

Safeguarding Wellness and Achieving SDGs: A Comprehensive Analysis of the Role of New Media in Fostering Sustainable Menstrual Practices among Women in Kerala

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ABSTRACT

This research thoroughly analyses how the media promotes sustainable menstrual practices among women in the state of Kerala, India, to the sustainable development goals of climate change, good health and well-being, and sustainable cities and communities. The topic of Menstrual Hygiene Management is mostly addressed in the context of the Sustainable Development Goals (SDGs). India created a Menstrual Hygiene Policy in 2023 as part of its dedication to accomplishing the Sustainable Development Goals (SDGs). The policy aims to tackle societal taboos related to menstruation, raise awareness about proper menstrual hygiene practices and materials, and foster inclusivity. The study utilizes a mixed-method approach, incorporating quantitative surveys, and focus group discussions. Its objective is to investigate how media contributes to the promotion of sustainable menstruation habits among women in the state of Kerala. The adoption of sustainable menstruation products and practices is analyzed via the theoretical lens of rational choice theory. The study examines the demographic, socio-cultural, and economic aspects that impact menstrual hygiene habits and the amount of awareness that influences these practices. Additionally, it investigates the anticipated role of the Menstrual Hygiene Policy. The study illuminates the disparity between the level of awareness and the selection of items among the people.

Introduction

India has a population of over 355 million menstruating women (AREA AND POPULATION - Statistical Year Book India 2015 / Ministry of Statistics and Program Implementation / Government of India, n.d.), each of them using up to 10,000-12000 disposable menstrual products (ABC News, 2017) during their menstruating years. Its production releases greenhouse gases and is made up of non-biodegradable materials, creating tons of waste. This adds to the waste crisis by ending up in landfills and releasing greenhouse gases, resulting in climate change (*The Ecological Impact of Feminine Hygiene Products - Technology and Operations Management*, 2016) and other environmental issues. In terms of achieving Sustainable Development Goals - climate change, good health and well-being, and sustainable

cities and communities, adapting menstrual hygiene and practicing sustainable menstrual practices are critical.

It is in this context that the government of India has drafted the Menstrual Hygiene Policy, 2023. The policy aims to ensure all the menstruators in the country have access to safe and quality menstrual hygiene products and services without any discrimination or stigma (DRAFT NATIONAL MENSTRUAL HYGIENE POLICY, 2023, 2023). Menstrual hygiene and menstrual hygiene practices can be defined as using safe and hygienic absorbents or collectors to collect period blood, access to a safe and hygienic environment and materials such as clean soap and water to sanitation and safe and sustainable ways to dispose of waste products (UNICEF, 2019). While the policy focuses on menstrual hygiene practices in the context of sustainability goals, adapting to sustainable menstrual products aids in achieving the SDG goals of climate change, good health and well-being, and sustainable cities and communities. Sustainable menstrual products available in the market are reusable cloth pads, biodegradable tampons, menstrual cups, and discs, which are reusable and last for many menstrual cycles (UNICEF, n.d.). These are made up of eco-friendly raw materials like organic cotton, silicone, or other sustainable alternatives with lower carbon footprints (Van Eijk et al., 2019).

Open discussions on menstruation have happened in very recent years in Indian society. The role of Indian media is crucial in aiding the shift from traditional menstrual practices to adapting hygienic and sustainable menstrual practices. In India, the initial challenge is to break the stigma around menstruation. It is perceived more as a socio-cultural issue than a health issue ("Coming to a Full Stop: An Investigation of Menstrual Period Stigmas in College Students," n.d.). NGOs like the Kshitij Foundation work on addressing the myths and misconceptions around periods among school children and women (Kshitij Fn.d.-b). The repetitive advertisements of menstrual pads have changed the idea of menstrual products. However, the advertisements are frequent and common only for disposable menstrual hygiene products. #padmanchallenge was one of the major campaigns on menstrual hygiene education and awareness by Bollywood actor Akshay Kumar during his release of the movie Padman (News18 & News18.com, 2018b). Though the challenge was part of movie promotion, the campaign had received broad reach among the audience. "Period- End of Sentence" is also one of the notable works on menstruation, which won an Oscar for Best Documentary Short Subject in 2019 (*Period. End of Sentence. - the Pad Project*, 2021). The mainstream media focuses on menstrual hygiene and menstrual hygiene products. To attain SDG 13, those initiatives sustainable menstrual hygiene products must be popularized and promoted along with other SDG targets and goals.

There are significantly fewer sustainable menstrual hygiene product advertisements in the mainstream media. However, in recent years, initiatives have been taken to educate and create awareness of sustainable menstrual products. Sustainable Sanitation Alliance (SuSanA) celebrates Menstrual Hygiene Day every year on the 28th of May (28.05). The date '28' represents the average menstrual days in a period cycle. And '5' represents the average number of days. The campaign aimed to promote menstrual hygiene and sustainable products (*Menstrual Hygiene Management – an Overview of a Neglected Issue - Resources • SuSanA*, n.d.).

Grassroots efforts become further effective with broader reach and communication. Sustainable menstrual product communicators use social media platforms to popularise and encourage open communication on menstrual products and hygiene as a standard bodily function.

Women are now initiating discussions on experiences, stigmas they have faced, newer perceptions, and products on menstruation on social media platforms like Instagram, Facebook, and Twitter. Such discussion impacts the youth, who are the major users of these platforms. #periodpositive, #menstrualhealthmatters, and #endperiodpoverty are some of the hashtags (Sara H. & Sara H., 2017).

The state of Kerala, with a population of 52% women (*Kerala Population Census 2011, Kerala Religion, Literacy, Sex Ratio - Census India*, n.d.), also contributes no less to this pollutant source. But, with higher education and health indexes, efforts have shifted to sustainable alternatives. An evident example of this progression is the transformation of Kumbalangi village in Kerala to the country's first napkin-free village (Staff & Staff, 2022).

These sustainable menstrual products reach less due to ignorance about their existence. Women have misconceptions and apprehensions regarding the usage of menstrual discs, tampons and cups, which are used internally. To address health and sustainability on menstrual hygiene, proper health campaigns, influence of media campaigns and social dialogues are needed. This rapid awareness phase will change the management of the menstrual cycle among women in Kerala.

The following works of literature will throw light on the current research status of menstrual hygiene - usage and preferences of women in Kerala, Environmental impacts of menstrual hygiene products and the role of media in menstrual awareness in Kerala.

Borowski (2011) identified a study conducted among American women in which they expressed willingness to opt for green and reusable menstrual products. However, cleaning the products' cost and process hinder their wide use and acceptance. Borker, Samar, and Bhat (2014), found the majority of women in Kerala have an awareness of menstrual hygiene products. The study population shows a favourable attitude towards menstrual hygiene products. The study found the higher literacy rate has played a significant role in women's positive attitude in the state. However, the unawareness of disposal methods restricts women unwilling to use menstrual hygiene products. Elledge et al. (2015), state that middle-income countries found that the proper disposal of menstrual waste has adverse effects on its consumers and the environment. Shreya (2016) states that sustainable menstrual hygiene product use can reduce carbon footprint by up to 35% during production and consumption. This biodegradable product does not clog landfills easily due to its lower decomposition time.

Crystal & Belen (2018) have suggested that the choice of sustainable menstrual products is an outcome of both economic and environmental impacts. MacRae (2019) found that women in India, particularly from rural areas of Odisha, prefer menstrual hygiene products that are clean, reliable, and easy to maintain and dispose of. But they still consider menstruation as a taboo. They find it difficult to dry their menstrual clothes, so they mostly prefer products that can be disposed of easily. Peberdy, Jones, and Green (2019) state women with higher awareness of

menstrual products choose greener options. Awareness plays a key role in the choice of menstrual hygiene products.

Dwivedi, A., & Desai, J. (2020) states although women have knowledge of eco-friendly menstrual hygiene products, their reluctance is due to unawareness on how to use them. Raj, Prabhakumari (2020), in their study, found there is a predominant use of disposable pads among adolescents of Kerala along with cotton cloth. They also maintain high hygienic standards by changing the pads twice during the day and disposing of the used pads in dustbins. Tu, C., Lo, Y., & Lai, T. (2021) find that women who have learned about eco-friendly menstrual products are willing to choose sustainable menstrual products due to environmental concerns and concerns for their health and hygiene.

The literature review revealed a significant gap in the role of media in educating sustainable menstrual hygiene products.

Objective and Research Questions

This study intends to explore the role of New Media and discourses in promoting sustainable menstrual practices among women in Kerala.

To understand the awareness among women in correlating the use of sustainable menstrual hygiene products to Environmental issues.

For this study, the researcher focuses on the following research questions:

- i. How do women perceive using disposable and sustainable menstrual hygiene products?
- ii. What factors influence the choice of menstrual hygiene products?
- iii. What role does new media play in popularising menstrual hygiene products?

Hypothesis

H1: Women in Kerala know the pro-environmental benefits of choosing sustainable menstrual hygiene products.

H2: Women in Kerala prefer disposable menstrual hygiene products to sustainable ones.

H3: Social media plays a significant role in popularising menstrual hygiene products among women of Kerala

Theoretical Framework

The study is based on rational choice theory. The theory proposed by Adam Smith suggests individuals use their rationale to calculate to achieve an outcome that aligns with their preferences. The outcome gives the individual benefit and a higher level of satisfaction. The theory was initially discussed in economics. However, in the current study, the individuals use their rationale to make choices based on the messages they receive through media and make choices for the outcome and gratification they want.

Materials and Methods

A mixed-method approach of collecting data through online surveys with multiple-choice questions was administered among Kerala's menstruating community. An online questionnaire was administered among 183 women in Kerala. Google Forms was used as the survey tool. The questionnaire was distributed to the samples through social media platforms - Facebook, WhatsApp, and Instagram; to women who are menstruating at present or in the past. The researcher adopted the snowball sampling technique.

Hence, participants were requested to forward the questionnaire to the women of the required criterion—the targeted response was 175, which was attained in 25 days.

The questionnaire consisted of 21 questions, including demographic questions. The initial three questions were demographic questions to understand the respondents' background. Excluding three demographic questions, there were 14 compulsory questions. In order to confirm the respondents are of the targeted category, the opening question asked was if the respondent is/was a menstruator. The follow-up questions were tailored to understand the menstrual hygiene product choice, awareness about the product, environmental impacts that are caused by the product choice, influential factors and the role of new media in creating awareness about menstrual products. Statistical Package for Social Sciences (SPSS) software by IBM was used to analyse data from Microsoft Excel Spreadsheet along with Microsoft Excel pivot table.

Focus group discussions were conducted to understand different menstrual products, the factors behind their choice, and the impact of menstrual hygiene products on the environment.

Participants for the focus group were recruited by purposive sampling. Similar to the participants of the survey, focus group participants were also menstruating or menopausal women. Participation in the focus group was voluntary. 6 women from across Kerala participated in the discussion.

The discussion started on different menstrual hygiene products, participants' awareness on each product, their impact on the environment and sources of information about sustainable menstrual products. The focus group discussions were recorded for qualitative analysis of different aspects of the research area.

Data Analysis

A total of 183 women participated in the online survey, and six women participated in the Focus group discussion. The results are as follows:

Awareness of menstrual hygiene products.

The survey respondents were 18-25, 25 -50 and 50+. In the 18-25 year old category, there were 65 respondents. Fifty-seven of them were college-going students. Of them, 20 belonged

to rural areas and 37 to urban populations. 97.3% of the respondents were menstruating women; the rest were women whose menstruation had been stopped.

In sustainable menstrual hygiene products, 40.7% of women know menstrual cups. 33% are aware of reusable pads. 8.1% are aware of the period panty. And 4.3% about menstrual discs. Respondents who do not know any of the sustainable menstrual products are 13.9%.

Women who realised the presence of plastic and toxic content accounted for 49.2%. Women who use menstrual hygiene products with no plastic or poisonous materials accounted for 30.1%. However, 20.8% could not identify the presence of such contents in their MHPs.

Women were asked about the impact of single-use menstrual hygiene products on the environment. 78.7% stated that single-use MHPs have adverse effects on the environment. One hundred thirty-nine respondents think sustainable menstrual hygiene products can help fight climate change.

50.3% of respondents think environmental concerns should be highlighted while popularising sustainable menstrual products. While 37.7.% think convenience and 12% think long-term financial benefits must be highlighted.

H_A Women of Kerala are unaware of the environmental benefits of sustainable menstrual products.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Aware of sustainable products	183	.85	.361	.027

One-Sample Test

	Test Value = 0.84		
	t	df	Sig. (2-tailed)
Aware of sustainable products	0.262	182	0.794

A one-sample t-test was employed to assess whether the mean awareness score significantly differed from the hypothetical value of 0.84, indicating an assumed baseline awareness. The results showed that the sample mean awareness score was 0.85 ($M = 0.85$, $SD = 0.361$, $SE = 0.027$). A t-statistic of 0.262 was computed with 182 degrees of freedom. The associated two-tailed p-value was found to be 0.794.

Given a commonly utilised significance level of 0.05, the p-value of 0.794 suggests no statistically significant difference between the sample mean and the assumed population mean of 0.84. Consequently, there is insufficient evidence to reject the null hypothesis.

Preferences in choice of menstrual hygiene products.

82% of women preferred the usage of the pad. Only 15% desired menstrual cups, and the rest, 2.7%, chose menstrual clothes. Among 183 respondents, 84.7% of women were aware of Sustainable menstrual hygiene products in the market. The usage of menstrual cups was preferred by 43.7% of women. Rest 56.3% of women use un-sustainable menstrual hygiene products. 39.3% of women preferred using disposable pads. Reusable pads, period panties and menstrual discs were used by 9.3%, .5% and .5% of women, respectively.

Of people who preferred disposable menstrual hygiene products, 41.5% preferred disposable products out of convenience. 12% are reluctant to shift to new products. 6% have never heard of sustainable menstrual hygiene products. For 3.3. % of people, sustainable menstrual hygiene products are too costly. 5.5% have tried and failed to use the product. 18.6% have health and societal concerns in shifting to sustainable alternatives.

Women who shifted from unsustainable to sustainable menstrual products because of social media influence are 12.6%. Out of health concerns, 33.3% shifted. 10.4% shifted due to environmental concerns. Peer groups influenced 12.6% of people, and for economic benefits, 3.8% of people changed their menstrual hygiene products.

An independent samples t-test was conducted to compare the mean preferences for disposable and sustainable menstrual products.

Group Statistics

	Menstrual products	N	Mean	Std. Deviation	Std. Error Mean
Negative impact of disposable product	Disposable pad	150	2.72	.520	.042
	Sustainable product	33	2.94	.242	.042

Group statistics for women who acknowledged the negative impacts of disposable menstrual products. The mean preference for disposable pads was 2.72 ($SD = 0.520$, $SE = 0.042$), whereas for sustainable products, the mean preference was 2.94 ($SD = 0.242$, $SE = 0.042$).

	T-test for equality of means		
Negative impact of disposable product	t	df	Significance 2 tailed
	-2.365	181	0.019

The results indicated a statistically significant difference between the mean preferences, $t(181) = -2.365$, $p = 0.019$ (two-tailed).

Role of media in popularising Sustainable Menstrual Hygiene products.

Social media made significant sources of information on sustainable menstrual products available to women. 78.3% of women knew about MHP from social media. From peer groups, 10.6% of women knew about MHP. Newspapers, Television, Sex education classes and E-commerce sites catered the information to .5%, 4.4%, 3.3% and 2.8% women, respectively.

80.9% of people think sustainable menstrual products should be popularised. Only 48.6% women have come across social media campaigns of women have come across social media campaigns promoting the use of sustainable menstrual products. Of these, 89.1% think social media can help popularise sustainable menstrual products.

The percentage of respondents who have been part of social media conversations is only 16.9%. 83.1% have never been part of any social media conversation on sustainable menstrual products.

A one-sample t-test was conducted to compare the mean perception score of the role of social media in popularising sustainable menstrual products to a hypothesised mean value.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Role of Social media in popularising sustainable menstrual products	183	2.87	.398	.029

One-Sample Test

	Test Value = 2.84		
	t	df	Sig. (2-tailed)
Role of social media in popularizing sustainable menstrual products	.980	182	.328

The data illustrates that the mean perception score regarding the role of social media in popularizing sustainable menstrual products was 2.87 (SD = 0.398, SE = 0.029) among the 183 participants.

A one-sample t-test employed to assess whether the mean perception score was significantly differed from the hypothesized value of 2.84. The results of the test indicated that the mean perception score (M = 2.87) regarding the role of social media in popularizing sustainable menstrual products did not significantly deviate from the hypothesized value (Test Value = 2.84), $t(182) = 0.980$, $p = 0.328$ (two-tailed).

Discussion

This study aimed to understand various aspects of sustainable menstrual products, such as awareness levels of MHPs, preferences for the products, and the perceived role of media in popularising such products among women in Kerala. The findings elucidate crucial factors influencing the adoption of sustainable menstrual products, contributing to both academic discourse and practical implications.

Awareness and Preferences:

Contrary to the alternate hypothesis that women in Kerala might be unaware of the environmental benefits of sustainable menstrual products, the study revealed a critical level of awareness. Most respondents demonstrated awareness of the negative impacts of disposable menstrual products. This trend can be associated with awareness campaigns, governmental initiatives, and the global discourse adopting sustainable choices.

Moreover, despite the awareness of the environmental downsides of disposable products, women seemed to prefer sustainable alternatives. The mean preference score for sustainable menstrual products was significantly higher than for disposable pads. This unexpected

preference might indicate the target population's growing consciousness and receptivity towards environmentally friendly alternatives.

Role of Media:

The examination of the role of media in popularising sustainable menstrual products produced some fascinating results. Social media is the most significant medium for sustainable menstrual product awareness. However, social media's persuasive effect on shifting women from unsustainable to sustainable menstrual products is less. The mean perception score did not significantly deviate from the hypothesised value, suggesting that, according to participant perceptions, media might not play a prominent role in popularising these products. This finding raises questions about the effectiveness of current media strategies in conveying information about sustainable menstrual products.

Conclusion

In conclusion, this study provides an in-depth understanding of menstrual hygiene awareness and preferences among women in Kerala. The findings showed significant awareness levels, indicating that the initiatives to educate and create awareness about the environmental downside of disposable menstrual products have been relatively successful.

Moreover, the inclination towards sustainable products owing to awareness suggests a positive shift in consumer behaviour towards more eco-friendly choices.

The study poses a critical examination of the role of media in influencing perceptions. The lack of a significant relationship between media and the perception of sustainable menstrual products indicates the need to reevaluate communication strategies in this domain.

While the study contributes valuable insights, it is not without limitations. The research is based on a specific geographic and cultural context and may need to be more generalisable. Future research could explore these themes in diverse cultural and geographical settings.

To conclude, this study highlights the reciprocity of awareness, preferences, and media perceptions of sustainable menstrual products. The findings contribute to the broader discourse on environmental consciousness and consumer behaviour, emphasising the need for multifaceted strategies that consider awareness campaigns, consumer preferences, and effective media communication to promote sustainable menstrual practices.

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