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A Study on Adoption and Challenges of Eco-friendly Menstrual Products Amongst Women in Ahmedabad

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Abstract

This study explores the adoption and challenges faced by menstruating women across various age groups in Ahmedabad in using eco-friendly menstrual products. Through qualitative research, thematic analysis is applied to analyze interview transcripts from 13 women belonging to different socio-economic backgrounds. The study identifies key themes. Findings suggest that while eco-friendly menstrual products offer sustainability benefits, several barriers hinder their widespread adoption. Policy recommendations and awareness campaigns are suggested to enhance adoption rates.

Keywords: Eco-friendly menstrual products, Adoption, Challenges, Thematic Analysis, Ahmedabad, Sustainability

Introduction

Menstruation is a natural biological process experienced by women worldwide. However, menstrual hygiene management (MHM) remains a critical issue, particularly in developing countries like India. The use of disposable sanitary products has raised environmental concerns due to the immense amount of non-biodegradable waste they generate. In response, eco-friendly menstrual products such as menstrual cups, reusable cloth pads, and biodegradable pads have emerged as sustainable alternatives. While these products offer long-term economic and environmental benefits, their adoption among Indian women, especially in Ahmedabad, remains limited.

The adoption of eco-friendly menstrual products is influenced by various factors, including affordability, cultural beliefs, accessibility, and awareness levels. Women often hesitate to transition to sustainable alternatives due to ingrained societal norms, misinformation, and concerns about usability and hygiene. Furthermore, socio-economic status plays a significant role, with women from lower-income groups finding the initial cost of sustainable products a deterrent despite their long-term cost-effectiveness.

This study aims to explore the factors affecting the adoption of eco-friendly menstrual products among women of different age groups in Ahmedabad. By conducting in-depth qualitative interviews, the research seeks to identify key barriers and motivators that influence women's choices regarding menstrual hygiene products. The findings of this study will contribute to policymaking, awareness campaigns, and the development of strategies that encourage the use of sustainable menstrual solutions. Menstrual hygiene management determines much of women's health as well as environmental sustainability. Usually consisting of non-biodegradable materials, conventional menstrual products

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significantly contribute to environmental contamination with their long decommission times—usually spanning several centuries (Down To Earth, 2021). With almost 12 billion disposable sanitary napkins produced annually most of which are non-biodegradable, India's environmental load is rather obvious (The Daily Guardian, 2023). This situation underlines how fast one should change to use greener menstruation products.

Among the greener alternatives with less impact are biodegradable hygienic napkins and menstrual cups. Although these products have benefits, some regions—including Ahmedabad, Gujarat—have rather low rates of adoption of them. Encouragement of environmental health and improvement of women's well-being depends on an awareness of the elements influencing the acceptance of these sustainable solutions as well as the challenges women face in adopting them.

From personal choices to more general society expectations, many factors influence whether one makes environmentally friendly menstruation products use. A Toxics Link (2021) study claims that strongly rooted taboos and misunderstandings particularly related to insertable products like tampons and menstrual cups hinder the change towards sustainable menstrual practices. More expensive organic disposable sanitary products also cause mistrust especially in low-income households (Down To Earth, 2021).

Menstrual cup acceptance attitudes of women are much influenced by both emotional and environmental values. Studies reveal that factors including knowledge, price sensitivity, quality issues, environmental awareness, and demand of knowledge greatly affect adoption intentions. Nevertheless, sometimes society taboos around menstruation complicate data collecting and honest communication, so hindering the promotion of sustainable menstrual health practices (Economic Times HealthWorld, 2024).

Campaigns pushing environmentally friendly menstruation products have begun to take shape in Ahmedabad. For instance, a local company owner founded "Ecoflo," intended to sell underprivileged women environmentally friendly sanitary napkins and educate rural schoolgirls safe and hygienic menstrual practices. Notwithstanding these efforts, issues including a belief of unaffordability and limited availability of biodegradable sanitary napkins still surface. Women who have switched to biodegradable substitutes claim to be pleased pointing out less allergies and skin irritability (The Daily Guardian, 2023).

Regarding the surroundings, traditional menstrual products show concerning results. Among other compounds, bisphenol A and bisphenol S included in inorganic sanitary products could stop embryonic development. Moreover, synthetic fibers—used for their absorbent properties—release dioxins during bleaching, a known carcinogen able to influence liver activity. Insufficient suitable disposal systems aggravates these issues and produces overfilled landfills and possible water source contamination (Down To Earth, 2021).

Although they provide a decent response for environmental and health concerns about conventional products, generally many barriers stop the wide acceptance of environmentally friendly menstruation products. Clearing false information, enhancing access, and promoting honest dialogues on menstrual health are important first steps toward sustainable menstrual hygiene management.

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Methodology

This study follows a qualitative research approach using semi-structured interviews. A purposive sampling technique was employed to recruit 13 menstruating women from diverse socio-economic backgrounds in Ahmedabad. The interviews were conducted in a conversational manner to encourage participants to share their experiences freely.

Transcript Analysis & Coding

Name	Demographic Profile	Research Question	Response
	24 years old, working professional, Ahmedabad	cups, reusable cloth pads, or biodegradable sanitary napkins?	"I have heard about menstrual cups, but I am not sure how safe they are. Do they cause infections?"
Respondent 1	24 years old, working professional, Ahmedabad	Where did you first learn about these products?	"From online blogs and YouTube videos, but I haven't tried them yet."
Respondent 1	24 years old, working professional, Ahmedabad	How would you describe your understanding of how these products work?	"I think they are reusable and eco-friendly, but I am not confident about using them."
Respondent 1	24 years old, working professional, Ahmedabad	Have you ever used an eco-friendly menstrual product? If yes, which one and for how long?	"No. I still use disposable pads as they are
Respondent 1	24 years old, working professional, Ahmedabad	Do you have any concerns or misconceptions about using these products?	"I feel they might not be as absorbent as disposable pads, and washing them could
Respondent 1	24 years old, working professional, Ahmedabad		"Maybe, but I need to learn more. Right now, pads are more convenient for me."
Respondent 2	30 years old, homemaker, Ahmedabad		"I saw an ad on Instagram about reusable cloth pads, but I wasn't sure if they were effective."

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		pads, or biodegradable sanitary napkins?	
Respondent 2	30 years old, homemaker, Ahmedabad	Where did you first learn about these products?	"From a friend who uses a menstrual cup."
_	30 years old, homemaker,	How would you describe your understanding of how these products work?	"I know they are reusable, but I am unsure
Respondent 2	30 years old, homemaker, Ahmedabad	Have you ever used an eco-friendly menstrual product? If yes, which one and for how long?	"No, but I have thought about trying biodegradable pads."
Respondent 2	30 years old, homemaker,	Do you have any concerns or misconceptions about using these products?	"I am worried about hygiene and whether they are comfortable for daily activities."
Respondent 2	30 years old, homemaker, Ahmedabad		"Yes, if I get proper guidance on how to use them."
Respondent 3	22 years old, college student, Ahmedabad	cups, reusable cloth pads, or biodegradable sanitary napkins?	"Yes, I learned about them in a college seminar."
Respondent 3	22 years old, college student, Ahmedabad	Where did you first learn about these products?	"Through social media and friends who have tried menstrual cups."
Respondent 3	22 years old, college	How would you describe your understanding of how these products work?	"I have some idea but need to research
Respondent 3	student Ahmedahad	Have you ever used an eco-friendly menstrual product?	"No, I have not tried any yet."

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			If yes, which one	
			and for how long?	
Respondent 3	22 years student, Ahmo	_	Do you have any concerns or	"I fear discomfort and leakage."
Respondent 3	22 years student, Ahmo	_		"Yes, if I see positive reviews from people I trust."
Respondent 4	28 years o Ahmedabad	old, teacher	pads, or biodegradable sanitary napkins?	"Yes, but I have never used them."
Respondent 4	28 years o Ahmedabad	old, teacher	Where did you first learn about these products?	"From a women's health awareness program."
Respondent 4	28 years o Ahmedabad	old, teacher	How would you describe your 'understanding of how these products work?	"I think they are safe, but I don't know if
Respondent 4	28 years o Ahmedabad	old, teacher	Have you ever used an eco-friendly 'menstrual product? If yes, which one and for how long?	"No, I am still using regular pads."
Respondent 4	28 years o Ahmedabad	old, teacher	Do you have any concerns or misconceptions about using these products?	"I worry about cleaning and hygiene."
Respondent 4	28 years o Ahmedabad	old, teacher		"Yes, if I see more people around me using it without any issues."

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Respondent 5	1	cups, reusable cloth pads, or biodegradable sanitary napkins?	"Yes, I have read about them in articles online, but I haven't used them yet."
Respondent 5	27 years old, finance professional, Ahmedabad	Where did you first learn about these products?	"I saw an advertisement on Instagram promoting menstrual cups."
Respondent 5	27 years old, finance professional, Ahmedabad	understanding of	"I know menstrual cups are inserted and can be reused for years, but I am unsure about the cleaning process."
Respondent 5	27 years old, finance professional, Ahmedabad	Have you ever used an eco-friendly menstrual product? If yes, which one and for how long?	"No, I am still using disposable pads."
Respondent 5	27 years old, finance professional, Ahmedabad	Do you have any concerns or misconceptions about using these products?	"I am worried about the hygiene factor and
Respondent 5			"Yes, if I get proper guidance and assurance from medical professionals."
Respondent 6	29 years old, marketing executive, Ahmedabad	cups, reusable cloth pads, or biodegradable sanitary napkins?	"Yes, my friends use menstrual cups and have told me about them."
Respondent 6	29 years old, marketing executive, Ahmedabad	Where did you first learn about these products?	"Through YouTube influencers and product reviews."
Respondent 6	29 years old, marketing executive, Ahmedabad	describe your	"I know they reduce waste and are cost- effective in the long run, but I am unsure about insertion."

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		how these products work?	
Respondent 6	29 years old, marketing executive, Ahmedabad	Have you ever used an eco-friendly	"No, but I am considering trying a menstrual cup soon."
Respondent 6	29 years old, marketing executive, Ahmedabad	Do you have any concerns or misconceptions about using these products?	"Yes, I fear discomfort and leakage, especially while traveling."
	29 years old, marketing executive, Ahmedabad	·	"Yes, if I get used to it and if it proves to be more convenient than pads."
Respondent 7	25 years old, lawyer Ahmedabad	cups, reusable cloth pads, or biodegradable sanitary napkins?	"Yes, my colleagues have discussed them during lunch breaks."
Respondent 7	25 years old, lawyer Ahmedabad	Where did you first learn about these products?	"Through newspaper articles on sustainability."
Respondent 7	25 years old, lawyer Ahmedabad	How would you describe your 'understanding of how these products work?	"I understand they are reusable, but I don't know the proper method to sterilize them "
Respondent 7	25 years old, lawyer Ahmedabad	Have you ever used an eco-friendly menstrual product? If yes, which one and for how long?	"No, I rely on disposable pads as they are
Respondent 7	25 years old, lawyer Ahmedabad	Do you have any concerns or misconceptions about using these products?	"I worry about whether menstrual cups can be used safely in public restrooms."

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Respondent 7	25 years old, lawyer Ahmedabad	product in the	"Yes, if they become more mainstream and I see more people using them
Respondent 8	31 years old, HR manager Ahmedabad	Have you heard about eco-friendly menstrual products such as menstrual cups, reusable cloth pads, or biodegradable sanitary napkins?	"Yes, but I don't know anyone personally
Respondent 8	31 years old, HR manager Ahmedabad	Where did you first learn about these products?	"Through corporate wellness programs."
Respondent 8	31 years old, HR manager Ahmedabad	•	"I think they are sustainable, but I don't know how comfortable they are compared
Respondent 8	31 years old, HR manager Ahmedabad	Have you ever used an eco-friendly menstrual product? If yes, which one and for how long?	"No, but I am open to trying one."
Respondent 8	31 years old, HR manager Ahmedabad	Do you have any concerns or misconceptions about using these products?	"I am concerned about leakage during heavy flow days."
Respondent 8	31 years old, HR manager Ahmedabad	-	"Yes, if I can test one out before fully committing."
Respondent 9	26 years old, friend software engineer, as mo Ahmedabad pads, napki	or biodegradable sins?	ets such "Yes, I have seen advertisements for menstrual cups on Instagram."
Respondent 9	26 years old, Software engineer, Ahmedabad these	re did you first learn products?	n about "From social media ads and health awareness campaigns."

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Respondent 9	software engineer, Ahmedabad	understanding of how these products work?	"I know they are reusable, but I am not sure how to clean them properly."
Respondent 9	software engineer, Ahmedabad	Have you ever used an eco- friendly menstrual product? If yes, which one and for how long?	
Respondent 9	software engineer, Ahmedabad	Do you have any concerns or misconceptions about using these products?	whether they are hygienic enough."
Respondent 9	,	Would you consider switching to an eco-friendly menstrual product in the future? Why or why not?	"Maybe, but I would need more education on their proper use."
Respondent 10	32 years old, entrepreneur, Ahmedabad	Have you heard about eco- friendly menstrual products such as menstrual cups, reusable cloth pads, or biodegradable sanitary napkins?	"Yes, I have heard about them through sustainability workshops."
Respondent 10	32 years old, entrepreneur, Ahmedabad	Where did you first learn about these products?	"Through a corporate sustainability event."
Respondent 10	entrepreneur, Ahmedabad	products work?	effective and sustainable, but I am skeptical about comfort."
Respondent 10	Ahmedabad	yes, which one and for how long?	napkins.
Respondent 10	32 years old, entrepreneur, Ahmedabad	Do you have any concerns or misconceptions about using these products?	"Yes, I wonder if they are as absorbent as regular pads."
Respondent 10	32 years old, entrepreneur, Ahmedabad	Would you consider switching to an eco-friendly menstrual product in the future? Why or why not?	"Yes, if I see more women using them without issues."
Respondent 11	23 years old, college student, Ahmedabad	Have you heard about eco- friendly menstrual products such as menstrual cups, reusable cloth pads, or biodegradable sanitary napkins?	menstrual cup."
Respondent 11	23 years old, college student, Ahmedabad	Where did you first learn about these products?	"From YouTube tutorials."
	23 years old, college student, Ahmedabad	How would you describe your understanding of how these products work?	tried them yet.
Respondent 11	23 years old, college student, Ahmedabad	Have you ever used an eco- friendly menstrual product? If yes, which one and for how long?	"No, I am not comfortable with the idea yet."

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Respondent 11	23 years old, college student, Ahmedabad	Do you have any concerns or misconceptions about using these products?	"I fear they might be difficult to use in public places."
Respondent 11	23 years old, college student, Ahmedabad	an eco-friendly menstrual product	"Yes, if I get guidance from someone who uses them regularly."
Respondent 12	Ahmedabad	pads, or biodegradable sanitary	"Yes, I often recommend them to patients."
Respondent 12	minicadoda	Where did you first learn about these products?	
Respondent 12	Ahmedabad	products work?	"I have a deep understanding, and I think they are beneficial."
Respondent 12	35 years old, doctor, Ahmedabad	yes, which one and for how long?	"Yes, I have been using menstrual cups for over three years."
Respondent 12	35 years old, doctor, Ahmedabad	Do you have any concerns or misconceptions about using these products?	"No, I think they are a great alternative to disposable products."
Respondent 12	35 years old, doctor, Ahmedabad	Would you consider switching to an eco-friendly menstrual product in the future? Why or why not?	"I already use them and encourage others to try."
Respondent 13	29 years old, banker, Ahmedabad	Have you heard about eco- friendly menstrual products such as menstrual cups, reusable cloth pads, or biodegradable sanitary napkins?	M/AMEN S Maoazine
Respondent 13	Ahmedabad	these products?	"From a magazine article on eco- friendly living."
Respondent 13	Ahmedabad	products work?	seen them in use."
Respondent 13	29 years old, banker, Ahmedabad	yes, which one and for how long?	"No, I haven't made the switch yet."
Respondent 13	29 years old, banker, Ahmedabad	Do you have any concerns or misconceptions about using these products?	"I worry about convenience and accessibility."
Respondent 13	29 years old, banker, Ahmedabad	Would you consider switching to an eco-friendly menstrual product in the future? Why or why not?	"Yes, if they become more widely available and easy to use."

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Transcript Evaluation:

Theme: 1: Awareness and Information Sources:

Although sources range from digital platforms, word-of-mouth, and corporate wellness programs, most respondents have heard about environmentally friendly menstruation products. After college seminars and corporate sustainability events, social media sites—especially YouTube and Instagram—emerged as the most often used sources.

Important Observations:

Younger respondents—especially students and working professionals—learned about these products via friends' use, college seminars, and social media.

- Older professionals and homemakers were more likely to have heard about them via conventional media including newspapers and magazines or via word-of-mouth.
- Doctors were knowledgeable and even suggested these goods to one another.

Theme: 2: Knowledge Gaps and Misunderstanding:

Although most respondents felt generally that these products are environmentally friendly and reusable, their knowledge was often lacking. Many voiced questions regarding the efficiency and cleaning technique.

Important Observations:

Many of the responders were unsure about the maintenance and cleaning needs.

- Common worries were those of hygiene, leaks, and comfort.
- Those who attended awareness campaigns or had formal medical education had more confidence in these products and understanding of them.

Theme:3: Preference for Convenience

Most of the respondents had not yet used a green menstrual product. Those who had used them, including the doctor, found them useful, though, and advised others of them.

Important Observations:

Given their availability and simplicity, disposable sanitary pads remained the preferred option.

- Only the doctor respondent had used menstrual cups heavily and strongly approved of them.
- While some respondents were willing to use biodegradable pads, they were dubious about reusable cloth pads and menstrual cups.

Theme:4: Trust and Peer influence

Often cited were issues with comfort, absorbency, leakage, and cleanliness. Many respondents also mentioned uncertainty about the sterilization process and trouble using menstrual cups in public restrooms.

Important Observations:

Among all the demographics, hygiene and safety ranked highest as chief issues.

- Particularly among working professionals and students, there was general anxiety about discomfort and leaks.
- Main deterrents were accessibility and simplicity of use, particularly for people not familiar with correct cleaning methods.

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Theme:5: Adoption conditions

Though there are still issues, a good number of respondents said they would be ready to switch to environmentally friendly menstrual products given they got appropriate advice, good reviews, or observed more general acceptance among their friends.

Important Observations:

If they could get professional advice or see good comments from reliable sources, many respondents were eager to test environmentally friendly substitutes.

• A recurring idea was the impact of peer adoption; respondents were more likely to think about changing if they saw others effectively using these products.

If appropriate awareness and education were given, medical professionals and business workers showed more openness about switching.

Findings and suggestions:

Views are shaped in great part by social media (instagram, YouTube).

- 1. Willingness to try these products is much influenced by word-of-mouth referrals from friends, coworkers, or medical experts.
- 2. Academic seminars and corporate awareness campaigns help to provide organized knowledge on environmentally friendly menstrual products.
- 3. Lack of knowledge of the sterilizing and cleaning procedures generates uncertainty.
- 4. Many people avoid trying these products out of discomfort and concern for leaks.
- 5. Common belief is that these products might not be as convenient or absorbent as regular sanitary pads.
- 6. As regular sanitary napkins are so user-friendly, disposable sanitary pads remain the most often used item.
- 7. Many of the respondents believe that environmentally friendly substitutes are less appealing since they demand more work in maintenance and cleaning.
- 8. Public bathroom use issues contribute to the resistance in acceptance.
- 9. Respondents more likely to consider a change were those who knew someone using cloth pads or menstrual cups.
- 10. Positive reviews and more general acceptance could inspire adoption.
- 11. Medical professionals pushing for these products improve credibility and confidence.
- 12. Respondents who got appropriate knowledge on product use and benefits were more likely to think about switching.
- 13. Availability of trial chances or first-hand demonstrations helps to lower uncertainty.
- 14. More visibility and accessibility of these products in mainstream retail stores would inspire change from throwaway pads to environmentally friendly choices.

Conclusion:

Eco-friendly menstruation products offer a sustainable and health-conscious alternative to traditional disposable sanitary products. Their acceptance among women in Ahmedabad is constrained due to various factors, including misinformation, social stigma, perceived inconvenience, and financial considerations. Although certain women have been motivated to alter their behaviors due to heightened environmental awareness and favorable user experiences, widespread adoption necessitates additional initiatives in education, affordability, and accessibility.

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Widespread acceptance will be promoted through heightened awareness via community engagement, governmental policies endorsing sustainable menstrual hygiene, and subsidized costs for eco-friendly alternatives. Facilitating open communication and educational initiatives enables women to surmount cultural barriers and make informed decisions regarding their menstrual health. The study's findings underscore the necessity for collaborative efforts among legislators, healthcare professionals, and social organizations to promote sustainable menstruation practices, thereby enhancing women's health and mitigating environmental impact.

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