

## **“Menstrual freedom -Experiences of reproductive age group women after using a menstrual cup in selected areas in Rajasthan (India).”**

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### **Abstract**

Menstrual health is a potential yet under-discussed element of women's health in low-middle-income countries like India. A sequential explanatory approach was used to assess the experiences and feedback of women after using a menstrual cup. The study used a sequential explanatory design to evaluate the experiences in terms of complete freedom after using a menstrual cup in the reproductive age group of women of selected states in India. Convenience sampling was used to recruit women who met inclusion criteria from the community of Jodhpur. A total of 50 women were provided a menstrual cup with a monthly diary to record their feedback after using the cup for at least two menstrual cycles. The period of the study was from January 2022 to March 2022, in Jodhpur, Rajasthan. The study result revealed the women who used menstrual cups experienced a great range of physical, psychological, financial, social, and emotional freedom. Findings from this study support policy changes including increasing awareness and access to the menstrual cup for reproductive-aged women in India.

### **INTRODUCTION –**

Menstrual freedom represents a term when a woman is satisfied based on physical, psychosocial, emotional, and financial barriers. It also includes the abolition of social and economic systems or situational obstacles that hinder individuals from experiencing their periods with dignity [1]. The present study tries to explain the above statement that a woman can achieve menstrual freedom after using a sustainable solution for menstrual hygiene. Monthly bleeding is a sign of maturity and reproductive health, that can impact all the spheres of quality of life of a woman. Despite the significance of a woman's health little attention is paid to menstrual hygiene and sustainable solutions. A country's growth and development indicators are the reproductive health of women. The Government and policymakers have started various programs to improve reproductive and healthcare services in India. Including the menstrual hygiene component in health and wellness centers strengthens the services under reproductive and child health services. In India, women still do not have proper education regarding menstruation and its management in a healthy way [2].

### **BACKGROUND OF THE STUDY -**

Unhealthy, unhygienic menstrual practices can lead to reproductive tract infections and various types of cancer [3]. Social taboos attached to this natural phenomenon are even more challenging to manage women's menstrual cycle needs with appropriate resources. Even more challenging to manage women's menstrual cycle needs with appropriate resources [4]. For instance, to avoid social exposure, women and girls do not dry the used cloth outside where it would be visible to others; instead, they hide the cloth in their rooms or a corner of the roof underneath their usual clothes [5]. There are a plethora of myths in India about menstruation such as touching a food item by a menstruator will turn the food bad, during menstruation a woman's or girl's body is not pure so she should not touch a man, she should not go outside otherwise will be caught by bad spirits and so on [6]. At present most women in India are in a transitional phase where they have access to information about the new tools and techniques available in the world, yet unaware or less understanding of a menstrual cup as a better alternative for menstrual hygiene [7].

Poor menstrual hygiene not only affects physical health but also social and mental well-being, this can be categorized as a violation of the human right to health, which is considered a social, mental, emotional, psychological, and spiritual aspect of a person. Complete menstrual freedom can be an integral part of health. That influenced the creation of a strong network to take action and advocate menstrual hygiene locally and globally [8].

To overcome most of the problems we need a sustainable and better alternative, a menstrual cup can be a potential solution. A menstrual cup is a silicon-made device that is inserted in the vagina to collect menstrual blood. Multiple barriers exist for Indian women to properly dispose of menstrual waste, and a menstrual cup has the potential to alleviate many of these barriers. Menstrual cups are less expensive than disposable pads and tampons with a significant environmental advantage [9], [10].

Commercial sanitary pads are loaded with chemicals, toxins, synthetic material, and plastic sanitary products are not only harmful to the normal vaginal flora but to the environment also[11].

The Government of India has started a new scheme aimed at offering sanitary pads at a subsidized rate to adolescent girls in rural areas. Falalin cloths were culturally more acceptable as they were readily available, easy to use, and cheaper than sanitary pads[12]. However, the main problem of infection, poor menstrual hygiene management, and monthly expense of pads or cloth will not be solved by this.

Developing countries like India need education about healthy menstrual practices, accurate information, and eco-friendly alternatives to menstrual products that are harmful to the environment. This study aimed to reflect on the experiences of menstrual cup users to bring a positive change towards the issues like lack of awareness, proper education, self-help groups, and lack of freedom to express women's thoughts, especially in the rural area.[4],[12-14].

## MATERIALS AND METHODS

### Aim and objectives

- To evaluate feedback after using a menstrual cup compared to their past menstrual hygiene product (Sanitary pads) in the reproductive age group women.
- To explore the change in the quality of life during the menstrual period after using a menstrual cup in terms of menstrual freedom.

### Research question

- What are the experiences of reproductive age groups women after using a menstrual cup concerning complete menstrual freedom?

**Hypothesis** – There is a significant difference in two interventions (menstrual cups and conventional methods) among the reproductive age group of women in terms of menstrual freedom.

### Variables under study:

- Independent variable: Sanitary pads, a Menstrual cup
- Outcome variable: feedback scores of menstrual cups with selected parameters and freedom felt based on the use of a cup and changes in quality of life during the menstrual period.

### Procedure

In this study, an explanatory sequential approach was used to explain, the changes in the life of women after using a menstrual cup as an alternative method to manage their menses. The time taken to assess the outcome was January 2022 to March 2022 in selected states in India. A total of fifty women of the reproductive age group (15-49) with the inclusion criteria were enrolled by purposive sampling method. The Participants were screened for meeting eligibility requirements. The women who showed their willingness to use a menstrual cup were included. Women with any pelvic inflammatory disease or reproductive tract diseases or urinary tract infections were excluded. We evaluated symptomatically the women for any reproductive tract infections or sexually transmitted diseases and silicon allergies. After a demonstration on how to use a menstrual cup, they were provided a menstrual cup, which they used for at least one menstrual cycle. The present feedback on the interventions is part of the main study, the participants who used a menstrual cup were given a diary to record their responses, followed by the 10 in-depth interviews. The feedback was taken separately for the conventional methods and the menstrual cup. The feedback responses showed a higher level of satisfaction among menstrual cup users. Fifty women were selected from the inclusion criteria and 43 completed the study. The remaining participants did not follow through. Formal administrative permission was obtained from each institution's head. The participants were asked to fill out a feedback form that had eight items related to their responses to the menstrual cup in comparison to their past method.

### Outcome measurement:

Participant feedback was analyzed by exploring the concept of complete menstrual freedom and the changes in life after using the menstrual cup. The data were managed by encoding and analyzed by using SPSS 29.0.0 for descriptive and inferential statistics (mean and percentage). The in-depth interviews were analyzed with thematic analysis.

### Results

*Table 1 The frequency and percentage of feedback scores*

S. No	Bases of the feedback	Frequency (%)	
		Sanitary Pad	Menstrual cup
1	<b>Number of menstrual cycles you used the product</b>		
	1	0	4 (9.3)
	2	0	3 (7.0)
	3	0	2 (4.7)
	more than 3	43 (100)	34 (79.1)

2	<b>Ease of wearing</b>		
	Easy	13 (30.2)	34 (79.1)
	Not so easy	2 (9.3)	8 (18.6)
	Difficult	26 (60.5)	1 (2.3)
3	<b>Removal</b>		
	Easy	37 (86.0)	34 (79.1)
	Not so easy	3 (7)	8 (18.6)
	Difficult	3 (7)	1 (2.3)
4	<b>Cleaning</b>		
	Easy	5 (11.6)	43 (100)
	Not so easy	3 (7)	0
	Difficult	35 (81.4)	0
5	<b>level of comfort</b>		
	Comfortable	0	39 (90.7)
	Not so comfortable	0	3 (7.0)
	Uncomfortable	43 (100)	1 (2.3)
6	<b>Leakage</b>		
	No leakage	7 (16.3)	30 (69.8)
	Little Leakage	36 (83.7)	13 (30.2)
	A lot leakage	0	0
7	<b>Any smell during menstruation</b>		
	No smell	2 (4.7)	40 (93.0)
	Little smell	4 (9.3)	3 (7.0)
	Intense smell	37 (86)	0
8	<b>Any difficulty after using</b>		
	Noproblemfaced	0	40 (93.0)
	After 1 day it's paining	0	1 (2.3)
	Pain	6 (14)	1 (2.3)
	Burning /Dryness	37 (86)	1 (2.3)
9	<b>Disposal</b>		
	Easy	2 (4.7)	43(100)
	Not so easy	5 (11.6)	0
	Difficult	36 (83.7)	0

*Table 2 The Mean and SD of the scores.*

Paired Samples Test				t	df	Sig.
Mean	SD	Std. Error Mean	95% CI of the Difference			
-7.26	2.048	.312	-7.886 -6.625	-23.231	42	.000

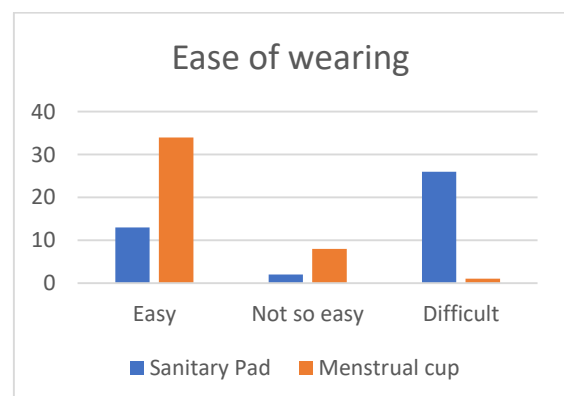
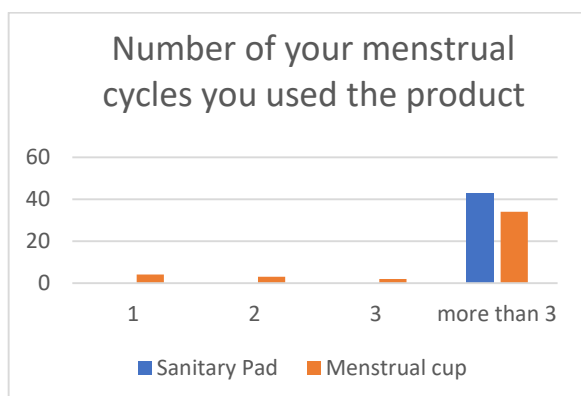


Figure -1 Comparing the frequency of using the product

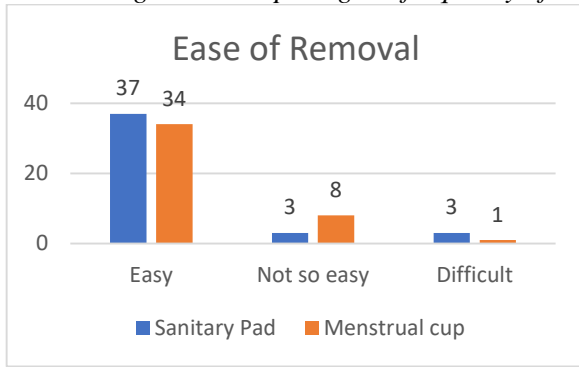


Figure 2. Comparing the ease of wearing



Figure -3. Comparing ease of removal

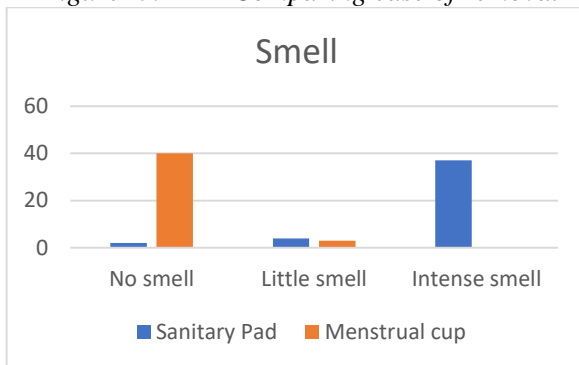


Figure -4. Comparing cleaning

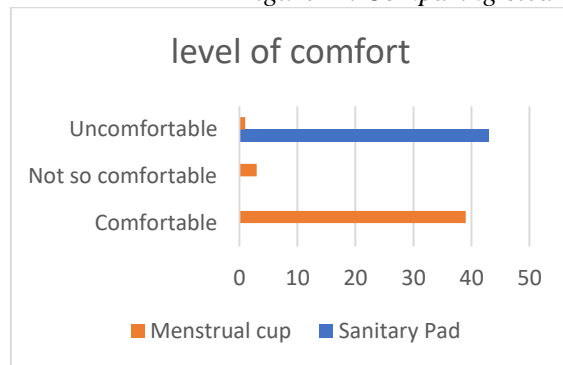


Figure -5. Comparing any smell

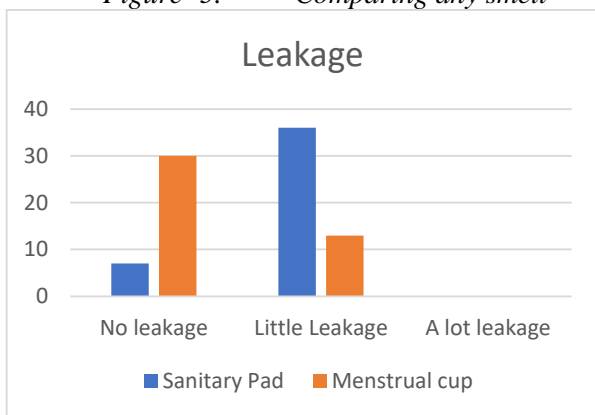


Figure -6. Comparing the level of comfort

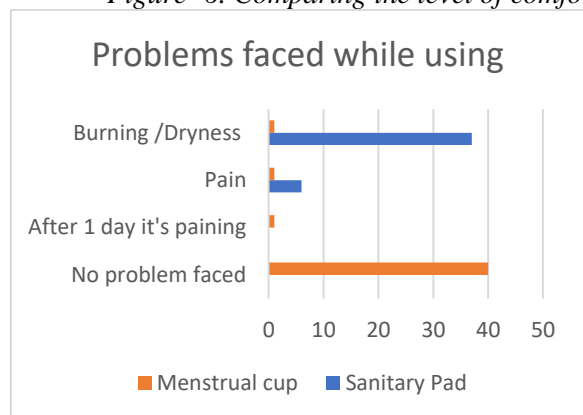


Figure -5. Comparing the leakage

Figure -6. Comparing any problems faced

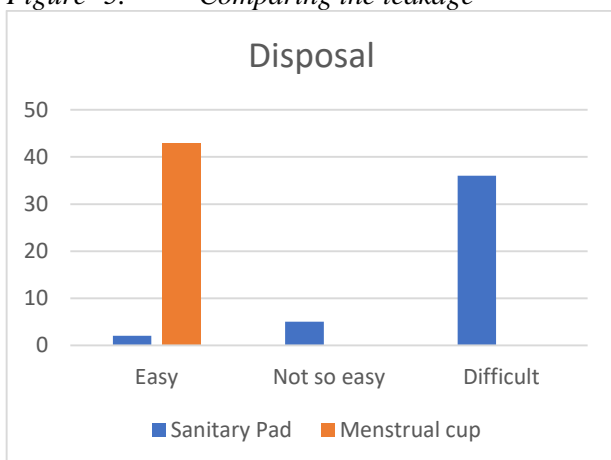


Figure -7. Comparing the disposal of menstrual waste

Figures 1 to 9 represent the responses of the participants after using the Menstrual cup. The majority of the participants showed a higher level of satisfaction after using a menstrual cup. The results in Tables 1 and 2 exhibit that a menstrual

cup ranked higher based on cleaning. The results showed a significant difference between the menstrual cup users and the conventional method users with a mean difference of (-7.26) with SD (2.048). It is conspicuous in the tables and graphs that the participants were satisfied after using a menstrual cup in comparison to sanitary pads.

#### **In-depth interviews**

After receiving the informed consent and the feedback forms from the participants, detailed interviews were taken. In-depth Interview (The interview narrations are kept quoted as received from the participants to be understood more authentically)

#### **DISCUSSION**

Based on the interviews we found five components of complete freedom. This part of the study discusses the feedback and revealed that the women who are using a menstrual cup experienced a sense of freedom after using a menstrual cup during the menstrual period.

The components of complete freedom experienced after using a menstrual cup.

#### **PHYSICAL FREEDOM**

Physical discomfort is a common element associated with menstruation. The physical activities related to sports and water were easy with a menstrual cup, for instance, swimming, dancing, running, playing, riding, or bicycling. Physical problems such as rashes, itching, redness, and vaginal dryness were no longer the issues along with the menses. The menstrual cup users experienced a sense of freedom at the physical level.

*"I am feeling blessed with it, I have really good experience using cups. I am using it for the last 4 years. They are extremely comfortable, easy to wear and create no mess. I will recommend it to everyone. It's seamless guilt-free. One can wear whites can go swimming without any fear. I can even go to the temple or a party or anywhere now because I don't feel any mess around me. Very happy with the product."*

#### **SOCIAL FREEDOM**

The narrations of the women interpreted that they used to avoid social events or gatherings before using the menstrual cup. The menstrual cup enabled them to attend these social gatherings more comfortably. They were no longer worried about the leakage or stains and were informed about their active participation in the program which was altered earlier due to the sanitary pad uses and the disposal issues outside of the house.

One participant, who was a working woman said that *"I had issues with using sanitary pads during my periods such as allergy, discomfort and of course the getting and discarding the pads hygienically, etc. especially as I had to travel frequently. Then in 2011, I was introduced to the menstrual cup. I started using it and literally, my life has changed. Now I do not plan my movements around period days but now I take them in my stride as I do not have to worry about carrying sanitary pads or having to think of their disposal. A menstrual cup is easy to use and includes insertion, emptying, cleaning, and storing the cup for the next period. There may be apprehension about using it for the first time but I can assure you that as we become aware of our menstrual cycle flow, we can use the cup more effectively."*

#### **PSYCHOLOGICAL FREEDOM**

The quality of the work was improved to a higher level at home and outside the home. The participants said that they even forget their menses were going on while wearing a menstrual cup. The stress and tension were relieved and facilitated the ability to work with more focus and attention. The four days with the tension of choosing a particular costume to hide the dirty clothes. The mental level of the women during menstruation was calmer and more stable.

*"I am feeling blessed with it, I have really good experience using cups. I am using it for the last 4 years. They are extremely comfortable, easy to wear and create no mess. I will recommend it to everyone. It's seamless guilt-free. One can wear whites can go swimming without any fear. I can even go to the temple or a party or anywhere now because I don't feel any mess around me. Very happy with the product."*

*"It's super comfortable and easy to use! Very important saves nature! I would suggest and I do educate girls who so ever come in my contact to shift with the cup! This is a brilliant gift for every woman!"*

#### **FINANCIAL FREEDOM**

The average money spent on reusable sanitary products is 150 - 200 Indian Rs. per month. The total reproductive years of a woman's life are 8 to 10 years. The cup is proved to be a more economical alternative as one cup can be used for 10-12 years of life. The participants reported that now there is no need to visit the pharmacy stores as the cup is reusable and due to this, they have started saving money for other work.

*"It is very comfortable and easy to carry with no problem and I am very happy to use it. Super comfortable n hygienic with a great experience using this cup is so easy n it has changed my life n has become so essential to me. Now I have tension-free periods. I don't need to think about spending money on sanitary pads. It's an effective and cost-effective solution to menstrual hygiene it just needs increasing the awareness, resolving the fears, and encouraging the women to use it"*

## EMOTIONAL FREEDOM

All the interviewed women were so happy and satisfied after choosing an eco-friendly and healthy alternative. They were livelier and more participative during their gloomy days when they used to suffer from other problems apart from physical discomfort.

Another participant explained *“Well I feel so good and relaxed after using this cup. Of course, I have a lot of doubts and queries related to this like how a tiny cup will help me with a big issue in every women's life. But now m so much satisfied with it and it's so easy to use and pocket friendly to carry. Now no tension of any pad or leaking. A big thanks to Mamta ma'am (the researcher)*

And one participant added, *"I wish .....cup had come when I had menarche. There would be neither the hassle of washing clothes nor the trouble of staying in dirty sanitary pads for long hours. It's been 8 years since I have been using it, and I haven't had any problems till date. Neither on putting it on, nor on taking it off, nor on staying off it inside. To use it is the feeling of menstrual day's freedom... Complete freedom".*

Overall, the study explored that the women who used the cup were so satisfied and they rated the cup higher and suggested that they will advise others to use it and try it their way.

Similar results were found in other research studies [15]. Several studies reported that the menstrual cup was well tolerated by women and adolescent girls [16], [17]. All the women who used the cup stated that it is far better than their previous method, so the menstrual cup was reported as a better and more appropriate method consistent with findings from other studies [17-24]. The study also concluded that in low-resource settings a pool of potential users can emerge after a proper educational program [18]. The results revealed that the menstrual cup was rated significantly high for comfort, quality, preferences, and appearance in comparison with usual products.



## Conclusion

By taking individual participants interviews it was reported that they were totally satisfied with it and the menstrual cup was ranked higher in terms of quality, cleanliness, cost, convenience, appearance, and comfort than their previous method overall, they reported a higher level of satisfaction after the use [25]. The participants explored a high level of quality of life after incorporating a new device into their life. The feedback and the interview strengthen the phenomena of enhanced freedom after making a better choice.

## Recommendation

The study results showed that a menstrual cup is a well-tolerated and better, healthy choice made by the women. However, in India the awareness, knowledge, and training to use this kind of device are negligible. The government can help to organize such awareness programs and provide the cup in the market or at a subsidized rate for women with lower economic status. The initial expense can be lowered by the cup-making companies also. If the government of India spends a huge amount of money on the free distribution of sanitary pads and pad vending machines for disposal. The menstrual cup can be proved as a far better alternative to alleviate the problem of cost, disposal, and discomfort that arises due to conventional methods.

## Ethical clearance:

The present study is a component of a dissertation of the researcher's main study. Individuals' Informed Consent was taken before enrolling in the study. Official permission was obtained (order no. GU/HREC/EC/2019/666) for the ethical clearance concerning the study from Human Research Ethics Committee (HREC) Geetanjali University, Udaipur. The main study is registered in CTRI (Clinical trial registry of India) (**Registration No. CTRI/2022/01/039237**).

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**Conflict of interest** – Not any

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