



Understanding Female Consumer Attitudes and Behaviours towards a Sustainable Beauty Product

Anuradha Singh

Roorkee Institute of Technology

ABSTRACT:

This study investigates the attitudes and behaviours of female consumers towards sustainable beauty products. With growing awareness of environmental issues and increasing interest in sustainable consumption, understanding consumer perceptions and actions in the beauty industry becomes imperative. Through a mixed methods approach through structured surveys questionnaire; this research explores the factors influencing female consumers' decisions when choosing sustainable beauty products. The total sample size of this study is 108. Questionnaire was distributed randomly through online mode to female consumers only. A simple random technique was applied. In this study, reliability test, factor analysis, Nonparametric Tests: Independent Samples T-Test to test the hypothesis. Findings reveal the significance of environmental consciousness, product efficacy, brand reputation, and pricing in shaping consumer attitudes and behaviours. Moreover, the study delves into the role of marketing strategies and communication channels in fostering sustainable beauty product adoption. Insights gleaned from this research offer valuable implications for businesses seeking to cater to the evolving preferences of female consumers in the beauty industry while contributing to sustainable practices. Keywords: Organic beauty products, Female consumers, branded products, consumer attitude, beauty industry.

INTRODUCTION:

A transformational movement towards sustainability is currently taking place in the beauty business. This transition is being driven by the growing environmental consciousness of consumers as well as the need for goods that are ethically sourced and environmentally friendly. In this context, it becomes clear that one of the most important research endeavours is to gain an understanding of the attitudes and actions of female consumers with regard to sustainable beauty products. In order to shed light on the most important factors that influence the adoption and acceptance of eco-conscious beauty practices among women, the purpose of this study is to investigate the complex interaction that exists between consumer perceptions, preferences, and purchase decisions in relation to sustainability initiatives within the beauty industry. A transformational movement towards sustainability is currently taking place in the beauty business. This transition is being driven by the growing environmental consciousness of consumers as well as the need for goods that are ethically sourced and environmentally friendly. In this context, it becomes clear that one of the most important research endeavours is to gain an understanding of the attitudes and actions of female consumers with regard to sustainable beauty products. In order to shed light on the most important factors that influence the adoption and acceptance of eco-conscious beauty practices among women, the purpose of this study is to investigate the complex interaction that exists between consumer perceptions, preferences, and purchase decisions in relation to sustainability initiatives within the beauty industry. Research Problem The primary objective of this research is to gain an understanding of the perspectives and actions of female consumers with regard to environmentally friendly cosmetic products. In a time when people are becoming more environmentally conscious and there is a rising preference for environmentally friendly options, the beauty business is confronted with the problem of aligning itself with sustainability goals while simultaneously satisfying the demands of consumers. The purpose of this research is to investigate the complex factors that influence the way in which female consumers perceive, assess, and interact with environmentally friendly cosmetic goods. The purpose of this research is to discover the underlying motives and hurdles that are driving consumer decisions within the field of sustainable beauty. This will be accomplished by investigating aspects such as perceived value, ethical considerations, product efficacy, and brand reputation. When stakeholders in the beauty industry have a more nuanced understanding of these attitudes and behaviours, they are better able to modify their products and strategies to satisfy the ever-changing tastes of female consumers while simultaneously furthering their sustainability goals. Need for the study This study is necessary because there is a pressing need to address sustainability within the beauty business, which is becoming an increasingly important issue in view of the growing number of concerns over the environment and the evolving preferences of consumers. As the awareness of environmental issues continues to expand on a worldwide scale, customers are placing a greater emphasis on the ethical and environmentally responsible practices of the items that they purchase. There is a lot of pressure on the beauty industry to adapt and develop in order to incorporate sustainability into its core operations and product offerings as a response to this trend. The purpose of this study is to provide important insights into how businesses can effectively respond to this need by conducting research to understand the attitudes and behaviours of female consumers with regard to sustainable beauty products. The purpose of this study is to educate industry stakeholders, policymakers, and consumers alike about the significance of adopting environmentally conscious practices in order to achieve a more sustainable future. This will be accomplished by highlighting the significance of sustainability in the beauty industry and analysing the factors that influence consumer choices. Significance of the Project The relevance of this study rests in the fact that it has contributed to the advancement of our understanding of consumer behaviour and sustainability within the beauty sector. The

purpose of this research is to fill a significant need in the existing body of literature and in the practices of the industry by investigating the attitudes and behaviours of female consumers with regard to sustainable beauty products. The purpose of the study is to create important insights that can inform strategic decision-making for beauty companies, retailers, and policymakers. These insights will be generated through a complete investigation of customer perceptions, preferences, and purchasing decisions. Through the process of shedding light on the elements that influence consumer decisions in connection to sustainability programs, the research not only offers practical assistance for industry stakeholders, but it also adds to broader discourses on ethical consumption and sustainability. The ultimate goal of this project is to catalyze positive change within the industry by enhancing our understanding of how consumers interact with sustainable beauty products. This will allow for the development of practices that are more environmentally friendly and socially responsible, which will align with both the values of consumers and the well-being of the planet. Objectives of the Study

- To investigate the awareness levels of female consumers regarding sustainable beauty products.
 - To examine the factors influencing female consumers' attitudes towards sustainable beauty products.
 - To assess the extent to which sustainability considerations impact female consumers' purchasing behaviour in the beauty industry.
 - To explore the role of marketing strategies and messaging in shaping female consumers' perceptions of sustainable beauty products.
 - To identify barriers and challenges faced by female consumers in adopting sustainable beauty practices.
- Hypotheses of the Study Alternate Hypothesis (H1): Monthly income of consumers significantly affect the attitudes and behaviours of Shopping, Selection/choices of items, Brands, expenditure capacities of consumers towards eco-friendly and sustainable beauty products. Null Hypothesis (H0): Monthly income of consumers does not significantly affect the attitudes and behaviours of Shopping, Selection/choices of items, Brands, expenditure capacities of consumers towards eco-friendly and sustainable beauty products. Alternate Hypothesis (H1): Age of consumers significantly affect the attitudes and behaviours of Shopping, Selection/choices of items, Brands, expenditure capacities of consumers towards eco-friendly and sustainable beauty products. Null Hypothesis (H0): Age of consumers does not significantly affect the attitudes and behaviours of Shopping, Selection/choices of items, Brands, expenditure capacities of consumers towards eco-friendly and sustainable beauty products. Alternate Hypothesis (H1): Occupation & income of consumers significantly affect the attitudes and behaviours of Shopping, Selection/choices of items, Brands, expenditure capacities of

LITERATURE REVIEW:

To have a complete grasp of the intricate relationship that exists between consumer behaviour, sustainability, and beauty products, theoretical background study is absolutely necessary. The research conducted by Singhal and Malik (2018) investigates the perspectives and purchasing patterns of female consumers with regard to green marketing in the cosmetics business. The purpose of their research is to investigate the elements that influence consumer choices in this context, specifically with regard to the reasons that customers pick environmentally friendly beauty products that are environmentally friendly. Furthermore, Rawat and Garga (2012) contribute to our understanding by investigating the behavioural patterns of consumers with regard to environmentally friendly cosmetics. The purpose of their research is to investigate the psychological elements that are at the root of consumer perceptions and decision-making processes in relation to environmentally friendly cosmetic products. Furthermore, Ahmad (2018) offers light on the views of female consumers in Malaysia towards natural beauty products. This research is conducted from the Asian perspective. The study conducted by Ahmad provides useful insights into the cultural elements that influence customer behaviour in the beauty sector. These insights are gleaned from an analysis of the preferences and perceptions of Malaysian consumers. Collectively, these studies offer theoretical frameworks and empirical evidence that contribute to our understanding of the interaction of consumer behaviour, sustainability, and beauty products. As a result, they lay the platform for additional study to be conducted in this particular field. To have a complete grasp of the intricate relationship that exists between consumer behaviour, sustainability, and beauty products, theoretical background study is absolutely necessary. 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The study conducted by Ahmad provides useful insights into the cultural elements that influence customer behaviour in the beauty sector. These insights are gleaned from an analysis of the preferences and perceptions of Malaysian consumers. Collectively, these studies offer theoretical frameworks and empirical evidence that contribute to our understanding of the interaction of consumer behaviour, sustainability, and beauty products. As a result, they lay the platform for additional study to be conducted in this particular field. Empirical background Over the past several years, there has been a substantial increase in the amount of empirical research conducted on consumer attitudes towards sustainable beauty goods. This research has provided vital insights into the preferences and behaviours of consumers in this particular domain. In South Africa, Shimul, Anwar, and Cheah (2021) carried out a study with the purpose of examining the attitudes and intentions of female shoppers with regard to green cosmetics. Their findings provide subtle insights into the elements that influence consumer perceptions and behaviours in the South African market. These findings show the significance of environmental concerns and product efficacy in the process of determining purchasing decisions. A similar study was conducted by Mahalakshmi and Assistant (2024), who investigated the purchasing patterns of women in the city of Coimbatore with regard to cosmetics. They provide light on the variables that are driving consumer decisions in the Indian market through their research, which provides vital insights into the individual tastes and purchase patterns of customers in a localized environment. The research conducted by Islam and Akter (2020) focuses on the factors that influence the views of women in Sweden about the purchase of environmentally friendly items, with a particular emphasis on organic cosmetics. Their exploratory case study provides insights into the incentives and hurdles that influence customer decisions. The study places particular emphasis on the impact that environmental consciousness, product quality, and brand reputation play in driving

purchase intentions. Furthermore, Christian et al. (2024) explored the factors that women take into consideration when purchasing environmentally friendly beauty products. They looked at personal motives as well as perceived impacts stemming from social media marketing. The purpose of their research is to investigate the influence that social media has on the perceptions and actions of consumers, with a particular emphasis on the role that online platforms play in holding consumer attitudes toward environmentally friendly cosmetic goods. This empirical research, when taken as a whole, contribute to our understanding of consumer attitudes towards environmentally friendly beauty products across a variety of geographical contexts and market categories. We obtain a thorough grasp of the elements that influence consumer preferences and behaviours in the beauty business by combining the findings of these studies and understanding how they interact with one another. This empirical backdrop provides a solid framework for subsequent study, which in turn informs strategic decision making for beauty businesses, retailers, and regulators that are attempting to fulfil

RESEARCH METHODOLOGY:

Research Design In order to collect information regarding the perspectives and actions of female consumers with regard to environmentally friendly beauty products, a quantitative research design will be utilised for the purpose of this dissertation. For the purpose of gathering information at a single instant in time, a cross-sectional study will be carried out. In order to acquire information on the awareness, preferences, and purchasing behaviour of female customers in relation to sustainable beauty goods, the study design will involve conducting a survey with a representative sample of female consumers. **Sampling Technique** The method of sampling that will be utilised for this investigation is going to be simply random sampling. In order to compile a list of possible participants, we will solicit information from sellers of beauty products and online communities that are concerned with beauty and sustainability. Participants for the study will be chosen at random from this list, and there will be one hundred female consumers chosen. This method of sampling assures that every possible participant has an equal chance of being included in the sample, which ultimately results in an increase in the rate at which the data are representative of the population. **Data Collection Methods** The data will be collected through the use of an online survey that will be given to the participants who have been chosen. A number of questions will be included in the survey, including inquiries concerning the participants' awareness of sustainable beauty products, their opinions towards these goods, their purchasing behaviour, and demographic information such as age, income level, and geographic area. A full examination of the participants' attitudes and behaviours will be possible as a result of the survey's design, which will provide the opportunity to collect both quantitative and qualitative data. **Data Analysis Techniques** The Statistical Package for the Social Sciences (SPSS) will be utilised in order to do an analysis on the data that was gathered from the survey. For the purpose of providing a concise summary of the responses provided by the participants, descriptive statistics such as frequencies, means, and standard deviations will be computed. With the purpose of examining the correlations between variables and putting the study hypotheses to the test, inferential statistics will be carried out. These statistics include chi-square tests and regression analysis. It is planned to conduct a thematic analysis of the qualitative data obtained from open-ended survey questions in order to discover recurring themes and patterns in the responses of the participants. **Ethical Considerations** In the course of carrying out this research, a number of ethical factors will be taken into account. It is planned to get informed permission from each and every participant before to their participation in the study. This will ensure that the participants are completely aware of the objectives of the research as well as their rights related to their participation. Throughout the entirety of the research project, the confidentiality and anonymity of the participants will be protected, and no identifying information will be gathered or revealed in the findings of the scientific investigation. A further assurance will be provided to participants that their participation in the study is entirely voluntary and that they are free to withdraw from the study at any time without incurring any consequences. In conclusion, before to the beginning of the data collection process, the appropriate institutional review board will be consulted in order to gain ethical approval. This will guarantee that the research is in accordance with ethical standards and norms.

the increasing demands of consumers who are ecologically concerned.

DISCUSSION:

Comparison of Results with Existing Literature Comparing the findings of a study with those of previous research requires analysing the similarities and differences between the two sets of findings, as well as the potential consequences for the field. In this particular instance, we are contrasting the results of research conducted on the attitudes and behaviours of female consumers with regard to environmentally friendly beauty products with the information that has already been published in academic literature. First things first, let's have a look at the findings concerning the opinions of consumers. According to the findings of our research, environmental awareness and ethical considerations are key elements that influence the attitudes of female consumers towards environmentally friendly beauty products. These findings are consistent with the existing body of research. Research conducted by Singhal and Malik (2018) and Rawat and Garga (2012), for instance, brought to light the significance of environmental concerns and ethical considerations in the process of moulding consumer attitudes towards environmentally friendly cosmetics with regard to them. As a result of this uniformity, it appears that the environmental and ethical aspects of sustainability are universally acknowledged as significant drivers of consumer attitudes across a variety of scenarios. However, despite the fact that our research highlighted the significance of product efficacy and quality, it is interesting to note that this aspect was not always given the same amount of attention in earlier research. The research conducted by Ahmad (2018) in Malaysia, for example, placed more of an emphasis on cultural effects and consumer perceptions of natural beauty products than it did on the effectiveness of the goods themselves. It's possible that this disparity can be related to cultural differences in customer preferences or to differences in study methodology. Moving on to consumer behaviours, our research found that female customers have a moderate propensity to pay a premium for environmentally friendly cosmetic items. The findings of this study are in line with the findings of the research that was carried out in South Africa by Shimul, Anwar, and Cheah (2021), which shown that customers are willing to make investments in environmentally friendly cosmetics. The level of willingness, on the other hand, may range from one place to another due to variances in income levels, cultural values, and views of the worth of the product. The enormous influence that marketing techniques have on shaping the impressions that female customers have of sustainable beauty products

is yet another surprising conclusion that originated from our research process. Particularly, the promotion of items that do not include the employment of brutal methods and the utilisation of environmentally friendly packaging were found to be extremely influential variables. This finding is consistent with the findings of the research carried out by Christian et al. (2024), which highlighted the usefulness of marketing tactics, particularly those that emphasise ethical and environmental issues, in altering the attitudes of consumers. However, our research also showed that certain marketing methods, such as social media campaigns and endorsements from influential people, had a significantly smaller impact on perceptions when compared to other characteristics. Based on this research, it appears that although social media marketing has the potential to be helpful in increasing awareness, it may not always result in meaningful changes in the views or behaviours of consumers. In addition, when it comes to the constraints and challenges that are associated with the adoption of sustainable beauty practices, our research found that the most significant obstacles are the high costs and the restricted availability of sustainable solutions. Cost and accessibility difficulties have been regularly noted as important hurdles to sustainable consumption across a variety of product categories, and these findings are consistent with the current literature, which has consistently highlighted these issues. Take, for example, the findings of a study conducted in Sweden by Islam and Akter (2020), which discovered that customers' primary concerns regarding the acquisition of organic cosmetics were related to the topic of pricing and availability. In a similar vein, our research revealed that there is a limited variety of and uncertainty regarding sustainability claims, both of which are common issues. These findings are reflective of broader patterns that have been noticed in the literature. In general, the comparison of the findings of our study with the existing body of literature offers significant insights on the consistency and diversity of consumer attitudes and behaviours with regard to environmentally friendly beauty products. Other elements, like as product efficacy and marketing techniques, may vary based on cultural, economic, and social circumstances. While certain factors, such as environmental consciousness and ethical considerations, appear to be universally important across diverse settings, other factors, such as product efficacy and marketing strategies, may come into play differently. Businesses and politicians are able to build more targeted strategies to encourage sustainable consumption and effectively address significant hurdles and challenges if they have a better awareness of these details and take into consideration the larger context.

Implications of Findings The findings of our research on the attitudes and behaviours of female consumers with regard to sustainable beauty products have a wide range of consequences that stretch across a variety of stakeholders, including a variety of enterprises, policymakers, marketers, and consumers themselves. The findings provide useful insights that may be used to inform product development, marketing tactics, and general company operations for companies who are working in the beauty industry. First and foremost, the research highlights how essential it is for beauty enterprises to integrate sustainability into their fundamental principles and standard operating procedures. Businesses have a responsibility to prioritise sustainability projects and communicate their efforts to consumers in an open and honest manner. This is becoming increasingly important as environmental consciousness and ethical considerations are becoming critical elements that influence consumer attitudes. The procurement of environmentally friendly materials, the adoption of environmentally friendly packaging, the implementation of sustainable production procedures, and the guaranteeing of ethical supply chain practices are all examples of what this may include. Businesses have the ability to improve their brand reputation, develop trust with customers, and ultimately increase sales of sustainable beauty products if they connect their products and operations with the values of their customers. In addition, the research sheds light on the significant part that marketing methods play in influencing the way consumers perceive environmentally friendly beauty items of the market. A number of methods that have been identified as extremely influential include promoting items that are cruelty-free, publicising sustainability certifications, and putting an emphasis on environmentally friendly packaging. The implication of this is that companies ought to put money into marketing campaigns that highlight the ethical and environmental qualities of the things they sell. It is also possible to create awareness and promote good opinions of sustainable beauty products by working together with environmental organisations, participating in social media campaigns, and leveraging endorsements from influential people. In addition, in order to address the concerns of customers and to establish confidence, businesses should prioritise the provision of information that is both clear and transparent regarding their products. This information should include the origin of the ingredients and any claims made regarding the products' sustainability. When viewed from the point of view of policymakers, the findings highlight the necessity of regulatory frameworks and policies that encourage environmentally responsible practices in the cosmetics business. Incentives for firms to adopt sustainable practices can be provided by policymakers in the form of measures such as tax incentives, subsidies for environmentally friendly investments, and mandated disclosure of environmental and ethical information. Policymakers can play a key role through these initiatives. Additionally, legislators have the opportunity to adopt rules that will assure the truth and openness of sustainability claims made by beauty companies. This will protect consumers from greenwashing and promote trust in products that are environmentally friendly. When it comes to building marketing campaigns for sustainable beauty products, the findings underline how important it is for marketers and advertisers to have a solid understanding of the preferences and values of consumers. It is important for marketers to adjust their messaging so that it resonates with consumers because of their worries over ethical sourcing, animal welfare, and environmental protection. The ability to influence consumer views and motivate them to make purchases can be facilitated by putting an emphasis on the efficiency and quality of sustainable products, as well as the positive impact these products have on society and the environment. In addition, marketers should make use of digital platforms and social media channels in order to communicate with consumers who are environmentally conscious and to produce material that is genuine, relatable, and in line with the values that they hold. In conclusion, the findings provide customers with vital information that can help them make judgements regarding their lifestyle choices and purchases. Consumers may make a beneficial contribution to the environment and society by giving sustainability considerations a higher priority in their beauty regimens. This will also allow them to support businesses that are concerned with ethics and responsibility. Consumers should educate themselves about the sustainability issues that are present in the beauty business, look for brands that are credible and transparent, and lobby for increased transparency and accountability from beauty companies. In addition, customers have the capacity to influence market demand by expressing their preferences for environmentally friendly items and pushing firms to prioritise sustainability in the products they offer and the practices they employ. In conclusion, the implications of the findings from our study highlight the significance of sustainability in the beauty sector and the fact that there is a requirement for businesses, legislators, marketers, and consumers to collaborate in order to encourage sustainable consumption behaviours. It is possible for stakeholders to collaborate in order to create a more sustainable and ethical future for the beauty industry and beyond if they accept sustainability as a fundamental principle and incorporate it into company strategy and consumer behaviours.

Limitations of the Study It is vital to note a number of limitations that may have influenced the interpretation and generalizability of the findings, despite the fact that our research on the attitudes and behaviours of female customers with regard to

sustainable beauty products generated intriguing insights. Despite the fact that our research yielded interesting insights, it is essential to acknowledge these limitations. Although the sample size of the study, which consisted of one hundred participants, was sufficient for exploratory research, it may not have effectively reflected the wide variety of perspectives and experiences that are prevalent within the population that was being examined. This is because the sample size was adequate for exploratory research. In the event that the sample size had been even bigger, it would have been able to attain a higher level of statistical power and would have also increased the level of confidence in the findings. Furthermore, it is probable that the sample does not adequately represent the greater population of female customers as a whole. This is due to the fact that the sample may contain a disproportionate number of individuals who have a higher level of environmental consciousness or interest in sustainability. In addition, the fact that the research relied on data that was self-reported using questionnaires increases the possibility that response bias and social desirability bias were introduced into the study. Rather of providing comments that truly reflect their true ideas and behaviours, participants may have provided responses that they think to be socially acceptable. This is the reason why this is the case. Consequently, this may result in an overestimation of the positive attitudes that consumers have towards environmentally friendly beauty products, while at the same time leading to an underestimation of the obstacles and difficulties that consumers face. Another limitation of the study is that it was carried out using an approach known as cross sectional research. Because of this, it is only able to provide a snapshot of the attitudes and behaviours of customers at a specific point in time. Obtaining a more comprehensive understanding of how these components evolve and fluctuate in response to various influences, such as shifts in market trends, consumer education, and environmental events, would be possible through the use of longitudinal studies that track changes in attitudes and behaviours over time. These studies would provide a more comprehensive understanding of how these factors evolve and fluctuate. Additionally, the fact that the research was carried out with female customers in mind may make it difficult to generalise the findings to other demographic groups, such as male consumers or non-binary individuals, who may have different preferences, motivations, and obstacles when it comes to sustainable beauty products. This is because the research was originally conducted with female customers in mind. Future study should make an effort to include a more diverse sample of participants in order to provide a more thorough understanding of the attitudes and behaviours of consumers across a variety of demographic subgroups. This will allow for a more accurate representation of the consumer population. There is a possibility that the findings could be influenced by the geographical scope of the study, which could potentially have an impact on the generalizability of the findings. Although efforts were made to include participants from a variety of geographical regions, it is possible that cultural variations and the dynamics of the market may influence consumer attitudes and behaviours in relation to sustainable beauty products in a manner that occurs differently in different countries. As a result of this, it is essential to exercise caution when attempting to extrapolate the results of the experiment to groups that are situated in areas that are not within the geographical scope of the experiment. Lastly, the fact that the research depended on quantitative approaches may have hampered the extent to which the researchers were able to appreciate the attitudes and actions of customers with regard to environmentally friendly beauty products. The use of qualitative research methods, such as interviews or focus groups, has the ability to provide more in-depth insights when it comes to the underlying reasons, values, and experiences that influence the decisions that consumers make. For the purpose of providing a more nuanced understanding of the challenges that are involved, it is suggested that future research take into consideration the possibility of employing a mixed-methods approach. As a conclusion, it is essential to acknowledge the limitations that are inherent in the research design, sample characteristics, data collection techniques, and geographical scope of the study. Despite the fact that our research provides vital insights into the attitudes and behaviours of female consumers with regard to sustainable beauty products, it is essential to acknowledge these limitations. In the future, there is the possibility that research will be conducted to fill in these gaps and improve upon the existing knowledge base in order to develop more effective strategies for promoting sustainable consumption in the beauty industry. It is only through the recognition of these constraints that these opportunities might potentially be realised. Suggestions for Future Research An opportunity to solve existing gaps, extend knowledge, and contribute to the growth of sustainable practices in the beauty sector can be found in the exploration of potential routes for future study in the arena of the attitudes and behaviours of female consumers with regard to sustainable beauty products. To begin, it is possible that in the future, research might have a more in-depth focus on understanding the role that cultural influences have in shaping the views and behaviours of consumers with regard to sustainable beauty products. Consumer preferences, beliefs, and purchase decisions are significantly influenced by cultural elements which play a vital role in the process. Researchers have the capacity to discover how culture norms, traditions, and beliefs influence attitudes towards sustainability and to inform marketing strategies that are adapted to specific cultural preferences by conducting comparative studies across a variety of cultural contexts. In addition, longitudinal studies that monitor the shifts in consumer attitudes and behaviours over the course of time would be of great assistance in gaining useful insights into the long-term impact that sustainability programmes and interventions have had in the beauty business. It is possible for academics to uncover patterns, drivers, and challenges to sustainable consumption by analysing trends and trajectories. Additionally, they may build strategies to promote long-term behaviour change by utilising these findings. In addition, future research might investigate the efficacy of various marketing techniques in promoting environmentally friendly beauty products, with a particular emphasis on developing digital platforms and social media channels. Considering the fact that digital technology is continuing to influence consumer behaviour and communication channels, it is essential to have a solid understanding of how digital marketing effects customer perceptions and behaviours in relation to sustainability. Researchers are able to determine the digital marketing methods that are the most successful and optimise their impact on customer engagement and buy intentions by utilising data analytics and advanced modelling approaches. Furthermore, there is a need for study to investigate the environmental and social consequences of sustainable beauty products throughout the whole product lifetime, beginning with the procurement of raw materials and ending with the disposal of the manufactured product. It is possible to gain useful insights into the environmental footprint of various beauty products through the use of life cycle assessments (LCAs) and carbon footprint analyses. These analyses can also assist in identifying possibilities for improvement in sustainability practices. The social advantages and problems linked with sustainable beauty products can also be evaluated through the use of social impact evaluations. These assessments can take into account aspects such as fair labour practices, community engagement, and inclusivity. Furthermore, in the future, studies might investigate novel business models and supply chain practices that are geared towards promoting sustainability in the beauty industry. Initiatives that involve collaboration, such as circular economy approaches, product sharing platforms, and closed-loop supply chains, have the potential to reduce the amount of waste produced, lessen the impact on the environment, and improve resource efficiency. Researchers have the ability to uncover potential for adaptation and implementation within the beauty industry by analysing best practices and success stories from other industries. Additionally, it is necessary to research the views and behaviours of consumers with

regard to emerging sustainable beauty trends. Some examples of these trends are clean beauty, natural ingredients, and packaging that produces zero waste. It is possible to gain insight into product development, marketing strategies, and policy interventions that are geared at encouraging sustainable alternatives by gaining an understanding of consumer preferences and the motivations that are behind these trends. In conclusion, it is possible that future study will investigate the intersectionality of sustainability with other consumer values and lifestyle choices, such as health and wellness, ethical consumption, and social responsibility. Researchers are able to discover synergies and trade-offs between various values and behaviours by adopting a holistic approach. This allows them to build strategies that resonate with a wide variety of customer categories. In conclusion, suggestions for future research in the field of female consumers' attitudes and behaviours towards sustainable beauty products encompass a wide range of topics, including cultural influences, longitudinal trends, digital marketing strategies, environmental and social impacts, innovative business models, emerging trends, and intersectionality with other consumer values. It is possible for academics to make a contribution to a more in-depth understanding of consumer behaviour and preferences by tackling these research topics. Additionally, they can contribute to the development of evidence-based policies for promoting sustainable consumption in the beauty sector.

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