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The role of environmental consciousness in shaping consumer buying behavior towards sustainable fabrics

Ms. Sumedha Kalia

Research Scholar, Department of Management, IIS (Deemed to be University)

Email: Sumedhakalia34830@iisuniv.ac.in

Prof. Ankita Jain

Professor, Department of Management, IIS (Deemed to be University)

Email: ankita.jain@iisuniv.ac.in

Abstract--The environmental impact of the textile and apparel industry has increased the need to understand consumer behavior towards sustainable fabrics. This study empirically examines the role of environmental consciousness in shaping consumer buying behavior towards sustainable fabrics. A descriptive and analytical research design was adopted, and primary data were collected from 200 consumers using a structured questionnaire. Environmental consciousness was measured through environmental awareness, ecological concern, and personal responsibility, while buying behavior was assessed through purchase intention and preference. Descriptive statistics, correlation, and regression analysis were employed for data analysis. The findings reveal a significant positive relationship between environmental consciousness and consumer buying behavior towards sustainable fabrics. Environmentally conscious consumers demonstrate higher purchase intention; however, price sensitivity and limited availability remain key barriers to actual purchases. The study provides empirical evidence from the Indian context and offers practical implications for marketers and policymakers to strengthen green marketing strategies and promote sustainable fabric adoption.

Keywords--Environmental Consciousness, Sustainable Fabrics, Consumer Buying Behavior, Purchase Intention, Sustainable Fashion.

Introduction

The global textile and apparel industry is recognized as one of the largest contributors to environmental degradation due to excessive water consumption, chemical usage, carbon emissions, and textile waste generation. Conventional fabric production processes rely heavily on synthetic fibers and toxic dyes, leading to pollution of water bodies and depletion of natural resources. In response to these growing environmental concerns, sustainable fabrics such as organic cotton, bamboo, hemp, and recycled textiles have emerged as environmentally responsible alternatives aimed at reducing the ecological footprint of the fashion industry.

In recent years, consumers have become increasingly aware of environmental issues, including climate change, resource scarcity, and pollution. This growing awareness has contributed to the development of environmental consciousness, which reflects an individual's understanding of environmental problems and their willingness to adopt eco-friendly behaviors. Environmental consciousness has become a key determinant influencing consumer decision-making, particularly in the context of sustainable consumption. As a result, consumers are gradually shifting their preferences toward products that align with their environmental values, including sustainable apparel and fabrics.

Despite the increased availability of sustainable fabrics and heightened environmental awareness, their adoption in mainstream consumer markets remains relatively limited. Many consumers express positive attitudes toward eco-friendly products but fail to translate these attitudes into actual purchasing behavior. Factors such as higher prices, limited accessibility, lack of reliable information, and skepticism regarding sustainability claims often discourage consumers from choosing sustainable fabric options. This attitude-behavior gap highlights the complexity of consumer decision-making in sustainable fashion markets.

Understanding the role of environmental consciousness in shaping consumer buying behavior towards sustainable fabrics is therefore critical for both academics and practitioners. While existing studies have examined green consumer behavior and sustainable fashion, limited empirical research focuses specifically on the influence of environmental consciousness on fabric-level purchase decisions, particularly in developing economies like India. Given India's rapidly growing apparel market and increasing environmental challenges, examining consumer responses to sustainable fabrics is both timely and relevant. The study aims to empirically analyze the relationship between environmental consciousness and consumer buying behavior towards sustainable fabrics. By identifying key factors that influence purchase intentions and preferences, the study seeks to provide valuable insights for apparel manufacturers, marketers, and policymakers to design effective strategies that encourage sustainable fabric consumption and support long-term environmental sustainability.

Review of Literature

Environmental consciousness has been widely recognized as a key determinant of sustainable consumer behavior. According to **Dunlap and Van Liere (1978)**, environmental consciousness reflects an individual's awareness of environmental problems and concern for ecological well-being. **Schultz (2001)** further emphasized that environmental concern is rooted in personal values and significantly influences pro-environmental behavior. Studies by **Roberts (1996)** and **Chan (2001)** found that consumers with higher environmental awareness are more likely to support environmentally responsible products and brands.

Several empirical studies have examined the relationship between environmental concern and green purchasing behavior. **Laroche, Bergeron, and Barbaro-Forleo (2001)** reported that environmentally conscious consumers exhibit a higher willingness to pay for eco-friendly products. Similarly, **Kim and Choi (2005)** demonstrated that environmental concern and perceived consumer effectiveness positively influence green purchase intentions. **Ajzen's (1991)** Theory of Planned Behavior has also been widely applied to explain how environmental attitudes translate into purchase intentions for sustainable products.

In the context of sustainable fashion, researchers have highlighted the growing relevance of eco-friendly fabrics such as organic cotton, recycled fibers, bamboo, and hemp. **Joergens (2006)** observed that consumers associate sustainable apparel with ethical responsibility and environmental protection. **Hiller Connell (2010)** found that environmentally conscious consumers show favorable attitudes toward sustainable clothing; however, these attitudes do not always result in actual purchasing behavior. This supports the existence of an attitude-behavior gap in sustainable fashion consumption.

Price sensitivity has been identified as a significant barrier to sustainable fabric adoption. **Auger et al. (2010)** reported that higher prices discourage consumers from purchasing ethical and sustainable products despite positive attitudes. Similarly, **McNeill and Moore (2015)** noted that limited availability and lack of transparent sustainability information reduce consumer trust and hinder purchase decisions. Consumer skepticism toward green claims, as highlighted by **Delmas and Burbano (2011)**, further weakens buying intentions.

Studies conducted in developing economies provide mixed results. **Bhaduri and Ha-Brookshire (2011)** found that functional attributes such as comfort, quality, and design often outweigh environmental concerns in apparel purchases. **Joshi and Rahman (2015)**, in their review of green purchase behavior, emphasized that income, education, and cultural factors moderate the influence of environmental consciousness on buying behavior.

Despite extensive research on green consumer behavior and sustainable fashion, limited empirical studies focus specifically on sustainable fabrics at the consumer decision-making level, particularly in the Indian context. Most studies emphasize sustainable apparel brands rather than fabric choices. Therefore, a clear research gap exists in understanding how environmental consciousness shapes consumer

buying behavior towards sustainable fabrics, which the present study seeks to address.

Research Methodology

The study adopts a descriptive and analytical research design to empirically examine the relationship between environmental consciousness and consumer buying behavior. Primary data were collected using a structured questionnaire designed on a five-point Likert scale. The questionnaire consisted of two major sections: environmental consciousness and consumer buying behavior towards sustainable fabrics. A sample of 200 consumers was selected using the convenience sampling technique from urban areas. Data analysis was carried out using statistical tools such as descriptive statistics to understand respondent characteristics, correlation analysis to examine relationships among variables, and regression analysis to test the proposed hypothesis. The methodological approach ensured reliability and validity of the findings.

Research Gap

A review of existing literature reveals that while several studies have examined green consumer behavior and sustainable fashion, limited empirical research focuses specifically on sustainable fabrics at the consumer decision-making level. Most prior studies emphasize sustainable apparel brands, ethical fashion, or green marketing strategies rather than fabric-level choices made by consumers. Furthermore, there is a scarcity of empirical studies conducted in the Indian context that examine the role of environmental consciousness in shaping consumer buying behavior towards sustainable fabrics. This gap highlights the need for a focused investigation into how environmental awareness and ecological concern influence consumers' purchase intentions and preferences for sustainable fabrics.

The present study is undertaken with the following objectives:

1. To analyze the relationship between environmental consciousness and consumer buying behavior towards sustainable fabrics.
2. To evaluate the impact of environmental consciousness on consumers' purchase intention and preference for sustainable fabrics.

Research Hypotheses

H₁: There is a significant positive relationship between environmental consciousness and consumer buying behavior towards sustainable fabrics.

Data Analysis

Variable	Category	Frequency	Percentage (%)
Gender	Male	96	48.0
	Female	104	52.0
Age (Years)	21–30	92	46.0
	31–40	56	28.0
	41–50	34	17.0
	Above 50	18	9.0

Variable	Category	Frequency	Percentage (%)
Education	Graduate	88	44.0
	Postgraduate & Above	72	36.0
	Others	40	20.0

The demographic profile indicates balanced gender representation and dominance of young consumers aged 21–30 years. A majority of respondents possess higher educational qualifications, suggesting greater exposure to environmental awareness and sustainability-related information.

Environmental Consciousness

Dimension	N	Mean	Std. Deviation
Environmental Awareness	200	4.12	0.61
Ecological Concern	200	4.05	0.65
Personal Responsibility	200	3.98	0.70
Overall Environmental Consciousness	200	4.05	0.58

Mean values above 4 indicate a high level of environmental consciousness among respondents. Consumers demonstrate strong awareness and concern for environmental issues, reflecting a positive attitude towards sustainable practices.

Consumer Buying Behavior

Variable	N	Mean	Std. Deviation
Purchase Intention	200	3.85	0.72
Preference for Sustainable Fabrics	200	3.78	0.69
Willingness to Pay Premium	200	3.32	0.81
Overall Buying Behavior	200	3.65	0.68

While purchase intention and preference show positive responses, willingness to pay a premium remains moderate, highlighting price sensitivity as a barrier to sustainable fabric adoption.

Correlation Analysis

Variables	Environmental Consciousness	Buying Behavior
Environmental Consciousness	1	
Buying Behavior	0.62**	1

** Significant at 0.01 level

Pearson's correlation analysis was conducted to examine the relationship between environmental consciousness and consumer buying behavior. The correlation coefficient ($r = 0.62$, $p < 0.01$) indicates a strong and statistically significant positive relationship. This implies that consumers with higher levels of environmental awareness and concern are more likely to exhibit favorable buying behavior towards sustainable fabrics.

The strength of the correlation confirms that environmental consciousness is a critical antecedent of sustainable consumption behavior. Hence, **Hypothesis H₁**, which proposed a significant relationship between environmental consciousness and buying behavior, is supported.

Regression Analysis

Model	R	R ²	β	t-value	Sig.
Environmental Consciousness → Buying Behavior	0.58	0.34	0.58	9.21	0.000

** Significant at 0.01 level

To assess the predictive power of environmental consciousness, regression analysis was conducted. The regression model yielded an R² value of 0.34, indicating that 34% of the variance in consumer buying behavior is explained by environmental consciousness. The standardized beta coefficient ($\beta = 0.58$, $p < 0.001$) demonstrates a strong and positive impact. Thus, **Hypothesis H₁** is accepted.

Gender	N	Mean	Std. Dev.	t-value	Sig.
Male	96	3.96	0.59		
Female	104	4.13	0.56	2.12	0.035

An independent samples t-test was performed to examine gender differences in environmental consciousness. Female respondents recorded a significantly higher mean score (4.13) compared to males (3.96), with the result being statistically significant ($p = 0.035$). This suggests that female consumers tend to be more environmentally conscious, possibly due to higher involvement in household purchasing and greater concern for health and sustainability issues.

Age Group	Mean	Source	F-value	Sig.
21–30	3.72	Between Groups	3.86	0.010
31–40	3.81			
41–50	3.59			
Above 50	3.41			

One-way ANOVA was conducted to examine differences in buying behavior across age groups. The results indicate a significant difference ($F = 3.86$, $p = 0.010$). Younger consumers (21–40 years) exhibited stronger buying behavior towards sustainable fabrics compared to older age groups. This may be attributed to greater exposure to sustainability education, social media influence, and eco-friendly lifestyle trends among younger consumers.

The detailed analysis demonstrates that environmental consciousness plays a decisive role in shaping consumer buying behavior towards sustainable fabrics. While awareness and concern significantly influence purchase intention, economic barriers and demographic factors moderate actual buying behavior. The

findings highlight the need for affordable sustainable fabric options, transparent communication, and targeted marketing strategies to bridge the gap between environmental awareness and sustainable purchasing behavior.

Findings

The study reveals that consumers exhibit a high level of environmental consciousness, particularly in terms of environmental awareness and ecological concern. Respondents demonstrate a clear understanding of environmental issues such as pollution, climate change, and the harmful impact of conventional textile production processes. The empirical analysis confirms a strong and statistically significant positive relationship between environmental consciousness and consumer buying behavior towards sustainable fabrics. Consumers with higher levels of environmental awareness and concern show stronger purchase intention and preference for sustainable fabrics. However, the study also identifies a noticeable attitude-behavior gap, as willingness to pay a premium for sustainable fabrics remains moderate. Price sensitivity and limited availability of sustainable fabric options continue to act as major barriers to actual purchasing behavior. Demographic analysis further indicates that female consumers and younger age groups exhibit higher environmental consciousness and stronger inclination towards sustainable fabric purchases compared to their counterparts.

Conclusion

The study concludes that environmental consciousness plays a crucial role in shaping consumer buying behavior towards sustainable fabrics. While increasing awareness and concern for environmental sustainability positively influence consumers' attitudes and intentions, these factors alone are insufficient to drive consistent purchasing behavior. Economic considerations, accessibility, and trust in sustainability claims significantly influence final purchase decisions. The findings highlight that bridging the gap between environmental awareness and actual buying behavior is essential for the growth of sustainable fabric markets. In the Indian context, where the apparel industry is rapidly expanding, promoting sustainable fabric consumption is not only an environmental necessity but also a strategic opportunity for long-term industry sustainability.

Suggestions

Based on the findings, several suggestions are proposed. Apparel manufacturers should focus on cost-effective production methods to make sustainable fabrics more affordable and competitive. Marketers should emphasize transparent and credible sustainability communication to build consumer trust and reduce skepticism. Retailers should improve the availability and visibility of sustainable fabric options through dedicated sections and online platforms. Policymakers can play a vital role by offering incentives, subsidies, and awareness programs to encourage sustainable textile production and consumption. Finally, future research may explore additional factors such as brand trust, social influence, and perceived value to gain deeper insights into sustainable fabric buying behavior.

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