

CAN MENSTRUAL CUPS BECOME AN ALTERNATIVE TO SANITARY NAPKINS? A CRITICAL ANALYSIS AMONG WOMEN IN BANGALORE CITY.

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Abstract

In the wake of rising concerns over health, grooming and beauty, the personal hygiene market seems to be gaining sufficient momentum. To ensure imperative development of a country, the well-being of the population especially the women category needs to be taken care of. Therefore, the government and large scale organisations worldwide are taking steps to promote awareness regarding the importance of maintaining personal hygiene. These ever increasing hygiene needs of the women were very much addressed with the emergence of Sanitary Napkins back in the year 1888 and has major amount of usage till date. With the advent of technology and more awareness about menstrual hygiene among women, there are many innovative products in the market such as menstrual cups, tampons and the like. This research is primarily being undertaken with an objective to understand the consumer awareness and usage of menstrual cups as an alternative to sanitary napkins among women in Bangalore city. Since sanitary napkins result in generation of ample amount of wastes and possess the risk of health hazards like TSS, UTI and yeast infections; this research focuses on understanding how women are ready for adopting eco-friendly method like menstrual cups. Even though this concept has been familiarised in almost the entire South Asian region, the acceptance of the same needs to be primarily understood with the help of this research. Women still experience a sense of shyness and fear. No matter how forward women are as a participant in each and every sphere, the “she” personal problems like these do need an addressing and even greater understanding and especially from the perspective of a marketer. To understand the same, a sample of 135 women respondents were taken

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for the study from different age groups, educational qualification and income groups. Their perception on menstrual hygiene, menstrual cup usage and menstrual wastage are recorded, analysed and interpreted.

Key Words: *menstrual cups, menstrual hygiene, health hazards, sanitary napkins*

1.0 Introduction

Menstrual cup is a next generation reusable female hygiene product that has been designed after receiving feedbacks regarding sanitary napkins and tampons from women all across the world. It is a good option for up gradation from sanitary napkins and tampons as it provides ease of traveling, hygienic, safe, cost effective and fully compatible with one's life style. It allows a normal female to perform duties hassle free during menstruation. It is small in size and funnel shaped which is usually made up of rubber or silicon that is inserted inside a women's vagina to catch and collect the blood fluid during menstruation. It reduces the risk of diseases relating to TSS, UTI, Yeast infections etc. However, menstrual cups have been available for decades, but their use is limited by bulky design and the need for multiple sizes (Kakani, Bhatt, 2017)

These ever increasing needs of the women were very much addressed with the emergence of Sanitary Napkins back in the year 1888 and has major amount of usage till date. That is the reason this study is undertaken to understand that now with the advent of technology and science, if there is a possibility of adopting a feasible option for menstruation, and even so, how women are willing to react towards the same.

This research is primarily being undertaken with an objective to understand the consumer awareness and usage of menstrual cups as an alternative to sanitary napkins among women in Bangalore city. From the macro level perspective, it shall help gain an understanding on how women of the modern era of 21st century are open to such kind of methods as a replacement to the conventional method of sanitary napkins. This is something that comprises of major part of a women's life ever since she attains the age of puberty and reaches the ultimate state of menopause. The reasons why women choose menstrual cups as an alternative to sanitary napkins in comparison to other methods are because:

- Its holding capacity is much more than other alternatives.
- It is an eco-friendly method in comparison to tampons. They are generally recyclable.
- It can be worn for more than twelve hours and no frequent changes are required, which have to be taken care of in case of the other conventional methods.
- It is less expensive and requires less decomposition time.
- It reduces the risk of diseases relating to TSS, UTI, Yeast infections etc.

Consultation with the gynecologist is a mandate. This is required only for the purpose of size identification and factors such as age, cervix length, type of flow, flexibility of the menstrual cup, cup capacity and the like shall be taken into consideration. This action and reaction attitude study is very much focused on the women belonging to the Bangalore city in India ranging from school and college going girls to working women class, homemakers and others in the city. At the micro level, it will provide insights about do women still feel period shame in this era, are they still hesitant to talk about sensitive topic like this? Is the menstrual hygiene improving with the usage of unconventional methods? Is the risk of TSS and other related diseases reducing with the help of usage of such kind of cost effective and eco-friendly methods?

Even though removal of GST has taken place @12% over sanitary napkins, it still not is a feasible option for lower income category groups of women among the country and it takes ample amount of years for decomposition.

1.1 Menstrual cups and its market

The growth of the menstrual cups market is fuel led by factors such as need of eco-friendly, safe, comfortable, clean and cost effective products as an alternative to sanitary napkins or tampons. The increasing awareness among woman about the existing products used during menstruation, menstrual cup sizes, menstrual cups shape and the like are created with the help of women communities, manufacturers and educational institutions. These are very much responsible for making a significant contribution to the growth. Furthermore, these are available at various price levels. In India, the starting price is Rs.249 (Sirona reusable Menstrual Cups) and goes upto Rs.699 (WOW Skin

Science Freedom Premium Menstrual Cup and Wash). Other products range between Rs. 300 – Rs.500 offered by I care.

The global market of menstrual cups was valued around USD 995 million in 2016 and by the end of 2023, it is expected to reach 1.4 billion growing at a CAGR of around 4.6% during the forecast period ranging from 2017-2023. Menstrual cups as of today have become one of the most affordable solutions for feminine hygiene protection. They are reusable and have a life cycle of more than 2-3 years. Comparing the initial investment in menstrual cups (\$15-\$75) to the cost of disposable sanitary napkins and tampons, it can actually help in saving hundreds of dollars.

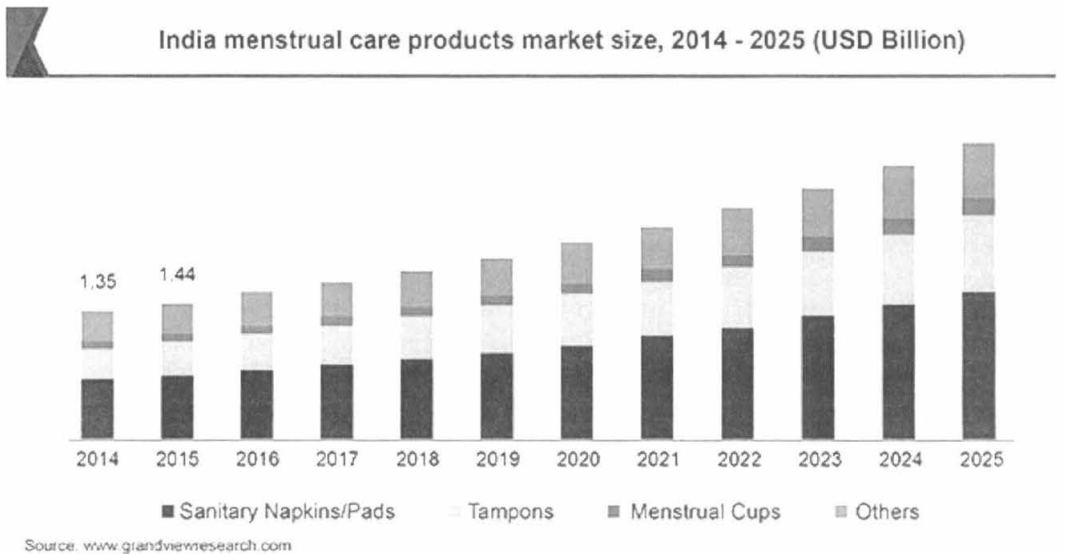


Figure 1 - Market size of menstrual cups

The rising consumption has been seen in tampons, menstrual cups and other methods. By the end of 2025, it is still believed that the consumption of sanitary napkins will be more than any other menstrual hygiene products. These other methods though have entered the modern era but still seem to face criticism and conservatism from the Indian Market. The rise in the level of women workforce coupled with the female gender that represents nearly half of the global population are the factors expected to spur the menstrual cup market growth. In addition, these kinds of products can very

well prevent the leakage of menstrual fluids and result in no adverse effects as per the report records.

Some of the leading brands operating in the global menstrual cups market are Diva Cup, Moon Cup, Lunette Cup, Lena Cup, Anigan Eva Cup, Ruby Cup, and others. The American and European regions are the major hubs for key industry participants, generating maximum market share which has turned these regions into well-developed markets. These companies have expanded their presence through online distribution in various other developing regions as well. The online distribution channel has played an important part in shaping the menstrual cups market.

International players	National players
Diva International Inc.	She Cup
Lunette	Rustic Art Menstrual Cup
The Keeper	Everteen Menstrual Cup
Inc	iCare soft Menstrual Cup
Vcup	Intimus Menstrual Cup
Mooncup Ltd	
Lady Cup	

Government policies influencing the industry

- A cup and cloth campaign was undertaken by citizen's movement in the year 2018 in order to create awareness among the rural and urban women regarding the sustainability and usage of menstrual hygiene products and promote their inclusion in government health schemes.
- Menstrual cup to be regulated as a medical device as per the view of SMRF. Since it will be recognised as a medical device, it shall be consistent as per the regulatory practises of FDA (Food and Drug Administration) and TGA (Therapeutic Goods Administration)

- A menstrual cup should be classified as a Class B medical device that is low moderate risk device under the Medical Device Rules 2017, available under the provisions of the Drugs and Cosmetics Act, 1940.
- Government is undertaking initiatives to make sure that these products have reach not just in the urban markets but rural regions as well.

2.0 Review of Literature

There is so much of concern about the environment and health concerns relating to the disposal of tampons and sanitary napkins. Tampons, sanitary napkins or be it a baby's diapers are made of synthetic materials which take years to decompose. A women's menstrual life cycle lasts for about 40 years and in their lifetime, this ends up generating ample amount of waste that gets accumulated in landfills and at times washes up the shores of local beaches or sewages in the Indian context. Even in the process of preparation, during the manufacture and bleaching process, there is a possibility of dioxin to be created which has health as well as environmental hazards associated with it. (Borowski,2011) It reveals that most of the women are concerned with price of the product and the environmental impact. The definition of what exactly "green" is debatable. Since women might want to consider the reusable options when using for the 2nd or the 3rd time as completely clean or laundered. It even provides an introspection of whether women will become more open to the idea of green alternatives provided they are aware of the risks associated with conventional menstrual products. (Borowski,2011) Figures indicate that 6.5 billion tampons production + 13.5 sanitary pads = Accumulations in landfills and sewer systems.

Indian Government provided sanitary pads at subsidiary rate to adolescent girls in rural India. They did a community based study in Rajasthan for a period of 6 months with a sample size of 164 adolescent girls from 8 different villages and found that girls used Tatalin cloth material as sanitary pads which was cheap, easy to use and comfortable than sanitary napkins. In Karachi also, girls used similar cloth material but however found it difficult to dispose the used cloth. The lack of privacy to manage menstrual hygiene was found in Nepal as well.

The perception about menstruation among young girls in India are always a shameful secret. Majority of the young girls in rural villages are too shy to use sanitary napkins and avoid it because of the cost factor. (Kothari, 2010). Girls in the rural India sit separately during menses and majority of them do not even know why menstruation occurs. Few girls got the knowledge about menstruation after its occurrence. (Shah et.al2013)and also think it as a mechanism to excrete dirty blood from the body (Kothari, 2010)

There were also instances found during the previous researches that menstruation negatively affected the girls' experience at school and in the classroom and caused an array of negative emotions. Girls reported leaving school often to change or bathe due to menstrual leaks and as a result missing class lessons. Poor concentration in class attributed to menstrual pain and worry over potential leaks was also mentioned. (Stepford, 2011).

Research conducted among 158 participants aged between 20 to 50 years with regular menstrual cycle in Gujarat Medical Education and Research Society showed that menstrual cup was preferred for comfort, dryness, and less odour. Further, the results demonstrate that this reusable vaginal device has no significant health risks and is acceptable to many women without the need for fitting or other medical services. (Kakani, Bhatt, 2017). Similar study was done in Zimbabwe for women belonging to the lower socio-economic class and surprisingly the results showed that women were very much comfortable with it. People there experience ample amount of scarcity of water, soiled uniforms, lack of privacy for women, sanitation, health related hazards and the like. It further explains the acceptance of menstrual cups among developed as well as developing countries and how they are becoming more open to such kind of a concept.

The need for menstrual education is the need of the hour. The mothers and teachers agree on the importance of menstrual education for girls yet mothers do not reveal all the necessary facts to their daughters, this may be because of the mother's own lack of knowledge. (Smart, 1959). Young girls should be sensitized about this topic and proper communication has to be given via movies or street plays. May 28th is observed as a menstrual hygiene day to promote healthy hygiene practices among women. A Bangalore city based foundation 'Youngistaan' foundation takes up the matter seriously

and conducts awareness programs among men and women and distributes free pads across government schools and other educational institutions.

Hindustan times (2018) conducted a research on the topic a sanitary pad revolution that never took off in Punjab showed that “With the arrival of a bollywood movie named ‘Padman’, the light lifted upon the menstrual hygiene topic which still is questionable in the age and era that we are living in, particularly in the state of Punjab. A project called ‘Swastha KanyaYojana’ was undertaken by the BJP Government to provide sanitary napkins to girls ranging from Class 6th to 12th but this motion was never passed. A Ludhiana Based Company launched ‘Amodini’, a menstrual hygiene programme where the survey showed only 20% of the girls are aware of menstrual cycle and its related hygiene”. Technology plays a major role for women to manage their menstruation. With invent of period tracking apps approximately 200 million women are benefitting from these applications to keep track of their monthly period, day and time. (Gander, 2016)

Studies reveal that a single sanitary napkin takes about 500 – 800 years to decompose due to massive amount of plastic content in them. Also if one plans to make use of bio-degradable materials for sanitary napkins, it is only going to make them even more expensive. Even though the removal of GST @ 12% has taken place for the sanitary napkins, violations are still taking place due to new price stickers not being introduced quickly by manufacturers, followed by the retail chain and ultimately reach the consumers. The goods and services tax removal is limited up to the country India and its relative cities.

Therefore, it has become the need of the hour to introduce sanitary napkin alternatives and increasingly engage in its awareness and usage and the alternative that concerns this research is the consumer awareness and usage of menstrual cups.

The idea of menstrual cups is not a new concept. The roots of its emergence fall back to the 1860’s and 1870’s but never reached on the shelf in stores. The first ever modern menstrual cup, also known as catamenial sacks were invented in the year 1937 by American Actress Leona Chalmers. The design was made up using latex rubber but due to the lack of latex rubber during the WWII it ceased to be used further. Looking at the current scenario people in US, UK and other foreign countries seem to be open

to the idea of menstrual cups. This product needs to be marketed really well in India to understand its usage and importance and how it is going to serve the menstrual hygiene needs of women in a better manner.

2.1 Statement of the Problem

Since sanitary napkins result in generation of ample amount of wastes and possess the risk of health hazards like TSS, UTI, yeast infections etc. The research focuses on understanding of how women are open to understanding of the same and are ready for adopting eco-friendly methods like menstrual cups. Even though this concept has been familiarised in almost the entire South Asian region, the acceptance of the same needs to be primarily understood with the help of this research. Women still experience a sense of shyness and fear. No matter how forward women are as a participant in each and every sphere, the “she” personal problems like these do need an addressing and even greater understanding and especially from the perspective of a marketer.

2.2 Objectives of the Study

- To study the consumer awareness of menstrual cups among women in India, particularly belonging to the city of Bangalore.
- To find out how open women are to using alternatives like menstrual cups are which serves as eco-friendly methods in comparison to other traditional menstrual products.
- To understand how well do women maintain menstrual hygiene and are aware of their menstrual cycle pattern.

2.3 Scope of the Study

The sample under study consists of only women ranged from young girls to women till the time they attain their menopause stage (Maximum 45-50 age).It focuses on women categorised mainly into the categories below:

- Working Class Women
- College going girls
- School Students

- Home Makers and others
- The research has been conducted in ‘Bangalore City’

2.4 Methodology of the Study

This study has been conducted with the help of a questionnaire as the primary source of data and secondary sources include the journal and publications relating to Zimbabwe pilot study, technology and menstrual cups etc. The predicted sample size is 135 and positively 138 responses were recorded. A stratified sampling technique has been adopted where girls and women have been stratified as per their age and occupation respectively. The tabular and graphical representation of the data has been done and further analysed with the help of SPSS software.

3.0 Data Collection

The primary source of data collection used is a structured questionnaire which is to be filled by women living in Bangalore City. It consists of 19 questions addressing issues beginning with age, occupation, menstrual pattern awareness, sanitary napkins advantages and disadvantage, openness towards menstrual cups, its future status, satisfaction level with menstrual cups if using already, how awareness about menstrual cup can be spread etc. Secondary sources of data for the study include census data, information collected by government departments, organizational records and data originally collected for the research purpose. These consist of:

- Research studies undertaken by National Health Department.
- Print Media sources like Entertainment Express and Metro News in UK.
- Hindustan times publication and online resources.

Table 2 Demographic factors and awareness of menstrual cups among women

3.1 Data analysis, interpretation and discussion

Particulars	Percentage of Responses
Age	3.60%
11-17yrs	63.80%
18-21yrs	8%
22-30yrs	24.60%
30yrs and above	
Occupation	2.00%
School Student	65.20%
College Student	15%
Working Class Women	14.50%
Home Maker	3.00%
Others	
Menstrual cycle awareness	90.60%
Yes	2%
No	7.40%
Maybe	
Period shame feeling	77.50%
Yes	16.70%
No	5.80%
Maybe	

Awareness of diseases related to sanitary pads	63.80%
Yes	21.00%
No	15.20%
Maybe	

About 64 per cent of college students in the age group of 18-21 year old girls are the major respondents of this study. They are aware of their menstrual cycle pattern and more than 50% of them maintain their menstrual hygiene really well. The hesitation to talk about periods and related issues is still prevalent among many women (77.50 per cent), no matter how much we as a society touch the age of modernity. Most of the women (72 per cent) have stain related issues with sanitary napkins and are aware of the diseases like UTI, TSS and yeast infection which are related to it (63.80 per cent). About (73.90 per cent) of respondents do show positive signs towards other economical and eco-friendly products like menstrual cups apart from cloth, and sanitary napkin. Maximum numbers of women (83.80 per cent) is aware of menstrual cups and are using it on a daily basis. It has been said that the first source of knowing about menstrual cups emerged from social media (50 per cent) and the respondents feel that the social media platform should be used for spreading awareness about the same. Easy to use, Eco-friendliness, washable and reusable feature, durability, economical option are considered to be the benefits of using menstrual cups (31.90 per cent).

Figure 2- Pie chart showing age wise responses

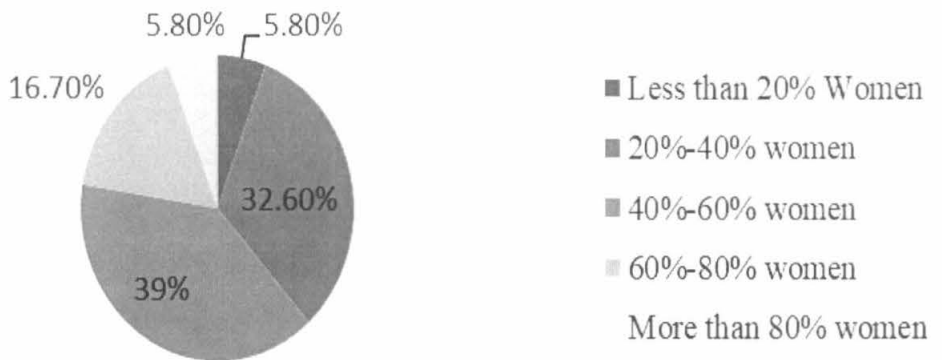


Table 3 - Source of awareness of menstrual cups

First source of hearing about menstrual cups	Percentage wise response
Newspapers	0.78%
Tv advertisements	4.70%
Social media	50.00%
Friends and family	29.70%
Pharmacy retailers	0.78%
Your gynaecologist	3.13%
Others	10.90%

Women who are new to menstrual cups would try the same on trial and error basis and would use it on a daily basis provided they are comfortable with it (48.60 per cent). Since, skin protection is an important factor when one uses personal care products, the respondents feel that consultation with gynaecologist for the usage of menstrual cups is mandatory (57.20%). About (32.30 per cent) women who use menstrual cups regularly are moderately satisfied with it and worry about the insertion pain it causes (50 per cent). This fear of pain also serves as a barrier for using such kind of a product in the long run (25.60 per cent).

The future status as per the opinion of the women undertaken for the study predicts that about 60% of the women in future i.e., 2025 will be completely open to the idea of using menstrual cups as their personal care product and Social media is the right platform to advertise the same.

Benefits of using Menstrual Cups over other products	Percentage of responses
Easy to use	4.30%
Eco-friendly, safe to environment	15.40%
Can be easily washed and reused	21%
Long Durability	12.10%
Economical Option	4.30%
Others	11.00%
All of the above	31.90%

Table 4- Benefits of menstrual cups over other products

Table 6–Correlation between Menstrual hygiene maintenance and awareness of menstrual cups

Count		Awareness of menstrual cups
Menstrual hygiene maintenance	Very poor	2
	Poor	5
	Neutral	2
	Good	36
	Excellent	93
Total		138

Table 7 Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.141 ^a	6	.028
N of Valid Cases	138		

H_0 - There is no significant difference between menstrual hygiene and awareness of menstrual cups

H_1 - There is a significant difference between menstrual hygiene and awareness of menstrual cups

Since the p – value is 0.28 which is less than the significance level 0.05, in this case, the null hypothesis shall be rejected and alternate hypothesis will be accepted. Which states that there is a significant difference between menstrual hygiene and awareness of menstrual cups.

Table 4.22 – Correlation

		Acceptance of Menstrual cups	Awareness of Menstrual cups
Acceptance of Menstrual cups	Pearson	1	.102
	Correlation		
	Sig. (2-tailed)		.236
	N	138	138
Awareness of Menstrual cups	Pearson	.102	1
	Correlation		
	Sig. (2-tailed)	.236	
	N	138	138

Correlation tries to measure the mutual relationship between the alternatives offered in place of sanitary napkins and if specifically women have heard and used a product like menstrual cups. Here, Pearson's type of correlation has been done which measures how the two variables are linearly related. Here, the value of correlation is 0.102. This value is less than 1 but greater than -1 which shows a moderate relationship exists between openness to alternatives and awareness about menstrual cups.

4.0 Suggestions for further research

A woman based research into menstrual cups, its related hygiene and the marketing perspective of a product like menstrual cups and acceptance of the same has been studied in depth. Though no matter how vast the scope of the research is there shall always remain possibilities of alterations and additions. As a researcher, this should be looked upon in an optimistic way and should realize that there is always further scope of improvement. These include this research's questionnaire is open to only the female gender. As a researcher, the scope of this research should have further been expanded to include the male opinion and how open they are to addressing a sensitive issue like this. The study has been conducted in the city of Bangalore. Although, the research has explored most of its objectives, other cities which may or not be metropolitan for a deeper understanding of a product like this could have been included. The researcher other than making a reference to questionnaire and secondary resources of published journals should have engaged in one on one conversation with the pharmacy retailers or women on road or in mall or workplace to have a better understanding of the topic. Though, the medical retailers were not very open to giving any sort of information. The research should have suggested ways as to how awareness about a product like menstrual cups should be created among school students because the girl child is the reflection of the growth and prosperity in the future. Their health and safety is a key factor. Their response in this research has been recorded only at intermediary level. The respondents that have opted for options in the 'others' category are open to alternatives other than sanitary napkins and menstrual cups. Since the scope and document of research is the usage and awareness of menstrual cups, it has not addressed other alternatives like tampons in detail.

5.0 Conclusion

The Conclusion as far as any project big or small plays an important role as it summarizes the purpose of conducting the research and provides fruitful results eventually. It provides a superficial yet important point of view of the study project undertaken. Awareness and usage of menstrual cups as an alternative to sanitary napkins has been quiet an extensive research. It begins with invention of sanitary napkins and how back in some other era it was made for men initially. Later the survival and essential needs of women was looked into and South Ball Company was the first one to take an initiative for them. Long after

the emergence of sanitary pads, it did help in maintaining menstrual hygiene. But it was realised that this accounts for about good percentage of expenditure every month and can get heavy over the pocket of a middle or lower level households. Considering this, even though the removal of GST has taken place, it is still not completely the most viable option. It takes years for sanitary napkins to decompose and therefore, it becomes important to introduce other alternatives. These alternatives which are both eco-friendly and economical in nature like the menstrual cups. Approximately, twenty literature articles have been reviewed and the focus of most of them has been on school girls, related menstruation, menstrual hygiene and menstrual education which should have been taught well to them in schools and colleges. The research methodology deals with the question of consumer awareness and usage of menstrual cups as an alternative to sanitary napkins among women in the Bangalore City. The sample size was originally assumed to be 135 and the researcher ended up getting 138 responses. Most of the girls aged between 18-21 year old have been aware of a concept of menstrual cups as a product. Most of the occupants were college students followed by school girls, working class women, homemaker and others.

Surprisingly good amount of responses was received from women above 30 years and above. This shows that even the elderly do have substantial knowledge about the emergence of new alternatives like menstrual cups. Most of them are concerned with the menstrual hygiene and are open to using alternatives like menstrual cups. The ones who have already been using it have had the issue of insertion related pain and give the satisfaction rating of 3 out of 5. Most of them have been aware of their menstrual cycle pattern. The good part is a decent percentage of the women today are ready to address a sensitive issue like periods and do not hesitate when asked about it. Be it sanitary napkins or menstrual cups for that matter will have pros and cons and the choice of one or the other differs from person to person. This again will be based on a number of factors like age, flexibility, gynaecologist consulting etc. Most of them are hesitant to use a product like this and considering this era is the Online buzz, therefore there cannot be a better medium than social media for spreading awareness about the same. Future prediction states that more than 60% of the women will be open to the idea of using a product like this. Hence marketers and women communities have to take steps to spread the awareness and usage of an Eco-friendly product among women.

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