have an impact on health due to lack of adequate facilities to manage menstrual fluid. There are several solutions available to manage menstrual blood outflow, but several factors like ignorance,

prejudice, costs, safety and fear prevent them from testing the available products.[4,5]

In India, hygiene products including sanitary pads, tampons, wipes and diapers contribute to 6% of non-biodegradable waste. According to some estimates, a lady in her lifetime will dispose of 11,000 menstrual products. Most of these are not biodegradable and would take 500-600 years to decompose.

In India, among women in the age group of 15-24 years, maximum use sanitary napkins (64.4 %), followed by cloth (49.6%), locally prepared napkins (15%) and menstrual cups(0.3%) as per the reports of fifth National Family Health Survey (NFHS-5).[6] There is an increasing trend seen for the sales of menstrual cups in India, being facilitated by digital media, and state governments like Karnataka.[7]

The menstrual cups are made up of silicone, which is non-toxic, non-allergic and the device is reusable. According to some estimates, one

menstrual cup is equivalent to 528 pads or tampons that are used by a lady during 24 months (two years). The reason they are not being used by a sizable proportion seems to be lack of knowledge and practice. This indicates enormous value of the menstrual cups, which are the most sustainable and environmentally friendly products for disposal of menstrual fluid month after month by all young women. Therefore, it's time to change ways and switch to new products becoming available for disposal of menstrual fluid month after month.

The present study on menstrual cups was planned to demonstrate that menstrual cups provide many advantages, particularly in a country like India and to educate and motivate women for using this eco-friendly, cost-effective, sustainable menstrual hygiene product.

### Material and methods

During July to November 2020, a sample of 30 females who were pregnant and delivered by caesarean section was used; they were supplied with a questionnaire to collect information about their knowledge about menstrual cups and were educated regarding the benefits of using menstrual cups. During 2-3 days of stay, each participant was educated about the insertion, removal, sterilization and storage of the cup through repeated practice of the operation. Once the participant was receptive and ready, the menstrual cup of appropriate size was inserted and the participant was discharged. Each participant was followed for 2-3 menstrual cycles through regular visits. At every visit, a pre-structured questionnaire was used for assessing their satisfaction regarding their use of menstrual cup and regarding the pain experienced during the insertion and removal and the level of confidence while using the menstrual cup. The response for satisfaction with the usage of the menstrual cup was measured on a six-point Likert scale, with 0 for not at all satisfied, 1 for slightly satisfied, 2 for mildly satisfied, 3 for moderately satisfied, 4 for highly satisfied and 5 for fully satisfied. If a participant was not able to report every month, they were telephonically interviewed and the data was recorded though. They were asked about difficulty or discomfort experienced and it was tried to be rectified. When participant came to follow after third menstrual cycle, additional questions were asked regarding if they would like to continue using it and if they would recommend it to their friends or relatives. This data was entered in excel sheet for analysis.

### Criteria used for inclusion in the study

Following criteria were used for selection of 30 subjects: (i) married menstruating women educated at least up to primary school. (ii) Age group ranging from of 21 to 50 years. (iii) Immediate post-partum females delivered by caesarean section. (iv) Earlier using sanitary pads/ tampons/ cloth as menstrual sanitary protection.

### Criteria used for exclusion from the study

As a precautionary measure, following criteria were also used for exclusion; (i) Women having any degree of prolapse of genital organs. (ii) Women allergic or sensitive to silicone. (iii) Women having active vaginal/urogenital infections. (iv) Women, who did not understand the nature/purpose of the study.

### Results

The 30 females, who participated, all belonged to the age group 20-36 years and each was delivered by caesarean section. Their education level ranged from 7<sup>th</sup> standard to university degree (B. Tech., MBA). Out of 30 participants, 16 were housewives, 18 had knowledge about menstrual cup and its use. The types of menstrual hygiene followed by the participants were commercial pads (70%), clothes (23.3%), homemade disposables, underwear only in an order of preference. Disposable was an issue to the majority using routine dustbin for disposing. 15 women (84%) preferred menstrual cups and rated them superior and safer for the environment than previously used methods like pads and tampons.

Of the 18 participants who were aware about menstrual cups, knew about their usage either through You Tube or through their friends and relatives, but did not use it because of their reluctance to use a new product. 26 patients were willing to use menstrual cup. Only four were reluctant, so that these four had to be motivated for using the cup at least during their stay in the hospital. Maximum females did not experience any pain in insertion and removal of cup and were confident about inserting, removing, washing and sterilizing the cup. Of the 30 volunteers, 8 found the cups to be excellent, another 12 appreciated the softness, design and size of cup and the length of the stem of the cup; the remaining were neutral. 27 were willing to use in future and 26 were willing to recommend it to friends and relatives. Some other details about the participants are presented in Tables 1 and 2.

**Table 1: A summary about attitude/experience of towards use of menstrual cups**

	Easy	Convenient	Difficult
Convenience	14(46.7)	9(30)	7(23.3)
Hand-wash before use	30(100)	0(0)	0(0)
Sterilising the cup	20(66.7)	8(26.7)	2(6.6)
Washing cup before use	28(93.3)	0(0)	2(6.7)

Folding/inserting the cup	24(80)	3(10)	3(10)
Removing the cup	27(90)	2(6.67)	1(3.3)
Storage of the cup	28(93.3)	1(3.3)	1(3.3)

**Table 2: A summary of the results of response of participants on current and future use of menstrual cups**

Item	Response regarding current use on a scale of 0 to 5					
	0	1	2	3	4	5
Pain during insertion of the cup	17	2	4	3	1	3
Pain during removal of the cup	17	1	5	3	1	3
Confidence for future use	3	1	5	5	6	10
Pain during insertion of the cup	17	2	4	3	1	3
Pain during removal of the cup	17	1	5	3	1	3
Confidence regarding Future use	3	1	5	5	6	10

## Discussion

Most commonly used product is sanitary pad as shown by previous studies like Singh R et al(95.5%), Sreedevi C et al(98.1%), Meghana S et al(96.7%) and Eti M et al(100%), which is similar as shown by our study(70%) followed by cloth.[8,9,10,11] Only Kaklani CR et al showed that most commonly used product was cloth(53.3%) followed by sanitary pad(43.3%).[12] This could be because sanitary pads are available easily and promoted highly through the medium of advertisements and social media.

Menstrual cups are least promoted by even health-care providers, as shown by Divakar et al[13] with major source of awareness being social media and peer group as shown in studies conducted by Sreedevi et al(58%), Meghana S et al(80%), Ballal SK et al(82%).[9,10,14] In a study conducted in Bangalore by Aishwarya and Tharani, it was reported that most of the women are already using the menstrual cups and have complete information about them, with major source of information being social media.[15]

These results are similar to our study(60%). So, we need better awareness amongst health-care providers to promote this sustainable menstrual hygiene product. Awareness campaigns can also be initiated by government, similar to the step taken by Karnataka by distributing menstrual cups free of cost. Many studies have shown that females are not happy with using sanitary pads due to problems associated like disposal, leakage, etc. and are willing to switch to other products like menstrual cups like Singh R et al have shown more than 90% female wanted an alternative, which is almost similar to our study(86.7%).[8] Though the awareness about menstrual cups exists, but usage is poor among rural as well as urban population, 2.67% by Ballal SK et al.[14] The reason for this could be lack of proper knowledge and confidence regarding its use. Studies like Sreedevi C et al and Singh R et al have shown their increased acceptability over successive cycles of usage.[9,8] Menstrual cups are extremely easy to wear and

remove, as shown by Singh R et al(75% and 77% respectively), Ballal SK et al(37.5% and 87.5% respectively) and Kaklani CR et al(83.3% and 93.3% respectively) results are comparative to our study where 76.7% found it convenient.[8,14,12] So, it can be easily adapted if it is propagated well.

Most of the patients had a good experience while using menstrual cups and they were willing to continue its use in future as well as recommend it to others as shown by Singh R et al(68.9%).[8] Our study showed even a higher percentage of future use(83.3%) and recommendation(86.7%).

## Conclusion

There is scope for improving awareness regarding promotion of menstrual health and hygiene amongst the healthcare providers and to advocate use of menstrual cup for the same as this is more eco-friendly. More researches need to be conducted for its safety so that consumers can be provided with information which is better researched. Social media also plays a major role in imparting knowledge, hence qualitatively researched data should be made available to propagate the use of this cheap, safe, eco-friendly and sustainable product for MHM.

More awareness campaigns and better availability of menstrual cups should be there in community. Making available of water, sanitation and hygiene i.e., WASH facilities in public places is also important to ensure better health and menstrual management.

The limitation of our study is that it is a preliminary study conducted with a small sample size for a short duration. Further research is needed in the form of long term prospective studies or randomized controlled trials.

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