
Attitude of urban women towards sustainable sanitary products: A study in Bengaluru

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ABSTRACT

An awareness campaign on menstrual health and hygiene aims to use sanitary pads. The use of un-hygiene products leads to various infections and even a risk of contracting cervical cancer. However, the increase in sanitary pads has moved the focus from menstrual hygiene to environmental pollution due to plastic in making the sanitary pads. There are sustainable alternatives like reusable cloth pads, menstrual cups, period underwear, etc. This study aims to identify factors hindering women of the urban Indian community from switching to these sustainable sanitary alternatives recommended by healthcare specialists and proven safe. The study was conducted among women aged between 15 and 55 years in urban Bengaluru. The questionnaire was circulated online due to the pandemic, and 240 responses were obtained. It was interesting to note that majority were aware of sustainable sanitary products. The significant factors that affect the purchase intentions of women in urban Bengaluru are awareness of product varieties, environmental concern, parental pressure, peer pressure, and product features major segments were identified, the financially dependent and the financially independent women. The financially dependent women had issues gaining approval from their family members. In contrast, the financially independent women had fears about the product features and were sceptical about using sustainable sanitary products. This research contributes to product companies understanding their customers and adding value to their lives by creating a healthier and more sustainable environment.

KEYWORDS: Sustainable sanitary products, urban women, marketing, branding, consumer behaviour.

1. INTRODUCTION

About 12.3 billion non-biodegradable/compostable sanitary wastes are generated by 336 million menstruating women in India alone, causing major disposal and environmental damage (Malaviya, 2019). Despite the availability of sustainable alternatives to disposable

sanitary products like reusable cloth pads, menstrual cups, and period underwear, people continue to use non-degradable products. Industrially manufactured, disposable sanitary pad uses plastic material and requires about 500–800 years to decompose (Sambyal *et al.*, 2019). Four hundred thirty-two million sanitary napkins are generated in India annually; this is a massive amount of hazardous pollution to the soil, causing groundwater pollution and soil infertility and harmful to humans. Incinerators are a solution for improper disposal; however, implementing such technology is time-consuming and expensive. Incineration will further cause skin and respiratory ailments; thus cannot be seen as the perfect sustainable solution. The transition from unhygienic, barbaric techniques is due to the high cost of disposable sanitary products. However, reusable sanitary products are both hygienic and cost-effective.

One of the major factors that could lead to a switch in product usage is how the product is branded and promoted. It has been noted that many women are not even aware of menstrual cups or period underwear because they have never seen any advertisements for them; neither has anyone spoken to them about these. This leads to the following questions. Despite such many start-ups manufacturing these, what are they missing out on? Why are they unable to convince consumers to switch to their products as much as the brands promoting sanitary pads? Is the product, price, distribution, or promotion a major issue?

The majority of the questions asked on Google concerning menstrual cups are: are menstrual cups safe, are they messy, are they hygienic, are biodegradable, are they leakproof. This shows that many women are still hesitant to use them because somehow the product's benefits have not been communicated to them, thus creating fear and doubt in how they perceive the product. This could have many reasons, such as lack of awareness, inaccurate communication, insufficient ad campaigns, social stigma, and many more. These factors need to be investigated, and these perceptions change.

Sustainability has become a very important aspect of many organizations in today's world. Companies are striving to manufacture products that are more sustainable and do not cause harm to the environment. Although sustainable sanitary products are more affordable in the long run, have a longer lifetime in terms of product usage, and could be more convenient and healthy for customers, they are still not being embraced and adopted at the rate they deserve. Suppose customers' attitudes towards sustainable sanitary products can be understood and their misconceptions changed. In that case, we will be able to help any company that wants to produce and market these products do a better job at targeting the right audience and communicating the right message.

1.1 Objectives of the study

- To identify those factors that hinder the women of the urban Indian community from switching to these sustainable alternatives recommended by healthcare specialists and proven to be safe.
- To study the features of the different sustainable alternatives of sanitary products specifically cloth pads, menstrual cups, and period underwear
- To measure the awareness of sustainable products and perception towards these products among women in Urban Bangalore,
- To identify the preference of urban Indian women when considering a sustainable alternative to a disposable sanitary product.
- To investigate the factors that impact the purchase intention of sustainable sanitary products.

2. LITERATURE REVIEW

Adequate awareness and information are not provided to adolescent girls in schools (Jain *et al.*, 2017). Young girls learn about menstrual practices from their mothers, followed by friends and relatives. This shows the major influencers in women's lives regarding menstrual product usage (Muralidharan, 2019). Due to a lack of awareness, many women still dispose of their used sanitary products by flushing them down drains. This, in turn, causes more harm to the environment as the absorbent gets soiled with water as well and reacts with

the plastics and hence ends up taking even longer to decompose and causes extreme drainage issues (Van Eijk *et al.*, 2016). Sanitary products that are the most popular are the most harmful to the environment. Consumers using the products are unaware of harmful content such as plastic present in these non-biodegradable products, harming the environment (Peberdy *et al.*, 2019). Women who were more aware of the harmful impacts of non-biodegradable products were more likely to use more environmentally friendly, sustainable products at the time of menstruation (Peberdy *et al.*, 2019). 'Tahini', a sanitary napkin incinerator smaller in size and costs about rupees 4000, is installed in schools, hostels, etc. However, this may not be the ultimate solution to curb waste disposal and is not the most economical as it consumes a lot of electricity (Bhor and Ponkshe, 2018).

Almost 199 different brands of menstrual cups are available in 99 countries, indicating that menstrual cups are a safe option and are being used internationally; however, sufficient studies should be conducted, and awareness spread on the benefits of menstrual cups over other such sustainable products (van Eijk *et al.*, 2019). An experiment where menstruating women were asked to use the menstrual cup for three months with proper instructions on the same showed that 80% of the respondents found it easy to use and insert the menstrual cups and preferred it for its comfort, dryness, and odour-free nature (Kakani and Bhatt, 2017). In Kenya, a positive response was obtained from most girls. The feedback obtained was that there was a slight amount of pain on insertion. Still, over time with proper advice on usage from peers, a nurse, or teachers, they did not feel any pain or discomfort and found it to overcome all the issues they were facing with disposable sanitary products in terms of economic benefits and comfort (Mason *et al.*, 2015). Menstrual cups were also helping girls concentrate more in their educational institutions as they did not have to constantly worry about regularly changing their sanitary napkins or staining their clothes (APHRC, 2010a). This also has led to economic and health benefits. Despite all these proven benefits of the menstrual cup, it shows that 97.40% of the respondents in urban India still use disposable pads. A small number of women used cloth pads made of eco-friendly products such as bamboo. This results from the behaviour and perception of Indian women towards sustainable products (Banumathy and Swetha, 2019).

The major factors that influence the buying intentions of Indian women, product awareness, perception, external influence, product features, and hygiene, were identified to be product awareness followed by perception and external influence (Riya *et al.*, 2020). Consumer perception of personal care products is affected by the product's sensory properties and based on the consumer's previous knowledge and experience with the product. Word-of-mouth promotions are what influence buying decisions of consumers when it comes to personal care products (Poranki, 2015). Women were prepared to switch to greener menstrual products once they knew what could be termed a green product in terms of a product and health perspective since what may be green and safe to the environment may not be safe for their health (Borowski, 2011). Also, certain studies show that some people do not shift to greener products that benefit the environment only because they do not wish to make sudden changes to their existing lifestyle (Bhatia and Jain, 2013).

Green marketing is emerging as a popular strategy as consumers are becoming more aware of the harmful impacts of certain products on the environment. It stated that although there is an ongoing debate on exactly what could be termed green, these factors, if present in a product, lead the consumer to agree that the product is green, namely safe, healthy products which are durable, reusable, biodegradable, and is energy efficient in terms of production and usage. According to the market research conducted by the world business council for sustainable development, it was identified that the Indian market lacked awareness and understanding of sustainable consumption. People still prefer consuming less rather than differently, irrespective of their income group (Olasiuk and Bhardwaj, 2019).

The major factor preventing consumers from shifting to environmentally friendly products is the low quality and the high price of these products (Makhdoomi and Nazir, 2016). However, there was a positive correlation between an individual's values and norms and their purchase behaviour towards green products (Joshi and Rahman, 2015). A major

hindrance in the purchase and usage of green products was their unavailability and lack of awareness about the green product (Shamsi and Siddiqui, 2017). Consumers believed that sustainable products were associated with attributes related to gentleness, for example, baby shampoo. In contrast, traditional products were linked to strength attributes, such as car tires (Trudel, 2018). The major factors that influenced or affected consumer preferences towards sanitary products were identified as product features, family, personal factors such as occupation and economic situation, lifestyle, price, comfort, availability, odor, execution of advertisement, awareness, customer loyalty, brand knowledge and brand image (Krithika & Aileen, 2019).

Marketing can be used to influence sustainable consumption opposing the belief that marketing and sustainable consumption cannot go hand in hand. Sustainable behavior change can be induced through a framework called the SHIFT framework. The acronym stands for Social Influence, Habit formation, Individual self, Feelings and cognition, Tangibility (White et al., 2019). It is important to use the right media for advertising green products as this could play a major role in the purchase behaviour of individuals (Durgamani et al., 2018). Brand image and brand awareness play a major role in consumers' buying choices, especially when it comes to green products (Joshi and Rahman, 2015). One of the significant P's of the marketing mix is, Place plays a major role in attracting customers to green products. It is extremely important to decide when and where to make their products available to get the maximum customer base (Sarkar, 2012). When it comes to green marketing, it was identified that emotional positioning strategies had a greater amount of influence on the buyer than the functional positioning strategies (Sao, 2014). Thus we can see that the brand experience and brand image could be major factors in consumer behaviour toward green products (Rana et al., 2018).

3. RESEARCH METHODOLOGY

This study focuses on menstruating women from the geographic region of urban Bengaluru falling under the age group of 15-55 years. According to census data, the total population of women in urban Bengaluru is 40 51,952. Assuming 60% are within the age group of 15-55 years and among them considering women who might have reached the phase of menopause, we calculate the final eligible population to be around 21 lakhs. A sample size of 385 was required keeping a margin of error at 5% and the confidence interval at 95%. However, data could be collected only from 240 respondents because of the pandemic situation and the questionnaire circulated online. A non-probability sampling method of convenience sampling is used to research the respondents. The questionnaire was developed by pooling the items from various literature and was validated by academicians and subject experts. The items are measured using a five 5-point agreeableness Likert scale.

4. RESULTS AND DISCUSSIONS

The profile of the respondents is presented in Table 1. The majority of the respondents are 15-25 years (75.8%) and married (80%). The data obtained from the respondents clearly showed that 77.9% of the respondents were currently using disposable sanitary napkins to handle their menstrual cycles. 12.5% are using tampons. 9.6% of the respondents are currently using sustainable products.

Items	Classification	Frequency	Percentage
Age	15-25 years	182	75.8
	26-35 years	43	17.9
	36-45 years	12	5.0
	46-55 years	3	1.3
Marital status	Married	192	80.0
	Unmarried	41	17.1
	I prefer not to say	7	2.9
The current method of	Disposable Sanitary Napkin	187	77.9

menstrual management	Tampon	30	12.5
	Cloth pads	6	2.5
	Menstrual cup	12	5.0
	Period Underwear	5	2.1
Product Awareness	Social media	130	54.2
	Friends	52	21.7
	Family	24	10.0
	Health Worker	5	2.1
	Advertisements	5	2.1
	Have never heard of these	24	10.0
Preferred Products	Menstrual cup	131	54.6
	Period	47	19.6
	Cloth Pad	34	14.2
	None of these	28	11.7

The majority of women (54.2%) stated that they learned about sustainable sanitary products through social media platforms like Instagram and YouTube. Friends seem to be the next best source of information about sustainable sanitary products (21.7%). Many of the respondents opted for a menstrual cup (54.6%) when considering sustainable sanitary products. The second preference seems to be the period underwear (19.6%), followed by the cloth pads (14.2%). Another important point to note is that 11.7% of urban women do not want to use sustainable sanitary products and prefer to stick to their current method of menstrual management using a disposable sanitary napkin or a tampon.

The reliability and validity of the measures are tested, and the results are presented in Table 2. The Cronbach's alpha and the composite reliability value for all the variables are above 0.7, showing a consistent measure. Average variance extracted (AVE) values are above 0.5 for all variables except availability and feature (Menstrual Cup). However, their values are very close to 0.5 and consider for further analysis.

For Mahindra and Mahindra Limited and Tata Motors Limited only the ticker will change, for Mahindra & Mahindra Limited it is 'M&M.NS' and for Tata Motors Limited is 'TTM'. Estimating company's historical log returns is very important to predict company's future stock price. The method used here is called "percent change," and to get the simple returns.

Table 2. Reliability and validity analysis.

SN	Constructs	Items	Cronbach's α	Composite reliability (CR)	Average variance extracted (AVE)
1	Variety	3	0.736	0.745	0.505
2	Availability	3	0.741	0.742	0.499
3	Awareness	6	0.818	0.819	0.538
4	Environmental Concern	4	0.894	0.907	0.714
5	Social Pressure	7	0.874	0.876	0.506
6	Feature (Period Underwear)	5	0.837	0.853	0.541
7	Feature (Menstrual Cup)	5	0.754	0.763	0.497
8	Feature (Cloth Pads)	5	0.813	0.823	0.584
9	Purchase intention	6	0.906	0.902	0.612

Table 3 presents the descriptive statistics of the variables. All the measures are done on a 5-point scale, and values above 3.0 show an agreement. Purchase intention is found to be lower (2.79). Knowledge about the availability of the product (3.58) and environmental concerns (3.48) is found to be positive. Among the knowledge about product features, menstrual cups (3.41) and cloth pads (3.40) are higher. Knowledge about variety (3.03), Awareness of sustainability products (3.15), Social Pressure (3.23), and product features of period underwear (3.09) are close to mid-value, meaning that they are neither agreed nor

disagreed. Table 4 shows the correlation between the variables. The values in the diagonal are the Square of Average variance extracted and used for testing the discriminant validity.

A regression test is conducted to find how the variables predict purchase intention. Results are presented in table 5. The measure of Product features of all the three sustainable products is aggregated into a single variable. The results reveal that environmental concern has a major impact on purchase intention ($B= 0.330$, $P<0.000$). Further, awareness ($B= 0.188$, $P<0.005$), Social pressure ($B= 0.116$, $P<0.037$) and product feature ($B=0.126$, $P=0.012$) explains the purchase intention. However, variety ($t=1.834$) and availability ($t=1.649$) did not explain the purchase intention. Overall, the variables predict purchase intention to the extent of 47.9% ($R\text{-sq}=0.479$, $p<0.000$).

	Variables	Mean	SD
1	Variety	3.03	.900
2	Availability	3.58	.932
3	Awareness	3.15	.831
4	Environmental Concern	3.48	1.076
5	Social Pressure	3.23	.799
6	Feature (Period Underwear)	3.09	.844
7	Feature (Menstrual Cup)	3.41	.734
8	Feature (Cloth Pads)	3.40	.818
9	Purchase intention	2.79	.924

Table 4. Correlation analysis

	1	2	3	4	5	6	7	8	9
Variety	0.711								
Availability	0.524	0.706							
Awareness	0.307	0.662	0.678						
Environmental Concern	0.422	0.703	0.628	0.845					
Social Pressure	0.305	0.490	0.566	0.592	0.711				
Feature (Period Underwear)	0.123	0.351	0.386	0.348	0.344	0.735			
Feature (Menstrual Cup)	0.292	0.396	0.323	0.352	0.422	0.453	0.630		
Feature (Cloth Pads)	0.199	0.312	0.221	0.415	0.353	0.330	0.503	0.696	
Purchase intention	0.454	0.542	0.600	0.674	0.521	0.351	0.380	0.260	0.782

Table 5. The results of the main effect on purchase intention

	Variables	B	SE	t	Sig	RSq	F	F-Sig
1	(Constant)	-.286	.283	-1.011	.313	0.479	35.707	0.000
2	Variety	.170	.053	1.834	.068			
3	Availability	.116	.070	1.649	.101			
4	Awareness	.188	.067	2.810	.005			
5	Environmental Concern	.330	.060	5.501	.000			
6	Social Pressure	.116	.070	2.103	.037			
7	Product Feature	.126	.082	2.537	.012			

Knowledge of product varieties did not significantly impact purchase intentions of sustainable sanitary products. This explains that there are still a good number of women in urban Bengaluru who seem to be aware of the different sustainable products and their existence, but the buying intention is low. Although the respondents have agreed that these products are not available in retail stores, they are fully aware of where to buy these products from. Therefore, knowledge about where these products can be bought from does not seem to impact the purchase intentions of women in urban Bengaluru. The major factor that influences the buying intentions of Indian women is product awareness. Previous studies have found that a major hindrance to purchasing and using green products was their unavailability and lack of awareness about the green product (Riya, Silpa & Vinnarasi, 2020;

Shamsi & Siddiqui, 2017). Disposable sanitary products have been in the market for many years, and sufficient promotions are done across various media channels. The presence of these disposable products in retail stores is advantageous to them as customers can see these products for themselves and then make the purchase. These also contribute to in-store promotions for big brands manufacturing disposable sanitary products.

Another important conclusion that can be drawn from the study is that environmental concern significantly impacts purchase intentions of sustainable sanitary products. Respondents accept that the amount of environmental damage can be significantly reduced if they used sustainable sanitary products. A majority of the respondents felt happy while making environment-friendly choices, positively pushing them to purchase and use sustainable sanitary products. Those urban women with a higher environmental concern are more likely to purchase and use sustainable sanitary products. However, certain studies show that some people do not shift to greener products that benefit the environment only because they do not wish to make sudden changes to their existing lifestyle (Bhatia & Jain, 2013). Therefore, it is important to offer personal benefits, many times although customers do care about the environment, they need to be assured that the product will provide them additional benefits as well, it could be an improvement in health or saving money, or higher convenience, etc. (Lokeswar, 2017).

Social pressure, including parental and peer pressure, impacts the purchase intentions toward sustainable sanitary products. A significant number of respondents said that their families, especially their mothers, did not approve of these products because they were new to them and worried about letting their children use them. This applies especially to the age group of 15 to 35. If family members or mothers do not approve of these products, it is highly unlikely that they will purchase them for their children to use. In research conducted it was reported that more than half the respondents were made aware of menstrual practices by their mothers followed by friends and relatives, this shows the major influencers in the life of a woman in terms of menstrual product usage (Kaur et al., 2018). The study showed that urban Indian women value their friend's/influencer's opinions; hence if they heard from one of their peers or influencers that a sustainable sanitary product changed the way they were able to handle their menstrual cycles positively, then they were more likely to consider trying to purchase and use a sustainable sanitary product just because a close friend or someone they looked up to was using one.

Product features influence the purchase impact. This research is in agreement with other articles that state that worry about the menstrual cup being stuck inside once inserted seems to be one big fear related to the product, concerning a cloth pad, storing the soiled cloth pad in a bag till the woman reach home seems to be another valid fear. Research showed that women were skeptical about using menstrual cups for the first time due to the larger size of the mouth of the cup and thought it would be difficult in terms of usage and insertion (APHRC, 2010b). Some gynaecologists have suggested that using these sustainable menstrual products will even aid in reducing menstrual cramps in the long run and increasing the level of comfort during a women's menstrual cycle. Therefore, these major fears associated with product use should be erased from women's minds to encourage them to purchase and use these products.

This further made them skeptical about using these products as they said the promotions done for these products were insufficient, and they are not sure if they can go ahead and trust these products. Therefore, being unaware of the different products they can use to handle their menstrual cycles is another major factor that affects their intentions to purchase sustainable sanitary products.

Another important point to note is that 11.7% of urban women do not want even to consider using sustainable sanitary products like menstrual cups, cloth pads, or period underwear and would prefer to stick to their current method of menstrual management using a disposable sanitary napkin or a tampon. Manufacturers can take advantage of the fact that 54.6% of women at least agree that they would want to use a menstrual cup shortly. Thus a strong message convincing women and mothers of the benefits and tutorials on using these

products in stores and through the right media-based promotions will help these products gain more attention. If a big brand can acquire one of these start-ups doing well, it would be a breakthrough for sustainable sanitary products. Another tactic could be used to leverage the fact that women tend to use or prefer using a menstrual cup and an additional sanitary product due to their fear of leakage.

Major factors that affect purchase intentions of sustainable sanitary products are awareness, environmental concern, pressure, and product features. The theory of reasoned action acts as a good base model and has been proven yet again. However, this research was able to relate the theory of reasoned action to a green product, thus adding in the variable of environmental concern (Sharma & Foropon, 2019). The study's outcome implies that managers need to focus on positioning the sustainable sanitary products in the mind of customers to be one that can solve their existing problems such as leakage, discomfort, and frequency of change. These benefits need to be conveyed to their target customers in the most effective way possible. Managers need to realize that customers are having issues in terms of gaining approval from their families, especially their mothers when the population is younger. This is where the tactical elements of the marketing mix come into play, namely the place and the promotion.

Managers of these brands have understood their target population is the younger generation and try advertising only on social media platforms to gain their attention. What they are missing is the parents and family members still need to be convinced. TV is the best media to reach the maximum customer base, especially the older generation of parents and family who still pay for the sanitary products of women aged 15 to about 26 and still have a say in the products Indian women use. If they do not agree to their daughter using these products, it is highly unlikely that she will purchase the product. For the older age groups of about 27 to 55, their major source of influence are their peers; they will also have to be targeted through advertisements and testimonials be shared about how the sustainable sanitary product has truly been beneficial to them and at the same time helped them save the environment from a significant amount of harm. As was noted from this study, these sustainable sanitary products are not readily available in retail stores for purchase but are only available online. For a brand to grow, it is important to ensure that it is physically and mentally available to the customer. This will help push customers down the marketing funnel stages comprising awareness, interest, consideration, evaluation, decision, purchase, repeat purchase, loyalty, and finally advocacy.

5. CONCLUSION

The research will help in understanding the attitude of urban Indian women towards sustainable sanitary products. It will throw light on the major influencers when working on strategic and tactical marketing strategies for green products. The research also presents scope for future research in the area of women's menstrual health products and maybe identify major reasons why the big brands that manufacture disposable sanitary pads are hesitant to produce or refuse to advertise sustainable sanitary products. This research will further help to strengthen the theory of reasoned action and propose a new theory for green products, which is the theory of reasoned action and an added variable of environmental concern. The future scope for this research would be to identify if the brand value is a factor that hinders the purchase of sustainable sanitary products, for example, if the big brands manufacturing disposable sanitary products like Whisper, Sofy, Stayfree, etc. started their line of sustainable sanitary products would that change the perception of women in urban India and encourage more women to use these products as opposed to trial of these sustainable sanitary products being manufactured by start-ups. Another area that could be studied is from the perspective of big brands currently manufacturing disposable sanitary products. A study could identify why these businesses have not diversified into manufacturing or acquiring sustainable sanitary products.

6. REFERENCES

- APHRC (2010a). Attitudes towards, and acceptability of, menstrual cups as a method for managing menstruation: experiences of women and schoolgirls in Nairobi, Kenya - policy brief No. 21. Nairobi: African Population and Health Research Center, 2010. http://www.susana.org/_resources/documents/default/2-984-policy-brief-no-21-2010-attitudes-and-acceptability.pdf (accessed June 20, 2019).
- APHRC (2010b). Use of menstrual cup by adolescent girls and women: potential benefits and key challenges – policy brief 22. Nairobi: The African Population and Health Research Center, 2010. <https://www.susana.org/en/knowledge-hub/resources-and-publications/library/details/985> (accessed June 20, 2019)
- Banumathy, S., & Swetha, J. (2019). Consumer awareness and acceptance of eco-friendly sanitary pads: an implication for manufacturers. In *Industrial Textiles – Products, Applications and Prospects* (pp. 37-48). New Delhi: Woodhead Publishing India Pvt. Ltd.
- Bhatia, M., & Jain, A. (2013). Green marketing: A study of consumer perception and preferences in India. *Electronic Green Journal*, 1(36). <https://doi.org/10.5070/G313618392>
- Bhor, G., & Ponkshe, S. (2018). A decentralized and sustainable solution to the problems of dumping menstrual waste into landfills and related health hazards in India. *European Journal of Sustainable Development*, 7(3), 334-334. <http://doi.org/10.14207/ejsd.2018.v7n3p334>
- Borowski, A (2011). Are American women turning to reusable and greener menstrual products due to health and environmental pollution concerns?. Thesis. Rochester Institute of Technology. Accessed from <https://scholarworks.rit.edu/theses/544>
- Durgamani, M. K., Abirami, K., & Ganesan, M. (2018). A Study on consumers' buying behaviour towards selected green products in Kumbakonam. *International Journal of Pure and Applied Mathematics*, 119(18), 3177-3193.
- Jain, R., Anand, P., Dhyani, A., & Bansal, D. (2017). Knowledge and awareness regarding menstruation and HIV/AIDS among schoolgoing adolescent girls. *Journal of family medicine and primary care*, 6(1), 47-51. <https://dx.doi.org/10.4103/2249-4863.214970>
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic management review*, 3(1-2), 128-143. <https://doi.org/10.1016/j.ism.2015.04.001>
- Kakani, C. R., & Bhatt, J. K. (2017). Study of adaptability and efficacy of menstrual cup in managing menstrual health and hygiene. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 6(7), 3045-3053.
- Kaur, R., Kaur, K., & Kaur, R. (2018). Menstrual hygiene, management, and waste disposal: practices and challenges faced by girls/women of developing countries. *Journal of environmental and public health*, 2018, Article ID 1730964, 1-9. <https://doi.org/10.1155/2018/1730964>
- Krithika, J., & Aileen, A. B. (2019). Women's Product Preference with Reference to Sanitary Napkins. *IOSR Journal of Business and Management*, 21(2,4), 01-04. DOI: 10.9790/487X-2102060104
- Lokeswar, R. (2017). Challenges for Green Marketing in India. *National Conference on Marketing and Sustainable Developments*, 10(4), 1-6.
- Makhdoomi, U., & Nazir, U. (2016). Consumer purchase behavior towards green products. *Journal of consumer marketing*, 16(6), 558-575.
- Malaviya, S. (2019 February 26). *The mammoth task of managing MENSTRUAL waste in India*. <https://www.downtoearth.org.in/blog/health/the-mammoth-task-of-managing-menstrual-waste-in-india-63376>.
- Mason, L., Laserson, K. F., Oruko, K., Nyothach, E., Alexander, K. T., Odhiambo, F. O., Eleveld, A., Isiye, E., Ngere, I., Omoto, J., Mohammed, Aisha., Vulule, J. & Phillips-Howard, P. A. (2015). Adolescent schoolgirls' experiences of menstrual cups

- and pads in rural western Kenya: a qualitative study. *Waterlines*, 34(1), 15-30. <https://www.jstor.org/stable/24688188>
- Muralidharan, A. (2019). Constrained choices? Menstrual health and hygiene needs among adolescents in Mumbai slums. *Indian Journal of Gender Studies*, 26(1-2), 12-39. <https://doi.org/10.1177/0971521518808104>
 - Olasiuk, H., & Bhardwaj, U. (2019). An Exploration of Issues Affecting Consumer Purchase Decisions Towards Eco-friendly Brands. *Marketing and Management of Innovations*, 2, 173-184. <http://doi.org/10.21272/mmi.2019.2-15>
 - Peberdy, E., Jones, A., & Green, D. (2019). A study into public awareness of the environmental impact of menstrual products and product choice. *Sustainability*, 11(2), 473. <https://doi.org/10.3390/su11020473>
 - Poranki, K. R. (2015). Consumer attitudes and perception on personal care products and cosmetics at Visakhapatnam, India. *Research Journal of Social Science & Management*, 5, 220-225.
 - Rana, A., Thakur, A., & Kaur, A. (2018). Growth of Green Marketing—A Literature perspective of Green Indian Economy. *International Journal of Architecture and Urban Development*, 8(4), 17-20.
 - Riya, C. R., Silpa, M. S., & Vinnarasi, B. (2020). Buying Intention Of Menstrual Cups Among Women In India. *International Journal of Advanced Science and Technology*, 29(2), 13-24.
 - Sambyal, S. S., Henam, S., & Tariang, F. (2019, May 29). *Is green menstruation possible?* Down To Earth. <https://www.downtoearth.org.in/blog/waste/is-green-menstruation-possible--64796>.
 - Sao, A. (2014). Research Paper on Green Marketing. *Journal of Business and Management*, 16(5), 52-57.
 - Sarkar, A. (2012). Green Marketing And Sustainable Development- Challenges And Opportunities. *International Journal of Marketing, Financial Services & Management Research*, 1(9), 120-134.
 - Shamsi, M. S., & Siddiqui, Z. S. (2017). Green product and consumer behavior: An analytical study. *Pertanika Journal of Social Sciences and Humanities*, 25(4), 1545-1554.
 - Sharma, A., & Foropon, C. (2019). Green product attributes and green purchase behavior: A theory of planned behavior perspective with implications for circular economy. *Management Decision*, 57(4), 1018-1042. <https://doi.org/10.1108/MD-10-2018-1092>
 - Trudel, R. (2018). Sustainable consumer behavior. *Consumer Psychology Review*, 2(1), 85-96. <https://doi.org/10.1002/arc.1045>
 - Van Eijk, A. M., Sivakami, M., Thakkar, M. B., Bauman, A., Laserson, K. F., Coates, S., & Phillips-Howard, P. A. (2016). Menstrual hygiene management among adolescent girls in India: a systematic review and meta-analysis. *BMJ Open*, 6(3), 1-12.
 - Van Eijk, A. M., Zulaika, G., Lenchner, M., Mason, L., Sivakami, M., Nyothach, E., ... & Phillips-Howard, P. A. (2019). Menstrual cup use, leakage, acceptability, safety, and availability: a systematic review and meta-analysis. *The lancet public health*, 4(8), e376-e393.
 - Walke, S. G., Shetiya, M. M., & Kumar, A. (2019). A Study of Sustainable Business Practices for Online Business. *International Journal of All Research Education and Scientific Methods*, 7(3), 51-58.
 - White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT consumer behaviors to be more sustainable: A literature review and guiding framework. *Journal of Marketing*, 83(3), 22-49. <https://doi.org/10.1177/0022242919825649>.