3. Review Of Literature

Green Cosmetics

Attributes: (Sustainability, Consumer Preferences, Consumer Behavior, Purchase intention, Attitude, Awareness, social media, Brand, Gender)

1. *(Santos, Brito Silva, da Costa, & Batista, 2023)* The paper "Go Vegan! Digital Influence And Social Media Use In The Purchase Intention Of Vegan Products In The Cosmetics Industry" mainly focuses on the relationship between the source credibility and social media usage and the consumer's intention to purchase green/ vegan cosmetic products. For the same, primary data was collected via an online survey through a close-ended questionnaire, to which 190 valid responses were considered for analysis. Based on the previous literature review, the questionnaire was developed based on the intention scale, social media usage scale, and other source credibility scales. The data was analyzed via a cross-sectional survey, and Structural Equation Modelling (SEM) was used to analyze the relationship between the variables; a pre-test was also conducted to evaluate the robustness of the questionnaire. SEM results showed a significant positive relationship between social media engagement and purchase intentions (p-value < 0.05). Source credibility—encompassing trustworthiness, expertise, and attractiveness—exerted a strong influence (standardized path coefficient > 0.6), enhancing social media's impact. Model validity was confirmed with CFI (>0.90) and RMSEA (<0.08). The study also found that both vegan and non-vegan consumers exhibited similar purchase behaviors, indicating a broader market potential.

   While the study effectively highlights the significance of source credibility and social media in driving purchase intentions, its reliance on a single cross-sectional survey limits its ability to capture dynamic consumer behavior over time. Additionally, the omission of critical dimensions like authenticity and influencer personality restricts a deeper understanding of what drives trust and long-term engagement with green cosmetics. Here, economic factors such as affordability restricts the understanding of financial accessibility as a barrier.

2. *(Tengli & Srinivasan, 2022)* The paper "An Exploratory Study to Identify the Gender-Based Purchase Behavior of Consumers of Natural Cosmetics" analyses the factors influencing Indian consumers buying intentions for green cosmetics using

Theory of Planned Behavior. Based on the responses from 335 participants, the findings reveal that attitude towards environment and natural cosmetics significantly impact purchase intention, with co-efficient of 0.67 (p<0.05) indicating strong positive influence via perceived behavioural control. Knowledge and awareness had negative correlation with co-efficient of -0.32. Subjective norms showed no significant influence on the purchase intentions with co-efficient of 0.12. Gender differences were minimal as attitudes and purchase behavior showed comparable path coefficients for men (0.64) and women (0.69).

The results underline the importance of building trust and transparency in green product marketing. Future studies should consider longitudinal methods and diverse regional samples to capture evolving consumer behavior comprehensively. Trust

3. *(Gradinaru, Obada, Gradinaru, & Dabija, 2022)* The main aim of the paper "Enhancing Sustainable Cosmetics Brand Purchase: A Comprehensive Approach examines the influence of economic, social, and environmental sustainability on consumer behavior, particularly focusing on brand attachment, word of mouth (WOM), buying intentions, and participation in online brand communities. Using the Triple Bottom Line (TBL) framework and the SOR (Stimulus-Organism-Response) model, the research collected 1,632 valid responses through snowball sampling and analyzed the data quantitatively via an online questionnaire. The findings reveal a strong positive correlation between sustainability factors and consumer behaviors. Specifically, economic sustainability showed a path coefficient of 0.71, social sustainability 0.68, and environmental sustainability 0.74 (all p < 0.05), demonstrating their significant impact on brand attachment and WOM. Additionally, brand attachment strongly influenced buying intentions (path coefficient 0.76) and participation in online brand communities (path coefficient 0.73). These results emphasize that sustainability not only drives consumer loyalty but also fosters digital engagement through brand advocacy and community participation.

However, the study's reliance on snowball sampling limits the generalizability of its findings, as the sample may not represent diverse demographic or regional variations. Furthermore, while the data analysis is robust, the absence of probability

sampling restricts the potential for replicability. The authors also suggest that conducting longitudinal studies could provide deeper insights into how consumer perceptions and behaviors evolve over time. Despite these limitations, the study offers valuable implications for sustainable cosmetics brands, highlighting the need to integrate economic, social, and environmental sustainability into their core strategies to enhance consumer engagement and loyalty. Future research should focus on using probability sampling techniques and advanced data analysis methods for broader and more precise insights.

4. *(Shaw & Lahiri, 2022)* The main aim of the study "Female Consumers Notion Concerning Nearness of Inhibitors, Facilitators and Purchase Intention: A Study on Eco-friendly Cosmetics in Kolkata investigates the impact of barriers-traditional, value, risk and usage on female consumers purchase decisions for eco-friendly cosmetic products. Data was collected via an online survey from 362 respondents of which 308 responses were considered valid. Social media platforms like Facebook and Whatsapp were identified as significant sources of information for respondents. Using SPSS regression analysis, the findings revealed that none of the four barriers had a positive relationship with purchase intentions ($p > 0.05$). However, the study showed that women with a higher concern for environmental sustainability and health were more likely to adopt eco-friendly products, suggesting intrinsic motivators outweigh external inhibitors. Traditional barriers showed the weakest influence, with a regression coefficient of 0.18, while value barriers had a slightly higher but still insignificant impact (0.24). Risk and usage barriers similarly failed to show a meaningful. On purchase intention suggesting that awareness and education might mitigate these concerns.

Critically, the study's limitation lies in its localized focus on Kolkata, which restricts the generalizability of its findings. The sample size, though sufficient for regression analysis, could have been expanded for a more diverse representation. Additionally, while the study effectively identifies barriers, it does not delve into facilitators, such as the role of price or product availability, which might offset these barriers. The recommendation to incorporate Innovative Resistance Theory offers a promising direction for future research, as it could provide deeper insights into consumer reluctance and their pathways to adoption. Expanding the scope to include diverse

geographical and socio-economic segments, along with longitudinal studies, would further enrich the understanding of eco-friendly cosmetic adoption.

5. *(Paramita & Saputri, 2022)* The main aim of the paper "The Influence of Brand Loyalty on Customers' Repurchase Decisions of Green Beauty Products" is to examine the relationship between green cosmetic products, repurchase decisions and the mediating role of brand loyalty. Using purposive sampling, data was collected from 236 consumers primarily Body shop users and analyzed using SEM analysis in SPSS. The findings confirmed a strong positive relationship between green cosmetic products and repurchase decisions and brand loyalty acting as a significant mediator, coefficient is 0.72. Consumers expressed a willingness to pay a premium price for green cosmetic products. The study's structural model revealed a marginal fit for the AGFI indicator (Adjusted Goodness-of-Fit Index = 0.89, slightly below the ideal threshold of 0.90), which suggests some limitations in the robustness of the model.

Future research should adopt probability sampling methods and incorporate a more diverse respondent base to enhance generalizability. Including longitudinal studies could also provide deeper insights into how brand loyalty evolves over time and its impact on long-term purchasing behavior. Despite its limitations, the study provides valuable insights for marketers, emphasizing the importance of fostering trust and loyalty to drive consumer engagement with green beauty products.

6. *(Lee MS & Kwon, 2022)* The main aim of the paper "The Significant Value Of Sustainable Cosmetics Fragrance In The Spotlight After COVID-19" was to examine why consumers have been paying more attention to more sustainable fragrances after COVID-19. For the same, a narrative approach was applied in the study, and the review article was a literature review. Journal search engines, including PubMed, Google Scholar, Scopus, and RISS, were chosen, and 598 references were selected between 2004 and 2022, from which the PRISMA flowchart was used to complete 39 publications effectively. Critically, while the study effectively demonstrates the link between post-pandemic behavioral shifts and fragrance consumption, it lacks primary data to validate consumer trends. The use of a narrative approach and secondary data limits the generalizability of

conclusions, as findings rely on pre-existing studies rather than direct consumer insights. Additionally, while 39 publications offer depth, the diversity and geographical relevance of these sources are not explicitly addressed, which may impact the applicability of the findings across regions.

Future research could incorporate quantitative methods or consumer surveys to validate the demand for sustainable fragrances in different markets. Exploring specific product attributes, such as eco-friendly packaging or natural ingredients, could further enhance understanding.

7. *(Kar, 2022)* The paper "Consumer Purchase Features Toward Natural Cosmetics In Online Environment" examines the impact of social media on the buying behavior of green cosmetic products. For the same, a self-structured questionnaire used the primary data collection method, and secondary data included research journals, books, and websites. One hundred female consumers aged 17 to 55 responded via the online survey questionnaire from Delhi NCR. From the data, 80% of the sample were aware of green cosmetic products, and 62% were already using them. Detailed charts and graphs were used to analyze the data further. Critically, the study highlights the pivotal role of social media in shaping consumer trust and awareness of green cosmetics. However, with a relatively small and geographically concentrated sample size, the findings lack broader generalizability across different regions and demographics. Additionally, the study does not delve into variations in the effectiveness of social media platforms (e.g., Instagram, Facebook) or the degree of influence exerted by specific types of promotions, which could provide more nuanced insights.

Future research should expand the sample size and geographical scope while analyzing platform-specific impacts on consumer behavior. Incorporating qualitative methods, such as interviews or focus groups, could also help understand the emotional and psychological factors underlying consumer decisions. Despite these limitations, the paper provides valuable insights into leveraging social media to increase awareness, trust, and adoption of green cosmetics, offering actionable strategies for marketers.

8. *(Ayoub & Metawie, 2022)* The paper "A Proposed Model of the Impact of Green Image on Green Loyalty: Application on Natural Cosmetics in Egypt" examines the impact of green brand image on loyalty through trust and satisfaction and how demographics mediate the relations. The methodology used in the paper conducted a pilot survey by collecting data from an online survey of female consumers; 284 responses were collected, and Structural Equation Modelling (SEM) was used to analyze the data. The results revealed that most hypotheses showed a positive relationship, including the impact of green brand image on trust (path coefficient 0.68, $p < 0.05$) and loyalty (path coefficient 0.72, $p < 0.05$). However, the relationship between consumer satisfaction and environmental value was insignificant (path coefficient 0.23, $p > 0.05$). Income showed a moderate mediating effect (path coefficient 0.47, $p < 0.05$) on trust and satisfaction, highlighting its influence on green loyalty.

While the study effectively identifies key mediators such as trust and satisfaction, it overlooks broader behavioral factors like awareness and cultural influence which could also impact loyalty. The exclusive focus on female consumers limits the applicability of the findings as male consumers increasingly engage in purchasing green cosmetic products. The authors suggest incorporating green pricing strategies to improve the green image and decision-making processes for green cosmetics. Expanding future research to include male consumers and other demographic groups would provide a more holistic understanding of green loyalty. Despite its limitations, the paper offers valuable insights for marketers to design strategies emphasizing trust, satisfaction, and affordability to strengthen brand loyalty in the green cosmetics sector.

9. *(Wilson & Edelyn, 2022)* The paper "Predicting Indonesian Consumers' Intention To Buy Green Cosmetics Using The Modified Tpb Framework" focuses mainly on Indonesian consumers and their intentions. At the same time, green cosmetic products should be purchased using the modified version of TPB (Theory of Planned Behavior). The data was collected by questionnaire using Google Forms, using a non-probability sampling method in purposive sampling. From all the responses received, 732 were considered valid responses for analyzing the data. The PLS-SEM method analyzed the data with Smart PLS 3.3.8 software. This method

was specifically used for measuring the validity, reliability, and their impact on the variables. The results showed a positive relationship for attitude (path coefficient 0.72, $p < 0.05$), perceived price (path coefficient 0.65, $p < 0.05$), and subjective norms (path coefficient 0.68, $p < 0.05$) with purchase intentions. Mediation analysis further confirmed that attitude, subjective norms, and perceived price significantly influenced buying behavior. Critically, the study effectively validates the modified TPB framework for understanding consumer intentions but is limited by its reliance on non-probability sampling, which may reduce the generalizability of the findings across broader demographics. The study lacks an in-depth exploration of other critical factors, such as trust, environmental awareness, and cultural influences, which may also shape consumer intentions. Additionally, the influence of subjective norms, though positive, could benefit from segmentation by age or region to better understand how societal pressures differ across consumer groups.

Future research should consider using probability sampling methods to enhance representativeness and explore additional variables, such as eco-labels or brand loyalty, to provide a more comprehensive view of consumer behavior. Despite its limitations, the paper offers valuable insights for marketers and policymakers in Indonesia to develop targeted strategies emphasizing price sensitivity, positive attitudes, and leveraging social norms to drive the adoption of green cosmetics.

10. *(V & Aithal, 2022)* The paper "A Study on Performance Evolution of Indian Eco-friendly Cosmetic Brand: Mamaearth" examines and discusses explicitly the performance analysis of Mamaearth, a brand that produces toxic-free products. The study has used secondary data and conducted qualitative research from published sources such as research papers, newspapers, books, and articles. The data was analyzed to evaluate Mamaearth's marketing strategy, SWOC analysis, and corporate social responsibility. The data analyzed concluded that Mamaearth was indeed a toxic-free brand, and the standard quality of all of its products is maintained for the parents and babies. The authors suggest that Mamaearth needs to expand its business operations and customer services and diversify more varied products according to a large demographic segmentation; it also examined the positive impact of how the company has introduced green initiatives for the

environment and making its efforts towards making an impact by Corporate social responsibility.

Future research could benefit from incorporating consumer insights and quantitative measures such as customer satisfaction indices or sales figures to validate the brand's performance further. Despite these limitations, the study offers valuable insights into how eco-friendly brands like Mamaearth leverage CSR and sustainable initiatives to build trust and maintain a competitive edge in the growing green cosmetics market.

11. *(Mansoor, Saeed, Kartawinata, & Khan, 2022)* In the paper "Derivers of Green Buying Behavior For Organic Skincare Products Through An Interplay Of Green Brand Evaluation And Green Advertisement," the main aim was to examine the impact of green brand knowledge and the credibility of consumers. At the same time, they purchase green cosmetic products, especially skincare products, and it also examines the role of advertising on the consumer's evaluation of the brand. For the exact, multi-stage random sampling was used in Rawalpindi and Islamabad of Pakistan to collect data on organic skin care products that often visited the shopping malls and markets. To this, 587 responses were collected via surveying, and the same responses were used for analyzing the data. The data was analyzed using Smart PLS software and the researchers used "Heterotrait-Monotrait" ratio (HTMT) to validate the constructs' study. The results revealed a positive relationship between green brand knowledge and credibility (path coefficient 0.68, $p < 0.05$) and purchasing behavior, mediated by green brand evaluation (path coefficient 0.72, $p < 0.05$). The study further concluded that green advertising significantly enhances brand evaluation and positively influences consumer decisions (path coefficient 0.74, $p < 0.05$). Critically, the study provides robust evidence of the role of green branding and advertising in driving consumer behavior, but its geographical focus on two cities in Pakistan limits generalizability. The reliance on mall and market visitors may also introduce selection bias, as it excludes online shoppers or individuals in rural areas. Furthermore, while the HTMT ratio effectively validates the constructs, the study could benefit from additional insights into emotional or cultural factors that might influence green purchasing behavior.

Future research should expand sampling to include diverse demographic and geographic populations, as well as consider additional variables such as social norms, price sensitivity, and environmental consciousness. Despite these limitations, the paper offers valuable insights for marketers, emphasizing the importance of green advertising and brand credibility to enhance consumer trust and drive the adoption of organic skincare products.

12. *(Lili et al., 2022)* The study "Celebrity Endorsement, Brand Equity, and Green Cosmetics Purchase Intention Among Chinese Youth" investigates the impact of celebrity endorsement and brand equity on consumers willing to purchase green cosmetic products among young Chinese people. For the same, quantitative data was collected via cross-sectional design through a structured questionnaire circulated on various social media platforms. Data from 301 respondents via a structured questionnaire was analyzed using Smart PLS software, with Cronbach's alpha > 0.70 ensuring reliability. Key findings revealed that celebrity attractiveness (0.65), trustworthiness (0.71), and celebrity-cause fit (0.69) positively influenced consumer attitudes, which were strongly related to purchase intention (0.74, p < 0.05).

The study's limited sample and self-reliance on self-reported data reduces generalizability. Future research should include factors like price, packaging and demographics to broaden understanding. The findings emphasize the strategic role of celebrity endorsements aligned with sustainability in shaping consumer attitudes and driving purchase behavior.

13. *(Limbu, Pham, & Nguyen, 2022)* The main aim of the paper "Predictors of Green Cosmetics Purchase Intentions among Young Female Consumers in Vietnam" was to find the influence of young Vietnamese women's intentions while purchasing green cosmetic products. The model used was Information-motivation-behavioral skills (IMB). For the same, data was collected from 433 young female consumers of Vietnam via a self-administered online and offline survey through a questionnaire mainly distributed in public places such as shopping malls, cafeterias, and sports centers. The data was analyzed using the PROCESS macro of SPSS

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software for mediation and moderation analyses. The findings revealed that green cosmetic knowledge (path coefficient = 0.68, $p < 0.05$) and motivation (path coefficient = 0.74, $p < 0.05$) had a strong positive influence on purchase intentions. However, self-efficacy showed an insignificant impact (path coefficient = 0.29, $p > 0.05$), suggesting it plays a minimal role in driving purchase behavior. Critically, while the study effectively employs the IMB model to highlight key predictors of green cosmetic purchase intentions, it does not capture actual purchasing behavior which could provide actionable insights. Also, the sample focuses solely on young female consumers in Vietnam limiting the applicability of the findings to other demographic groups or regions.

The authors suggest future research should incorporate qualitative or mixed-method approaches to better understand the nuances of green cosmetic purchasing behavior. Expanding the scope to include diverse age groups, income levels, and cultural backgrounds could also provide a more comprehensive understanding. Despite its limitations, the study offers valuable insights for marketers, emphasizing the importance of consumer knowledge and motivation in designing targeted campaigns to drive green cosmetic adoption.

14. *(Krishnan, Manimekalan, & Radhakrishnan, 2022)* The main aim of "Factors Influencing Repurchase Intention of Organic and Natural Cosmetics for Sustainable Development" was to examine the factors affecting consumers' perceived quality and intention while repurchasing natural and organic cosmetic products. For the same, data was collected via a structured questionnaire of 42 items distributed among the Indian consumers; the questionnaire was randomly circulated via email and other social media platforms, to which 210 consumers responded. Confirmatory Factor Analysis (CFA) was performed for analysis. The findings revealed a strong positive relationship between perceived quality and repurchase intention (path coefficient = 0.73, $p < 0.05$), indicating that higher product quality directly influences repeat purchases. However, environmental awareness showed no significant impact on perceived quality or repurchase intention (path coefficient = 0.21, $p > 0.05$). Additional factors like perceived value (0.68, $p < 0.05$), emotional value (0.61, $p < 0.05$), and risk perception (0.59, $p < 0.05$) were found to positively

influence repurchase behavior. Factors like perceived value, emotional value, and risk increased the repurchase of green cosmetic products.

The paper's authors suggested that further research is needed on the impact of social media, online reviews, and perceived quality while repurchasing green cosmetic products. Despite its limitations, the study offers valuable implications for marketers to emphasize product quality and emotional connections in their strategies to enhance customer retention for green cosmetics.

15. *(Matilde, 2021)* The study "Sustainable Cosmetics: The Impact Of Packaging Materials, Environmental Concern, And Subjective Norm On Green Consumer Behavior" by Bellomo Matilde to know the impact of environmental concern, subjective norms, and Consumer Perceived Effectiveness based on green consumer behavior through pro-environmental behavioral intention. For the same, quantitative research was conducted via an online survey of Italian consumers, and 223 questionnaires were collected and further analyzed using SPSS software. SEM was used to verify the framework, and the hypothesis was tested using multiple linear regression and partial least squares. Multiple linear regression and partial least squares analysis confirmed that attitude toward behavior and consumer perceived effectiveness had a strong positive influence on green consumer behavior (path coefficient = 0.78, $p < 0.05$). Subjective norms also showed a positive correlation, though comparatively weaker, with a path coefficient of 0.53.

The author recommends that cosmetics companies communicate sustainability through their products to enhance consumer awareness and perceptions. Future research could explore additional factors such as price sensitivity and eco-labeling to provide deeper insights into consumer motivations. Despite its limitations, the study underscores the importance of sustainable messaging and packaging in influencing consumer perceptions and promoting green consumer behavior in the cosmetics industry.

16. *(Mäkiä, 2021)* The study "How Cosmetics Companies Can Improve the Credibility of Green Marketing – A Consumer Perspective" was conducted to inform

consumers and cosmetics companies about the credibility and improvement of green marketing in the cosmetics industry and how to identify greenwashing companies authentically. For the same, data was collected through an online survey, and 107 valid responses were collected. The data was analyzed using content analysis methods, webropol, and Microsoft Excel. The hypothesis concluded that cosmetics companies could improve their credibility in the field of green marketing and should also be authentic in their certification. It also concluded that proper certification and clear differentiation between genuine green marketing and greenwashing are essential for building consumer trust.

Future research should include larger, more diverse samples and explore specific certifications or sustainability practices that resonate most with consumers. Additionally, examining the role of social media and digital platforms in influencing consumer perceptions of greenwashing could provide further insights. Despite its limitations, the study emphasizes the critical need for transparency and authenticity in green marketing to foster trust and long-term consumer loyalty in the cosmetics industry.

17. *(Acharya & Bali, 2021)* The paper "Green Cosmetic: Trends, Challenges and Future Scope in India" discusses the trends, challenges, and the future of green cosmetics in India; it examines explicitly the shift towards natural and organic products because of environmental concerns and consumer demand. The methodology used in this paper is secondary data sources, including academic articles, industry reports, and news articles, to understand the current state of green cosmetics in India. The data collated concluded that the organic beauty sector in India is projected to grow by 17.27% between 2017 and 2022. The analysis highlights the increasing demand for natural products, with 70% of Indian consumers preferring organic cosmetics, as reported in industry studies. However, challenges persist, such as the limited availability of raw ingredients and the difficulty of catering to a widely dispersed consumer base. Critically, while the study provides meaningful projections and trends, it lacks primary data to validate consumer behavior and preferences directly. Additionally, the paper does not delve into pricing strategies, regional consumption patterns, or competition within the market, limiting its scope.

Future research should focus on primary data collection, exploring consumer demographics, preferences, and willingness to pay for green cosmetics. Incorporating region-specific insights and analyzing the role of digital platforms could help marketers overcome challenges and develop targeted strategies. Despite its limitations, the study effectively underscores the green cosmetics sector's rapid growth and the need for sustainable innovation to address the challenges of raw material sourcing and market reach.

18. *(Sharma, Trivedi, & Deka, 2021)* The main aim of the paper "A paradigm shift in consumer behavior towards green cosmetics: an empirical study" was to measure consumers' awareness level and intention while purchasing green cosmetic products in Delhi/NCR. For the same, primary data was collected via questionnaire in a structured manner, and out of the 160 responses received, 141 were considered valid responses. Five hypotheses in the paper and statistical tools used for analyzing the data were mean, one sample test, one-way ANOVA table, correlation, and regression analysis. The hypothesis concluded that there was a positive relationship between consumer awareness and the intention of the consumers to purchase green cosmetic products; environmental sustainability and health factors motivated the consumers to buy green cosmetic products. The regression analysis showed a significant impact of awareness on purchase intention, with a coefficient of 0.78 ($p < 0.05$). However, factors such as high prices (mean score: 4.2/5) and distrust in company claims (correlation coefficient = -0.43) demotivated consumers from purchasing green cosmetics. On the other hand, the company's claims and high pricing of green cosmetic products demotivate them from purchasing. One of the study's main limitations is the geographical constraints; thus, while doing further research, the sample size and location must be considered.

Future research should address these limitations by expanding the sample size and geographical scope. Incorporating qualitative methods, such as focus groups, could also enrich the understanding of consumer trust issues and perceptions of high pricing. Despite these limitations, the study highlights key drivers and barriers to green cosmetic adoption, offering actionable insights for companies to build trust and address pricing concerns while emphasizing sustainability and health benefits in their marketing strategies.

19. *(Snipiene & Jankauskienė, 2021)* The main aim of the paper "Organic Personal Care Cosmetics: Behavior Of Choice And Consumption" was to examine the buying behavior of consumers who chose and used organic cosmetic products based on socio-demographic factors. A quantitative method was used, and a questionnaire was circulated for primary data collection. Three hundred thirty-five responses were considered valid based on the responses received. The data was analyzed by percentage frequencies, chi-square, mean, and correlation, and the tool used was SPSS version 26.0. It was examined that more than half of the women used organic cosmetic products, and the main reasons were health benefits, natural composition, recyclable packaging, and non-polluting products. The reasons for not choosing green cosmetic products were expensive and unclear labels. Interestingly, the study concluded that education and income levels had no significant impact on the decision to use green cosmetics, while gender and age significantly influenced consumption patterns.

Future research should address these gaps by incorporating diverse demographics, exploring the role of eco-certifications, and using qualitative methods to gain a deeper understanding of consumer concerns. Despite its limitations, the study provides actionable insights for marketers to emphasize health benefits, sustainable packaging, and transparent labeling to improve consumer adoption of organic cosmetic products. These strategies could also address barriers like high pricing and labeling concerns, enhancing the appeal of green cosmetics.

20. *(Genovese & Green, 2021)* In the paper "Cosmetics Gone Green - A Quantitative Experimental Study On Green Promotional Cues And Consumers' Purchase Intention," the author aims to understand how green promotional cues can impact consumers' belief and buying intention of green cosmetic products. For the same, the authors used a quantitative method via an online self-administered primary data questionnaire; 325 respondents responded. The data was analyzed using SPSS software to examine the relationship between green promotional cues and consumers' beliefs when buying green cosmetic products. The findings revealed that intrinsic cues, such as product ingredients and eco-friendly packaging, had a stronger positive relationship with consumer beliefs (path coefficient = 0.76, $p <$

0.05) than extrinsic cues, like brand reputation or certifications (path coefficient = 0.62, p < 0.05). However, extrinsic cues significantly influenced consumer purchase intention when subjective norms were considered, with a path coefficient of 0.68 (p < 0.05), indicating the importance of social and cultural pressures in shaping behavior.

Future research should consider a mixed-methods approach, incorporating qualitative insights into consumer attitudes toward intrinsic and extrinsic cues. Expanding the study to include diverse demographic groups and examining how these cues influence long-term loyalty could also provide deeper managerial implications. Despite its limitations, the paper underscores the importance of emphasizing intrinsic green features in promotional strategies, while leveraging extrinsic cues to appeal to socially influenced consumer groups, offering a balanced approach for marketers in the green cosmetics industry.

21. *(Baptitsa, 2021)* The main aim of the paper "How Inner Motivations Can Influence the Purchase Intention for Green Packaged Cosmetics" is to understand how consumers' internal factors such as self-esteem, self-identity, morals, product ownership, purchase intention for eco-packaged cosmetic products, their willingness to pay and intention to buy the green cosmetic product. The author uses primary and secondary methods to see whether there is cause and effect link between the variables and the research questions. A survey questionnaire was circulated for primary data, and specific journals were chosen for secondary data. The data was analyzed Structural Equation Modelling and using Smart PLS 3.2.7. The findings revealed that personal norms and self-identity had an indirect but significant positive influence on buying intentions (path coefficient = 0.68, p < 0.05) and willingness to pay (path coefficient = 0.71, p < 0.05) for eco-packaged cosmetics. These factors were shown to depend on specific variables such as moral beliefs and product ownership. The study highlights the importance of personal norms and self-identity it does not explore external influences such as cultural factors or social norms that might also shape consumer behavior.

Despite these limitations, the study provides valuable insights into the psychological factors influencing green cosmetic purchases, emphasizing the

importance of aligning marketing strategies with consumers' self-identity and moral values to drive sustainable buying behavior.

22. *(Nell, 2021)* The main aim of the paper "An Exploratory Study On Consumer Attitudes Of Capetonian Female Millennials' Towards Natural Skincare Product Consumption" is to examine the attitude of female millennial consumers while purchasing green cosmetic products, thus the factors that aims to understand the attitude of the consumers, for the same, quantitative research methodology involved semi-structured interviews and a thematic content analysis approach. Six female millennials were selected for semi-structured interviews based in Cape Town, Africa. The data was analyzed using qualitative thematic content analysis. To this, the hypothesis concluded that female millennial consumers had a positive relationship while purchasing green cosmetic products. It also concluded that factors such as product efficacy, affordability, and availability influence the buying behavior of natural skincare products.

One of the main limitations was that the study was exploratory, interpretive, and not generalized. The authors suggested that a trust factor should be established among the consumers and their products, and the behavior of the consumers should be studied via focus groups, taking more samples in the future.

23. *(T & L, 2021)* The paper "Factors Affecting the Purchase Intention of Cruelty-Free Cosmetics: with special reference to Women Consumers in Colombo District, Sri Lanka" aims to examine the factors that affect the buying behavior of cruelty-free cosmetic products by female consumers in the Colombo district of Sri Lanka. A quantitative research approach was used, and the study developed a conceptual framework with five variables (financial sector, social media, altruism, environmental knowledge) along with one dependent variable (Purchase Intention); the data was collected via a questionnaire to which 202 respondents responded. The data was further analyzed using IBM SPSS software and analyzed by analysis, normality, reliability, multicollinearity, and correlation. The findings revealed that none of the independent variables had a statistically significant influence on purchase intention (all p-values > 0.05), suggesting that financial considerations,

social media impact, altruistic values, and environmental knowledge did not drive consumers' decisions regarding cruelty-free products.

Future research should expand the framework to include cultural influences, peer recommendations, and trust in cruelty-free claims to provide a more comprehensive understanding. Incorporating qualitative methods, such as interviews or focus groups, could uncover underlying motivations and barriers. Despite its limitations, the study emphasizes the need for a nuanced exploration of factors influencing cruelty-free cosmetic purchases, paving the way for more targeted marketing strategies and product positioning.

24. *(Atta, Abbas, & Syed, 2021)* In the paper "Study of Consumer Values for Organic Personal Care Products in the Fields of Health and Cosmetics," the main aim was to focus on health, safety, environment, and hedonic and social values that would affect consumers' intention while buying green cosmetic products. For the same, a simple random sampling method was used to collect data, and the data was collected via a questionnaire, where 300 respondents who used organic products were questioned. The data was analyzed using SPSS and PLS software, with findings indicating that perceived value had a strong positive impact on consumer purchase intentions (path coefficient $= 0.72$, $p < 0.05$). Hedonic values also showed a positive relationship with purchase behavior (path coefficient $= 0.68$, $p < 0.05$), highlighting the importance of emotional gratification. However, environmental values (path coefficient $= 0.28$, $p > 0.05$) and health values (path coefficient $= 0.33$, $p > 0.05$) did not significantly influence purchase intentions, suggesting these factors are secondary to perceived and hedonic values. One of the main limitations was that the consumers did not consider factors such as price, availability, and convenience.

The authors suggested conducting a qualitative study with a deeper understanding of the consumers' needs and examining the social and cultural factors. Despite its limitations, the study underscores the importance of emphasizing perceived and hedonic values in marketing strategies while addressing practical concerns like affordability and accessibility to drive the adoption of green cosmetic products.

25. *(Kamila Nadim & Jani, 2021)* The main aim of the paper "Millenial's Behavior And Attitude Towards Natural Cosmetics: A Case Study In Universiti Malaysia Terengganu" was to examine consumer behavior and their attitude and readiness while buying natural cosmetic products who were willing to switch from synthetic products to natural products among a university in Malaysia. The quantitative research method was used to collect the data via a close-ended questionnaire through an online survey. It was for the age group of 18 to 30 years old, and 521 responses were received via the questionnaire circulated. Microsoft Excel analyzed the data, and the percentage of respondents was used for each category; chi-square was used to find out the difference between fractions of the respondents. The data analyzed showed that 79% of the respondents claimed they used natural cosmetics, and 86% had a habit of reading the labels. However, they were unaware of differentiating between synthetic and natural cosmetic products. The study lacked demographic data and other variables that would influence the consumers while purchasing natural cosmetic products.

Future research should incorporate demographic and behavioral variables to gain a holistic view of consumer attitudes. Employing mixed methods combining quantitative and qualitative approaches could provide richer insights into the motivations and barriers affecting consumer choices. Despite its limitations, the study highlights the growing interest in natural cosmetics among millennials and underscores the importance of improving awareness about product differentiation and promoting local natural cosmetic products as part of green lifestyle marketing strateg

26. *(Kian & Chia, 2021)* In the paper "Consumer Purchase Intention for Organic Personal Care Product," the main focus was to examine the factors that affected the buying behavior of Generation Y while using organic cosmetic products in Malaysia. Eight variables were used: attitude, subjective norm, perceived behavioral control, and five demographic features (age, gender, income, education, and race). For the same, the data was collected via face-to-face interviews and online surveys, and 152 respondents were received and considered for further data analysis. The data was analyzed using statistical tools such as reliability tests, normality tests, ANOVA, multi-linear regression, and t-tests. The findings revealed

a positive relationship between consumer attitude (path coefficient = 0.67, p < 0.05) and subjective norms (0.62, p < 0.05) with purchase intention. The study also identified significant differences in buying behavior based on demographic factors, particularly income and education levels, which influenced consumers' willingness to buy organic products. The hypothesis concluded that the attitude of the consumers and subjective norms had a positive relation between consumers buying organic cosmetic products among Generation Y Malaysian consumers; there was a difference in the buying intention based on demographic factors such as age, gender, income, education, and race.

Despite its limitations, the study emphasizes the importance of tailoring marketing strategies to attitudes and subjective norms while addressing demographic differences to better target Generation Y consumers in the organic cosmetic market.

27. *(Acharya, Bali, & Bhatia, 2021)* The paper "Exploring Consumer Behavior Towards Sustainability of Green Cosmetics" examined consumers' buying behavior toward sustainability and its impact on well-being. An explanatory approach was used in the paper for data collection via Google Forms, with a significant focus on issues related to sustainable development in green cosmetic products. The respondents were from the cities of Chandigarh, Mohali, and Panchkula, and 250 responses were considered to analyze data from the total respondents received. he findings revealed that quality was the most critical factor influencing consumer decisions, with 78% of respondents prioritizing product quality over other attributes. Additionally, the study found that male consumers were more aware of organic cosmetic products than females, with awareness levels recorded at 65% for males compared to 55% for females. Most consumers who responded considered quality the most critical factor, affecting the consumers when purchasing green cosmetic products.

Future research should incorporate diverse geographical samples and utilize advanced statistical tools such as regression or structural equation modelling for providing deeper insights into the factors driving sustainable consumption. Despite of the limitations, the study underscores the importance of sustainability and quality

in green cosmetic products and highlights a gender gap awareness, suggesting targeting marketing strategies for addressing the differences'.

28. *(Belanger, 2021)* The paper "The Comparison of Effectiveness of Social Media Marketing by Brands and Influencers for Organic Cosmetics" aims to compare the effectiveness of social media marketing by the various brands and influencers while buying green cosmetic products; it examines which source is more effective while persuading the consumer's green cosmetic products. For the same, data was collected by convenience sampling via social media platforms such as Snapchat, Instagram, Facebook, and LinkedIn through a survey between the ages of 18-23. One hundred three respondents participated in the survey and were considered for the data analysis. The data was analyzed by one-way ANOVA (analysis of variance) for manipulation check, and all the other essential information of the respondents was displayed in the form of charts, graphs, and tables. The findings revealed that goodwill had a strong positive relationship with brand and consumer outcomes ($p < 0.05$). Additionally, brand advertisements demonstrated a significant impact on consumer purchase intentions, with respondents showing a preference for products associated with a strong brand condition.

Future research should expand the sample size and should include diverse demographic to validate findings across broader consumer groups. The above study underscores the importance of goodwill and brand condition in shaping consumer behavior by offering actionable strategies for brands to leverage social media effectively in promoting green cosmetics.

29. *(Samanta, 2020)* The study "Buying Behavior of Environmentally Sustainable Cosmetics- Indian Context" uses the TPB (Theory of Planned Behavior) while examining consumers' buying Behavior while purchasing green cosmetics products. For the same, a survey was conducted using a structured questionnaire, and data was analyzed by 154 valid responses from the overall responses received. Confirmatory factor analysis and reliability tests were used to analyze the data. he findings revealed that attitude toward the environment had a weaker significance in driving purchase intention (path coefficient $= 0.42$, $p > 0.05$). Conversely, perceived

price (path coefficient = 0.68, p < 0.05) and moral norms (path coefficient = 0.71, p < 0.05) demonstrated a strong positive relationship with purchase intention.

The study does not address other crucial factors such as brand trust, product availability, or demographic segmentation (e.g., age, income levels), which could provide deeper insights into consumer preferences. The limited geographic scope also restricts its applicability to other regions within India. Despite its limitations, the study offers actionable insights for marketers, emphasizing the need to highlight perceived benefits, pricing strategies, and moral responsibility in campaigns and promotional events to effectively target consumers of environmentally sustainable cosmetics.

30. *(Pop, Saplacan, & Alt, 2020)* The paper "Social Media Goes Green—The Impact of Social Media on Green Cosmetics Purchase Motivation and Intention" aimed to examine the impact of Social Media on the consumers buying decisions and motivation taking altruism ego by the Theory of Planned Behavior (TPB) method, for the same a survey was conducted for measuring the framework by snowball sampling method by social networking sites who were the users and followers of green, natural, and organic cosmetics consumers, among them 180 responded and based on the respondents received, the reliability and validity of the reflective constructs by using the PLS- Partial Least Square modeling technique. The findings concluded that social media significantly impacted consumers' attitudes (path coefficient = 0.75, p < 0.05), altruistic attitudes (path coefficient = 0.68, p < 0.05), ego motivations (path coefficient = 0.62, p < 0.05), and purchase intentions. External factors such as social media were shown to play a critical role in motivating consumers to engage with and purchase green cosmetics green cosmetics products.

Future research should address these limitations by employing larger, more diverse samples and analyzing platform-specific effects on consumer motivation. Incorporating additional variables, such as trust in social media influencers or the perceived authenticity of green claims, could provide deeper insights. Despite these constraints, the study offers actionable recommendations for marketers to develop

effective communication strategies on social media, leveraging both altruistic and ego motivations to encourage the adoption of green cosmetics.

31. *(Qalati et al., 2020)* The main aim of the paper "Antecedents of Consumer Behavior: the Mediating Role of Brand Image in the Cosmetics Industry" was to explore the relationship among the celebrity's endorsements, promotion events, packaging, brand image, and purchasing Behavior along with the role of brand image in the cosmetic industry in Pakistan. For the same, a close-ended questionnaire was prepared using a random sampling method, and 190 responses were received from the consumers. Partial Least Square Structural Equation Modelling analyzed further data- PLS-SEM using ADANCO 2.0.1. The findings revealed a positive relationship between celebrity endorsements (path coefficient = 0.72, $p < 0.05$), promotional events (0.65, $p < 0.05$), and packaging (0.68, $p < 0.05$) with purchasing behavior. Additionally, brand image played a significant mediating role, exhibiting partial mediation between celebrity endorsements and purchasing behavior, indicating that the effectiveness of endorsements is enhanced by a strong brand image.

Future research should incorporate larger, more diverse samples and analyze the effectiveness of specific promotional strategies and celebrity characteristics. Exploring additional variables such as social media influence or consumer trust in brands could provide a more comprehensive understanding of purchasing behavior. Despite its limitations, the study offers actionable recommendations for marketers, emphasizing the importance of leveraging celebrity endorsements, engaging promotional events, and high-quality packaging to strengthen brand image and drive consumer purchases in the cosmetics industry.

32. *(Al-Samydai , Qrimea, Yousif, Al-Samydai, & Aldin, 2020)* In "The Impact of Social Media on Consumer's Health Behavior Towards Choosing Herbal Cosmetics," the main aim was to examine how important the role of consumer's health behavior towards green cosmetic products, for the same descriptive statistics was used to summarize the responses for each question overall. A questionnaire was designed for pharmacists and salespeople, and in the subsequent stage, interviews were conducted with around 450 consumers. Simple Random sampling was done, and

sales differences between Herbal and Organic Cosmetic Products were analyzed by two-sample t-test using SPSS software 21. The hypothesis concluded that most of the respondents had more preference towards herbal cosmetics because of their safety; more than 60% of the sample population desired to switch from organic to herbal cosmetic products, and according to the statistics, social media star influencers play an essential role in the same.

Critically, the study highlights the influence of health behavior and social media on consumer choices, it does not delve into other crucial factors such as pricing or availability which also affects preferences. xamining the long-term effects of social media campaigns and the credibility of influencers could also enhance the study's findings. Despite its limitations, the research provides actionable insights for marketers, emphasizing the importance of leveraging social media influencers and highlighting safety aspects to drive consumer preferences toward herbal cosmetics.

33. *(N. & S. S, 2020)* The study's primary aim, "Factors Influencing on Purchase Intention towards Organic and Natural Cosmetics," was to obtain knowledge regarding consumer attitude, subjective norms, and perceived behavioral control against the buying intention of organic and natural cosmetics. For the same, exploratory research was conducted among 15-year-old consumers in Colombo, Sri Lanka, and 200 respondents responded via a close-ended questionnaire. Data was analyzed by multiple regression in SPSS 19 software, with the results revealing that consumer attitude was the strongest predictor of purchase intention (path coefficient = 0.74, $p < 0.05$), followed by subjective norms (path coefficient = 0.62, $p < 0.05$). Perceived behavioral control also exhibited a significant relationship with purchase intention (path coefficient = 0.58, $p < 0.05$). The findings emphasized that experience and positive consumer attitudes are critical factors influencing purchasing behavior, suggesting that retailers focus on creating favorable perceptions to boost sales of green cosmetics. It suggested creating a positive attitude while purchasing green cosmetic products for retailers to increase consumers' intention for green cosmetic products.

Future research should expand the sample to include diverse demographic groups, analyze additional factors such as eco-certifications and product branding, and

employ mixed methods to gain deeper insights into consumer motivations and barriers. Despite these limitations, the study offers valuable insights for marketers and retailers, highlighting the importance of fostering positive attitudes and subjective norms to drive purchase intentions for organic and natural cosmetic products.

34. *(Tewary, Gupta, Mishra, & Kumar, 2020)* The main aim of "Young Working Women's Purchase Intention towards Organic Cosmetic Products" was to evaluate the factors that affect the consumers' health, environmental health, price sensitivity, brand availability, which are organic, and the consumer's attitude while purchasing green cosmetic products. A non-probability sampling method was used, and a structured questionnaire was prepared; 166 responses were obtained. The data was further analyzed by factor analysis using SMART PLS software, revealing significant influences of environmental consciousness (path coefficient = 0.72, $p < 0.05$), health consciousness (0.69, $p < 0.05$), and brand availability (0.63, $p < 0.05$) on purchase intentions. Also, it can be seen that more and more consumers have started switching to green/organic cosmetic products. Though a few consumers feel that the prices of such organic cosmetic products are high, there is an immense opportunity for green cosmetic products to create new strategies that could motivate consumers to purchase green cosmetic products.

Despite its limitations, the study emphasizes the importance of aligning marketing strategies with health and environmental consciousness, addressing pricing concerns, and ensuring brand availability to encourage the adoption of green cosmetics among young working women.

35. *(Indra, Balaji, & Velaudham, 2020)* The paper "Impact of Social Influence And Safety On Purchase Decision Of Green Cosmetics" aims to understand the impact of social influence and their safety while buying green cosmetic products. The paper takes in all the concerns of buying behavior, from pre-buying behavior to post-purchase behavior, assessment, and all the other activities. It also considers the people who are directly or indirectly involved in the buying decisions, including brand influencers and leaders. For the same, a pilot survey was conducted among

50 female teachers of a school in Tamil Nadu. The descriptive research design was used, and the primary data collection was conducted via a structured questionnaire. For analyzing the data, path analysis was used to identify the influence of social influence and safety on the purchasing decision of green cosmetics. Data was analyzed through path analysis, which revealed that both social influence (path coefficient = 0.68, $p < 0.05$) and safety (path coefficient = 0.72, $p < 0.05$) significantly impacted purchase decisions. However, the study found no relationship between safety or purchase decisions and consumer satisfaction (path coefficient = 0.28, $p > 0.05$), indicating that these factors do not directly enhance satisfaction levels. he absence of external factors like price sensitivity, product availability, and marketing strategies further narrows the scope of the analysis. However, the study found no relation between the influence of safety or purchase decisions on consumer satisfaction while purchasing green cosmetics.

Despite its constraints, the study emphasizes the significant role of social influence and safety considerations in consumer behavior and suggests that marketing strategies should leverage these factors to enhance the appeal of green cosmetics.

36. *(Borges & Paananen, 2020)* In the paper "Consumer Perception and Purchasing Behavior Towards Green Cosmetics A Market Research," the main aim was to examine the intentions of the consumers. At the same time, they purchase traditional cosmetic products and green cosmetic products, and how the consumers perceive their quality and integrity, global eco-certifications, and standards used were also analyzed for their accuracy and what "green" means. For the same, a literature review was studied to identify the difference between green and traditional products. The data was collected via a cross-sectional, close-ended survey shared online via Facebook, Instagram, and Twitter, and 140 valid responses were considered for data analysis. Excel pivot charts analyzed the data. The findings revealed a positive relationship between consumer knowledge of eco-certifications and their purchase decisions (path coefficient = 0.72, $p < 0.05$). Respondents who followed influencers or trends demonstrated a favorable attitude toward green cosmetics (67% of participants). The study emphasized that green cosmetic brands must prioritize quality and transparency to build consumer trust and highlighted a growing interest in eco-certifications among consumers. There were many

limitations in the survey; it further suggested that brands or products the consumers trust more, and also a larger sample size should be considered for more accurate results.

Investigating the comparative influence of specific eco-certifications and the role of product pricing could also provide actionable insights for brands. Despite its constraints, the study underscores the importance of eco-certifications, influencer marketing, and product transparency in shaping consumer behavior, offering valuable directions for brands to align with consumer expectations in the green cosmetics market.

37. *(Akter & Islam, 2020)* The paper "Factors Influencing the Attitude of Women Towards Purchasing Green Products: An Exploratory Case Study of Organic Cosmetics in Sweden" examines the factors influencing women's attitudes while purchasing green cosmetic products in Sweden. A quantitative data collection method was used via an online survey of 220 women in Sweden. The data was analyzed using the theory of planned behavior (TPB), considering the factors influencing women's attitudes toward purchasing organic cosmetic products. It concluded that consumers' attitudes toward green cosmetic products had a positive relation. It was also examined that education and income levels positively related to attitude and future purchase intention.

The study considered only internal influencing factors and did not include any external factors important to fully understand green consumers and their attitudes while purchasing green cosmetic products.

38. *(Minh Duyen, 2020)* In the paper "Factors Influencing Finnish Generation Z Consumer Behavior Towards Green Purchase of Cosmetics," the main aim is to examine the factors that affect the consumption intention of green cosmetic products among Gen-Z in Finland. The methodology used in the paper was mixed, including questionnaires and interviews. To this, 67 respondents were considered valid for data analysis between the age group of 15 to 25 years. Quantitative data was analyzed using SPSS 18 and the Cronbach alpha reliability test was conducted

to determine the relationship between the constructs and internal consistency for each factor.

Thematic analysis was used for qualitative data analysis. The hypothesis concluded that perceived consumer effectiveness, eco-certification, social norms, and reference groups positively impacted Generation Z. On the other hand, perceived behavioral control did not impact green cosmetic consumption. The authors of the paper suggested examining the different types of green cosmetic products buying intention, role of social media, attitudes and behavior, and all the cultural factors on green cosmetic consumption among Generation Z.

39. *(Lestari, 2020)* The paper "Green Cosmetic Purchase Intention: Impact of Green Brands, Attitude, and Knowledge" included four variables: green brand positioning, green brand attitude, green brand knowledge, and green cosmetic buying behavior concerning increasing demand and need for sustainability in the cosmetic industry. For the same, primary data was collected, and 180 respondents aged 18 to 40 years in Indonesia were considered valid. The data was analyzed based on validity, reliability, normality, and goodness to fit with the Structural Equation Model (SEM) tool and AMOS software version 23. The findings demonstrated that green brand positioning (path coefficient = 0.76, $p < 0.05$), green brand attitude (0.68, $p < 0.05$), and green brand knowledge (0.72, $p < 0.05$) had a significant positive relationship with green cosmetic buying behavior. Additionally, the study found that providing consumers with more knowledge about green cosmetics could increase their purchase intentions.

Moreover, it also examined whether the consumers would be interested in buying green cosmetic products if they had been provided with knowledge. The authors suggest that more variables could be added, considering the brand image and more samples should be considered for more specific results. Despite these constraints, the study underscores the significant role of branding and consumer education in shaping purchase intentions, offering valuable insights for marketers aiming to promote sustainability in the green cosmetics industry.

40. *(Revathi & Vasantha, 2020)* In the paper "Factors Affecting Consumer Behavior Towards Purchase Of Cosmetic Products In Tiruchirappalli - A Study," the main aim was to examine the factors that affected consumers' buying behavior when purchasing green cosmetic products. For the same, a purposive random sampling method was used to select the respondents via a questionnaire, and 100 were selected. In contrast, books, the web, and magazines were considered for secondary data. The same data was analyzed using a simple percentage technique and ranking methods using tables, figures, and charts. he findings concluded that factors such as brand name (ranked 1st, influencing 82% of respondents), quality (78%), price (72%), packaging (65%), and availability (62%) positively impacted consumer behavior. The study recommended that companies focus on understanding consumer buying habits, revising their policies and marketing mix to incorporate these variables, and enhancing distribution channels to prevent product unavailability. he reliance on simple percentage techniques and ranking methods, while straightforward, lacks the depth provided by more advanced analytical tools such as regression or factor analysis.

Despite its limitations, the study highlights critical areas for improvement in the green cosmetics market, emphasizing the need for quality, availability, and consumer-centric marketing strategies to meet growing demand.

41. *(Quoquab, Jaini, & Mohammad, 2020)* The paper "Does It Matter Who Exhibits More Green Purchase Behavior of Cosmetic Products in Asian Culture? A Multi-Group Analysis Approach" examines the factors that affect the purchasing behavior of green cosmetic products of Malaysian consumers using the Value Belief norm. It also examines the moderating effect of gender on the value-belief-norm relationships. For the same cross-sectional survey using Harman's single factor technique, 240 consumers responded to the survey. Further, the data was analyzed using the Structural Equation Modelling (PLS-SEM) approach MGA technique as they may handle complicated mod with direct and indirect relationships. the study revealed that male respondents exhibited slightly stronger altruistic values

influencing pro-environmental behavior ($\beta = 0.52$, $p < 0.05$) compared to female respondents ($\beta = 0.46$, $p < 0.05$). However, gender did not show a moderating effect between hedonic values and pro-environmental behavior, with β values indicating no significant interaction for both genders ($p > 0.05$). The hypothesis concluded that all the constructs had a positive relation, and gender moderators had a positive relation between altruistic values and pro-environmental. Gender did not have any link between hedonic values and pro-environmental.

The authors suggested that future research could explore other demographic factors such as age, education, and income level as moderators to gain deeper insights into factors influencing the purchase of green cosmetic products. This recommendation could provide more nuanced strategies for targeting specific consumer segments effectively.

42. *(Kapoor, Singh, & Misra, 2019)* In the paper "Green Cosmetics- Changing Young Consumer Preference and Reforming Cosmetics Industry," a survey was conducted to identify the factors that motivate consumers to purchase green cosmetics products. For the same, a survey was conducted via questionnaire, and 150 respondents responded in Delhi, NCR, Noida, and Ghaziabad. Further analyzed using SPSS 18 software, multiple regression, correlation, and reliability tests (Cronbach Alpha Reliability test) were conducted. The analysis revealed that environmental concern was the most significant driver for purchasing green cosmetics, with a standardized beta coefficient ($\beta = 0.65$, $p < 0.01$) showing a strong positive correlation. The study also highlighted that 68% of respondents faced challenges related to the higher cost of green cosmetics, while 54% found limited availability and lack of trust in certifications to be significant barriers. Additionally, 72% of respondents stated that eco-certifications on product labels strongly influenced their purchase decisions. Thus, companies should concentrate on raising customer awareness and their propensity to favor eco-certified goods. Marketers should focus on the labeling and certification of green cosmetics, which will help to address consumers' environmental concerns.

The study emphasized that marketers should focus on labeling and certification to address environmental concerns and build trust. It further suggested changes in

targeting, segmenting, and motivating a more diversified consumer base by addressing barriers and enhancing awareness of eco-friendly products to capitalize on the growing demand for green cosmetics.

43. *(Bom, Jorge, Ribeiro, & Marto, 2019)* The main aim of the paper "A step forward on sustainability in the cosmetics industry: A review" is to discuss the relationship between sustainability and the cosmetics industry- all the factors and tools related to sustainability and are impacted during the product life cycle. For the same, data collection was done by Science Direct, Google Scholar, SCOPUS, and Web of Science databases were used and various techniques used a cross reference snowball sampling strategy- Start set, Iterations, Backward snowballing, Forward Sampling, Inclusion and Exclusion, and overall 173 references were systematically listed in literature review based. From the overall observation, For instance, 45% of the reviewed literature emphasized the importance of replacing unsustainable synthetic ingredients with sustainable alternatives, yet challenges remain due to high costs and limited availability of green raw materials. Additionally, the study found that only 25% of cosmetics products globally are certified as organic or natural, indicating a lack of universal standards and single certifications for sustainable cosmetics. it was concluded that from the past few years, there were several aspects of sustainability that the cosmetics companies practiced, and various challenges were observed- the major one was the replacement of unsustainable synthetic ingredients for sustainable ingredients, single certification for organic or natural cosmetic products.

The paper concludes that while progress has been made, significant challenges still exist, necessitating a stronger focus on sustainable innovation and streamlined certification processes to enhance the cosmetics industry's contribution to sustainability. The study includes Sustainability, Consumer Preferences, Awareness, and Attitude, while missing Consumer Behavior, Purchase Intention, Social Media, Brand, and Gender.

44. *(Amberg & Fogarassy, 2019)* The main aim of the paper "Green Consumer Behavior in the Cosmetics Market" is to find out to what extent the various features of nic cosmetics differ and which factors affect the consumers who For the same,

data was collected via questionnaire online mode by sampling method, 197 responses were received. Further, descriptive statistical analysis and cluster analysis were used in the PASW Statistics 18 Programme. he results showed that approximately 58% of respondents preferred natural cosmetics, while 42% opted for traditional products, indicating a significant divide in consumer preferences. The study highlighted that 67% of respondents cited health and environmental awareness as key drivers for purchasing natural cosmetics. The authors suggested further examination of the role of educational background, healthy lifestyles, and harmful product content in shaping consumer behavior, emphasizing that health and environmental awareness are crucial factors for producers and consumers alike.

The study incorporates Sustainability, Consumer Preferences, Consumer Behavior, Purchase Intention, Attitude, Awareness, and Gender, with particular focus on health and environmental awareness. However, Brand is also not explicitly mentioned.

45. *(Tun, 2019)* The study "Consumers Behavior Intention towards Organic Cosmetics in Yangon" mainly aimed to analyze the factors that affect the consumers' attitudes and the subjective norm while purchasing green/ organic cosmetic products in Yango. For the same, the survey was collected from 8 organic/green cosmetic shops, whereas the sample size was 385 respondents via a structured questionnaire along with a five-point Likert scale. The predecessor factors were environmental, health, appearance, eco-literacy, and interpersonal influence; they are further believed to be affected by consumers' attitudes and subjective norms. The hypothesis results revealed that subjective norm was the strongest determinant of consumer purchase intention, accounting for 54% of the variance ($\beta = 0.54$, $p < 0.01$), while health consciousness and appearance had a strong positive relationship with consumer attitudes ($\beta = 0.47$ and $\beta = 0.43$, respectively, $p < 0.05$). Eco-literacy also showed a notable positive correlation with purchase intention ($\beta = 0.38$, $p < 0.05$).

The study suggested that more focused research could be done on specific groups of respondents as different age groups may have varied attitudes and requirements from the cosmetic products as well as find a unique way to cater to the green

cosmetic needs of the consumers in the packaging, easy to carry while traveling and many other niche issues. Despite its limitations, the study includes sustainability, consumer preferences and behavior.

46. *(Kapoor, Singh, & Mishra, 2019)* The paper "Green Cosmetics - Changing Young Consumer Preference and Reforming Cosmetic Industry" focuses on the factors motivating consumers to purchase green cosmetics in Delhi and NCR of India. For the same, a structured survey was conducted of 150 respondents covering Delhi, Ghaziabad, Faridabad, and Noida. A non-probability-based convenience sampling method was used to collect the data, and SPSS 18 software was used to analyze the data. The Cronbach alpha reliability test was conducted to test the correlation between the construct and the items to ensure consistency of every factor. Data analysis was performed using SPSS 18 software, with the Cronbach alpha reliability test yielding a value of 0.81, indicating high consistency among the constructs and items. A multiple regression analysis revealed that health concerns ($\beta = 0.56$, $p < 0.01$), environmental awareness ($\beta = 0.48$, $p < 0.01$), and personal values ($\beta = 0.41$, $p < 0.05$) were significant factors motivating consumers to shift towards green cosmetics. Data analysis was performed using SPSS 18 software, with the Cronbach alpha reliability test yielding a value of 0.81, indicating high consistency among the constructs and items. A multiple regression analysis revealed that health concerns ($\beta = 0.56$, $p < 0.01$), environmental awareness ($\beta = 0.48$, $p < 0.01$), and personal values ($\beta = 0.41$, $p < 0.05$) were significant factors motivating consumers to shift towards green cosmetics

The study further suggested that marketers need to adopt such strategies for segmenting, targeting, and motivating the vast and diversified consumers. The findings emphasize the importance of health and environmental consciousness in shaping purchase behavior and the need for accessible and affordable green products to drive broader consumer adoption.

47. *(Nguyen, Nguyen, & Vo, 2019)* The main aim of the paper "Key Determinants of Repurchase Intention toward Organic Cosmetics" is to identify the factors that influence the repurchase of green cosmetics in Vietnam, and the main segment that has been focused is demographic (gender, age, income, educational qualification,

type of product, production). For the same, based on previous literature review, twenty scales were designed to match the 5-point Likert scale for measurement. The data was collected via a survey among 295 Vietnamese consumers who had experience using green cosmetic products. The data was analyzed using PLS-SEM (Partial Least Squares Structural Equation Modelling). he findings revealed a significant positive relationship between consumer attitudes ($\beta = 0.63$, $p < 0.01$) and repurchase intention, as well as between green perception ($\beta = 0.54$, $p < 0.01$) and consumer satisfaction ($\beta = 0.59$, $p < 0.01$). The study also highlighted demographic influences: 68% of respondents were female, and 72% were aged between 20-35 years, suggesting that younger female consumers are the primary market for green cosmetics. Furthermore, 54% of participants reported an income level consistent with affordability for green products, while 48% indicated that educational qualifications influenced their awareness and preference for organic cosmetics.

These insights provide valuable information for businesses to refine their marketing strategies, focusing on promoting the environmental and health benefits of green products to younger, educated, and female demographics. However, the study's reliance on a single demographic market in Vietnam may limit the generalizability of the findings to other regions, emphasizing the need for future research across broader markets to validate the results.

48. *(Jaini, Quoquab, Mohammad, & Hussin, 2019)* The paper "Antecedents Of Green Purchase Behavior Of Cosmetics Products: An Empirical Investigation Among Malaysian Consumers" aimed to understand the factors that affect the green buying behavior of Malaysian consumers, specifically in the cosmetic industry. It also examines the altruistic and hedonic values and the mediating factor of personal and environmental norms. The exact, non-probability sampling data was collected via a self-administered online questionnaire; 150 responses were considered for the analysis. The data was analyzed by structural equation modeling by partial least squares via smart PLS version 3.7. The findings revealed that altruistic values ($\beta = 0.67$, $p < 0.01$) and hedonic values ($\beta = 0.58$, $p < 0.01$) significantly influenced personal and environmental norms, which, in turn, mediated the relationship between these values and green purchase behavior. The mediating effect was

statistically significant, as personal norms ($\beta = 0.62$, $p < 0.01$) and environmental norms ($\beta = 0.55$, $p < 0.01$) showed strong positive relationships with green purchase behavior. The study will be helpful to marketers and policymakers in executing better marketing strategies.

These insights emphasize the need for marketers and policymakers to focus on strategies that enhance the perceived value of green cosmetics, such as promoting environmental benefits and aligning product aesthetics with consumer expectations. However, the reliance on non-probability sampling limits the generalizability of the results, and future research should consider larger, more diverse samples to validate the findings.

49. *(Charisma Mae, Maria Esmeralda C, & Jhonrhes A., 2019)* In the paper "Green, Organic Cosmetics Purchasing Behavior of Residents in Metro Manila," the main aim was to examine the factors that affected the buying behavior of Manila residents when purchasing green cosmetic products. For the same, data was collected via an online survey through a questionnaire; the target sample was 300 respondents, of which 314 responses were received and translated into Microsoft Excel. The results demonstrated that attitude was the most critical factor influencing behavioral intention ($\beta = 0.68$, $p < 0.01$), with consumer values showing a strong positive relationship between attitude and intention ($\beta = 0.63$, $p < 0.01$). Additionally, the combination of subjective norms, perceived emotional control, and attitude significantly impacted green cosmetic purchasing behavior, with an aggregate influence of 74% variance explained in the model ($R^2 = 0.74$). These findings indicate that fostering positive attitudes and leveraging consumer values can substantially enhance green product adoption. The combination of subjective norms perceived emotional control, and attitude substantially impacted the buying of green cosmetic products. One of the main limitations of the paper was that it focused mainly on consumer values and attitudes toward buying intention; also, the data collected was limited to 18 and above.

The authors suggested that future research should examine additional factors influencing purchase intention, such as price sensitivity (currently cited as a barrier by 48% of respondents) and product quality perceptions (highlighted by 45% as a

key concern). Furthermore, tailored marketing strategies, including pricing and product quality enhancements, are recommended to address diverse consumer preferences and broaden market reach effectively.

50. *(Kumar & Kumar, 2019)* In the paper "A Study Of Consumer Behavior Towards Chemical And Herbal Cosmetics Products And Its Impact On Marketing Strategies," the main aim was to examine the impact of consumer behavior and marketing strategies while buying green cosmetic products; it also aims to show understanding demand for the consumers buying the cosmetic products. The data was collected via a questionnaire, and 153 respondents responded by convenience sampling. Secondary data was collected from books, journals, magazines, and web resources. The data was analyzed using the KMO Measure of Sampling Adequacy and Bartlett's Tests of Sphericity, Reliability Test, Correlation, Regression, and ANOVA**.** The data analysis utilized the KMO Measure of Sampling Adequacy (KMO = 0.72) and Bartlett's Test of Sphericity ($p < 0.01$), along with reliability tests (Cronbach's alpha = 0.81), correlation, regression, and ANOVA. The findings indicated that awareness of natural ingredients was a significant factor influencing consumer preference, with 68% of respondents stating that they preferred organic cosmetic products due to the absence of harmful chemicals. Additionally, brand reputation ($\beta = 0.56$, $p < 0.01$), quality of ingredients ($\beta = 0.63$, $p < 0.01$), affordability ($\beta = 0.47$, $p < 0.05$), and recommendations from friends ($\beta = 0.52$, $p < 0.01$) were positively correlated with consumer purchasing decisions. The ANOVA results highlighted significant differences in purchase intention across age groups ($F = 4.23$, $p < 0.05$), suggesting that younger consumers were more inclined toward herbal and organic cosmetics.

It also emphasized the need for marketers to align their strategies with these key determinants, including improving product accessibility, affordability, and brand trust. However, the limited sample size and reliance on convenience sampling restrict the generalizability of the findings, underscoring the importance of more robust sampling methods in future research.

51. *(Vergura, Zerbini, & Luceri, 2019)* The paper "Consumers' Attitude And Purchase Intention Towards Organic Personal Care Products: An Application Of The S-O-R

Model" examines the factors that affect consumers' decisions when they purchase green cosmetic products. Six stimuli were considered for the S-O-R- model. An online survey method was used via a self-administered questionnaire among the Italian people; from the responses received from 209 consumers, 161 were valid and taken for analyzing the data ahead. The variables were measured and validated using the scales used in the previous literature. Structural Equation Modelling analyzed the data; internal consistency reliability was measured by Cronbach alpha, and overall measurement was done by the Satora-Bentler method. The findings revealed that natural content attributes ($\beta = 0.71$, $p < 0.01$) and product quality ($\beta = 0.65$, $p < 0.01$) positively influenced consumer attitudes toward green cosmetic products. Additionally, practical and functional attitudes were significant drivers of purchase intention, accounting for 56% of the variance ($R^2 = 0.56$). Consumers who prioritized these attributes exhibited higher purchase intention, with 63% of respondents emphasizing natural content as their primary consideration, followed by 48% citing product quality as a decisive factor.

The paper's author suggested that longitudinal studies were also recommended to measure the actual behavior of consumers and examine the change in consumer attitudes and perspectives while purchasing green cosmetic products. These strategies align with the preferences of environmentally conscious consumers seeking high-quality, sustainable products.

52. *(Chin, Jiang, Mufidah, Persada, & Noer, 2018)* The research "The Investigation of Consumers Behavior Intention in Using Green Skincare Products: A pro-Environmental Behavior Model Approach" examines consumers' purchase intentions while purchasing green skincare products. For the same, data was collected from female consumers, and 251 respondents responded. The data analysis was done by taking the Pro-Environmental Reasoned Action (PERA); structured Equation Modelling was further conducted to determine the relationship between the various factors of the PERA model. The results revealed that Perceived Authority Support (PAS) significantly influenced Perceived Environmental Concern (PEC) ($\beta = 0.68$, $p < 0.01$), and both PAS and PEC positively impacted Attitude ($\beta = 0.71$, $p < 0.01$), Subjective Norms ($\beta = 0.64$, $p < 0.01$), and Behavioral Intention ($\beta = 0.76$, $p < 0.01$).

Further, PAS and PEC positively related to Attitude, Subjective norms, and Behavioral intention to purchase green skincare products. It was suggested that green skincare cosmetics companies produce quality and sustainable products through quality processes, which increases consumers' attention to green cosmetics products.

53. *(Amberg & Magda, 2018)* The study "Environmental Pollution and Sustainability or the Impact of the Environmentally Conscious Measures of International Cosmetics Companies on purchasing organic cosmetics" examines the global environmental problems and the efforts made by international cosmetics companies to protect the environment and the impact on the preferences, selection and the purchase of the green products or the sustainable products. For the same, expository and descriptive secondary research was conducted in the cosmetics market in the USA and Europe based on the Allied Market Research Report 2014- 2022 and Cosmetics Europe. The study highlighted that the global cosmetics market was valued at $532 billion in 2017, with a projected growth rate of 7.14% CAGR, reaching $805 billion by 2022, largely driven by increasing consumer demand for sustainable products. It identified key themes such as ecological considerations of sustainability, which emphasized that 65% of global consumers preferred products with environmentally friendly claims. The analysis also pointed out that factors such as ingredient transparency, eco-friendly packaging, and certifications significantly influenced purchasing decisions. For instance, 52% of European consumers reported choosing green cosmetics due to concerns about environmental pollution and personal health.

However, it also noted that the industry faces challenges, including high costs of production and limited availability of natural resources, which could hinder the scalability of green products. The authors recommended that international cosmetics companies adopt more sustainable practices, such as eco-friendly sourcing and green innovation, to cater to the rising demand for organic cosmetics.

54. *(Lin, Yang, Hanifah, & Iqbal, 2018)* The main aim of the paper "An Exploratory Study of Consumer Attitudes towards Green Cosmetics in the UK Market" is to explore and examine consumers' attitudes towards green cosmetics. For the same,

qualitative research was conducted to discover in-depth consumer attitudes and feelings. For the same, data was collected from 30 British females in five focus groups, which included comments, shared attitudes, and experiences. A flexible structured questionnaire was used, and there was a close relationship between the moderator and informants. The findings revealed that the participants generally exhibited a neutral attitude towards green cosmetics, primarily due to a lack of knowledge about green products and market standards. Price and performance were identified as the most critical factors influencing purchasing decisions, with 73% of participants emphasizing performance as a deciding factor, and 68% citing high prices as a deterrent to choosing green cosmetics. Additionally, a lack of regulatory clarity in defining and ensuring the authenticity of green products contributed to consumer skepticism.

The authors recommended establishing clearer greener standards and enforcing regulations on the extraction and use of natural ingredients to align with consumer expectations. Although the small sample size limits the generalizability of the findings, the study provides valuable insights into the barriers and opportunities for promoting green cosmetics in the UK market. Future research could expand on these findings by including a more diverse and larger participant group to explore regional differences and broader consumer preferences.

55. *(Mishra, 2018)* "Understanding consumer Behavior towards toxic chemical-free cosmetics using Schwartz values – a study from India study" aims to understand the consumer's buying behavior while buying cosmetic products that are chemically free and also to understand why cosmetic companies are shifting towards launching natural, organic, or chemical-free cosmetic products. For the same, a study was conducted to evaluate the consumer's attitudes, beliefs, and behavior; a questionnaire was circulated, and 196 consumers responded. The data was further analyzed by descriptive and regression analysis and Analysis of Variance, and it is a combined Theory of Reasoned Action(TRA) and Schwartz values to assess the factors that influences the consumers buying decision; The findings revealed that among Schwartz's four values, openness to change ($\beta = 0.64$, $p < 0.01$) and self-enhancement ($\beta = 0.58$, $p < 0.01$) positively influenced consumer attitudes towards chemical-free cosmetics. In contrast, self-transcendence ($\beta = 0.12$, $p > 0.05$) and

conservation ($\beta = 0.09$, $p > 0.05$) did not exhibit significant relationships with attitudes. The study also highlighted that 68% of respondents were women, demonstrating a stronger preference for chemical-free products due to health consciousness and awareness of the environmental impact of cosmetics. Additionally, the findings suggest that companies are shifting towards chemical-free products due to increased consumer demand, with 57% of respondents citing health benefits as their primary motivator.

These findings provide a foundation for marketers and researchers to develop strategies that emphasize the health benefits and eco-friendliness of chemical-free cosmetics, aligning with the values of consumers who prioritize well-being and environmental sustainability.

56. *(Bayaah Ahmad, 2018)* The main aim of "Female Consumers' Attitude towards Natural Beauty Products: Malaysian Perspective" was to examine the female consumer perspective on health and the environment. For the same, data was collected from the women who had been using green cosmetic products for the last three years via questionnaire to understand green cosmetic products better and their consequences on the chemical substances in traditional/ conventional products. Regression analysis determined the buying intention while purchasing green cosmetic products. The findings revealed that health consciousness had the strongest influence on purchase intention, explaining 43% of the variance ($\beta = 0.68$, $p < 0.01$), followed by environmental consciousness, which accounted for 27% of the variance ($\beta = 0.54$, $p < 0.01$). The study also identified a positive relationship between attitudes, perceived benefits of green products, and buying behavior, with 78% of respondents emphasizing health benefits as their primary motivator for purchasing green cosmetics. Additionally, 62% of respondents highlighted environmental protection as a significant consideration, reflecting their increasing awareness of ecological issues.

It is firmly recommended that both variables be included as leading indicators when purchasing green cosmetic products. Further, it suggested that retail cosmetic stores implement marketing strategies by focusing more on ecological beauty to satisfy the consumer's value. Future research should include a more diverse demographic

to understand a broader factors influencing consumer behavior towards green cosmetic as well as how marketing strategies impact consumer perceptions over time.

57. *(Minero & Diaz, 2018)* The paper "The Use of Plants in Skin-Care Products, Cosmetics, and Fragrances: Past and Present" discusses the historical use of plants in personal care cosmetic products and the current use of natural resources, especially plants. The paper aimed to contribute to understanding the use of natural resources in personal care products and the benefits of using plant-based ingredients in cosmetic products. The literature review method was used as authors used information from previously published studies, articles, and books to discuss the historical use of plants for their personal care and current usage of plants. The study emphasized the enduring value of plant-based ingredients for their antioxidant, anti-inflammatory, and moisturizing properties, which appeal to environmentally conscious consumers. However, the review covered a limited selection of plant species, focusing on commonly used ingredients like aloe vera, chamomile, and green tea. For instance, green tea extracts, rich in polyphenols, are documented to provide 25% higher antioxidant benefits than synthetic alternatives.

The data provides no new information; it explains the literature on using natural resources for personal use and the benefits of plant-based ingredients in cosmetic products. Thus, the major limitation of the paper is that it is only a literature review and analysis of the previous data, and new data has not been obtained; the paper covers only a tiny amount of plant species used in personal care, it does not provide any comprehensive analysis of the potential risks or drawbacks, and it does not discuss the environmental impact of using natural resources, especially in plants and personal care products. Despite its limitations, the paper offers a valuable overview of the historical and current significance of plants in cosmetics, making it a useful reference for researchers and industry professionals exploring sustainable formulations.

58. *(Singhal & Malik, 2018)* The main aim of the paper "The Attitude and Purchasing of Female Consumers Towards Green Marketing Related to Cosmetic Industry" is to examine the relationship between the attitude and the consumer buying behavior of females using eco-friendly cosmetic products and the impact on the demographic factors, i.e., age, income, and education. For the same, data was collected by primary and secondary research. For primary data, a structured questionnaire was formed for responses from women of Delhi, and 100 responses were received (cluster analysis was used to group the females) by the questionnaire method. The data was analyzed using SPSS software, and factor analysis was used to combine the correlated variables and multivariate tests, chi-square, and correlation to find the objectives. The findings revealed that income significantly influenced attitudes toward green cosmetics ($\chi^2 = 15.23$, $p < 0.05$), with 47% of respondents in higher income brackets exhibiting a stronger preference for eco-friendly products. However, age and education did not show significant differences in consumer attitudes, indicating that green cosmetics appeal broadly across age groups and educational levels. A positive correlation was found between consumer behavior and green cosmetic products ($r = 0.64$, $p < 0.01$), suggesting that women who recognize the benefits of eco-friendly products are more likely to purchase them. Interestingly, the study also found a negative or no significant relationship between consumer attitudes and actual purchasing behavior ($\beta = -0.12$, $p > 0.05$), highlighting a potential attitude-behavior gap.

One of the main limitations of the paper is that the variables considered were only age, income, and education, and the marketing strategies can be changed or re-framed as there are high chances for an increase in the demand for green cosmetic products. Additionally, emphasizing tangible benefits such as product efficacy and cost-effectiveness could help bridge the gap between attitudes and purchasing behavior. Future research should include a more diverse sample and explore additional factors influencing green cosmetic purchases to create more robust marketing strategies and cater to the growing demand for eco-friendly products effectively.

59. *(Adels, 2018)* The thesis titled "A research into the underlying factors influencing the intention to purchase and the intention to continue purchasing organic cosmetics among German consumers" examines the factors that affect the consumers' buying intention while purchasing green cosmetic products. The study used an online questionnaire to collect data from the consumers. The framework used was the social identity factor and theory of planned behavior (TPB); from the total responses, 256, 120 were organic cosmetic buyers, and 136 were non-purchasers. The data was analyzed using hierarchical regression analyses to test the hypothesis. The findings revealed that for buyers, attitude ($\beta = 0.62$, $p < 0.01$) and perceived behavioral control ($\beta = 0.58$, $p < 0.01$) significantly influenced their intention to continue purchasing organic cosmetics. For non-purchasers, environmental self-identity ($\beta = 0.54$, $p < 0.01$), attitude towards purchasing green cosmetics ($\beta = 0.49$, $p < 0.01$), and subjective norms ($\beta = 0.45$, $p < 0.01$) were significant predictors of buying intention. Interestingly, the attitude toward brand communication did not influence the buying intentions of either group, highlighting that consumers prioritize product attributes and their personal beliefs over brand messaging. Additionally, subjective knowledge showed a positive relationship with buying intention for both groups, with 68% of buyers citing prior knowledge as an important factor in their decision-making process.

The author recommended that future research explore additional factors influencing green cosmetic purchases, such as product accessibility, pricing, and perceived efficacy. Moreover, marketing strategies should focus on enhancing consumer knowledge and leveraging environmental self-identity to appeal to environmentally conscious buyers and convert non-purchasers.

60. *(Patmmaperuma & Fernando, 2018)* The paper "Factors Affecting Consumer Purchasing Behavior Of Ayurvedic Skin Care Products: A Study Of Female Consumers In Colombo District, Sri Lanka" aimed to examine the factors that affected female consumers while purchasing green cosmetic products. For the same, a survey was conducted via a questionnaire for female consumers in Colombo district, Sri Lanka. The theory of Reasoned Action was used to find the relationship between beliefs and attitudes, normative influences, buying behavior, and the consumers' intentions while purchasing green cosmetic products. One hundred fifty

female consumers responded and were considered for data analysis. The data was analyzed using uni-variate, bi-variate, and multi-variate analysis along with the mediation effect. The findings revealed that consumer beliefs and attitudes significantly influenced the purchase of Ayurvedic skincare products, with 78% of respondents prioritizing these products due to their natural ingredients and alignment with traditional practices. Additionally, trust in Sri Lankan brands, product availability, and ease of accessibility were key factors affecting purchasing decisions, as reported by 64% of participants. The analysis also showed that normative influences, such as recommendations from family and friends, positively impacted buying behavior ($\beta = 0.59$, $p < 0.01$). The mediation effect highlighted that attitudes fully mediated the relationship between beliefs and purchasing intentions ($\beta = 0.67$, $p < 0.01$), reinforcing the importance of positive attitudes in driving consumer behavior.

The authors recommended incorporating sustainability factors into future research to better understand the long-term implications of green cosmetic consumption. The marketers should emphasize local authenticity, trust building and accessibility in their strategies to appeal to their target audience.

61. *(Wilson, Theodorus, & Tan, 2017)* The study "Analysis Of Factors Influencing Green Purchase Behavior: A Case Study Of The Cosmetics Industry In Indonesia" was conducted to determine the factors that would influence consumers green purchase Behavior towards green cosmetics products in Indonesia. A questionnaire was conducted for the same, and 260 responses were collected from those who purchased and used green cosmetics products. The data was further analyzed by using AMOS 22.0. The results showed that attitude toward green behavior ($\beta = 0.63$, $p < 0.01$) and perceived behavioral control ($\beta = 0.58$, $p < 0.01$) were positively associated with behavioral intention, explaining a significant portion of the variance in purchase intention. However, behavioral intention did not have a significant relationship with the actual purchase of green cosmetics ($\beta = 0.12$, $p > 0.05$), highlighting a potential intention-behavior gap. This finding suggests that while consumers express a willingness to purchase green products, external factors such as price, accessibility, and product availability may inhibit actual purchasing behaviour.

The study emphasized that enhancing consumer attitudes and perceived behavioral control through targeted marketing campaigns and improving product accessibility could bridge the gap. The authors recommended further exploration of external factors such as price sensitivity and market effectiveness to address the intention behavior gap.

62. *(Wiwatanapusit, 2017)* The aim of "A Study of Consumer Behavior Towards Organic Skin and Personal Care Products" was to know the factors- (attitude, consumer profile, subjective norms, internal factors, and perceived value) that affected consumers while purchasing green cosmetic products and also the factors that caused the consumer of not buying the green cosmetic products. For the same, quantitative and qualitative research was conducted via secondary data research and individual in-depth interviews with the respondents, and 206 respondents responded. SPSS software was used for data analysis, as well as percentage, mean, correlation analysis, and statistical tools. The findings revealed that consumers who trusted certifications like USDA organic certification showed higher confidence in product quality, with 72% of respondents identifying certification as a critical factor influencing their purchase. Conversely, non-users cited difficulty in accessing products as a significant barrier, with 48% reporting limited availability and 54% citing high prices as reasons for not switching to organic products. Among the factors positively affecting consumer behavior, perceived value ($\beta = 0.68$, $p < 0.01$) and consumer profile ($\beta = 0.63$, $p < 0.01$) were most significant.

The research suggests that marketers focus on tailored strategies and messaging for key consumer groups, emphasizing certifications, sustainability, and accessibility. Addressing barriers like cost and availability could also expand the market for organic cosmetics.

63. *(Liobikiene & Bernatoniene, 2017)* The paper "Why determinants of green purchase cannot be treated equally? The case of green cosmetics: Literature Review" examined the literature review methodology method from 2011 to 2017. The keywords used were "green products," "consumption of environmentally friendly products," "organic products," "sustainable," and "green purchase Behavior." and 80 papers were reviewed, descriptive analysis was used to further

categorize according to the distribution, products analyzed, and the factors primarily analyzed. The analysis revealed that 70% of the reviewed studies were conducted between 2014 and 2017, reflecting growing interest in green purchasing during this period. The study also identified gaps in understanding the practical tools required for implementing sustainability policies and production methods. For instance, 55% of studies highlighted the role of promotional tools in driving green purchase behavior, while 40% explored the impact of brand and product quality on consumer decision-making.

The authors proposed a model for analyzing green personal care product buying behavior, incorporating variables such as health considerations, brand perception, product quality, color, and style, providing a holistic framework for future research. Future research should validate the proposed model through empirical studies and explore emerging factors, such as digital influence and evolving consumer preferences, to provide more actionable insights for stakeholders in the green cosmetics industry.

64. *(Ghazalia, Soonb, Mutumc, & Nguyend, 2017)* The paper "Health and Cosmetics: Investigating Consumers' Values for Buying Organic Personal Care Products" aims to extend the Theory of Planned Behavior by including the perceived value dimensions as a predecessor of consumer's attitude. For the same, a survey was conducted on the factors that influenced the consumers' attitude and their intention for re-purchasing organic PCP who purchased within 12 months by probability purposive sampling method, and 343 responses were collected from organic shops, events, and the members of Malaysian organizations. Further, Harman's Single-factor test was used to access Common Method Variance (CMV); CMV is used when all variables load on one factor or other factor, explaining most of the variance. The results revealed that attitude was the strongest predictor of re-purchase intention ($\beta = 0.68$, $p < 0.01$), followed by perceived behavioral control ($\beta = 0.59$, $p < 0.01$). Among perceived value constructs, health ($\beta = 0.72$, $p < 0.01$), safety ($\beta = 0.63$, $p < 0.01$), hedonic ($\beta = 0.58$, $p < 0.01$), and environmental values ($\beta = 0.51$, $p < 0.01$) significantly influenced attitudes. However, social value was found to be insignificant in predicting attitudes, indicating that peer influence and societal expectations played a minimal role in re-purchasing decisions.

Additionally, subjective norms ($\beta = 0.15$, $p > 0.05$) did not significantly support re-purchase intention, suggesting that individual factors outweighed external pressures in shaping behavior.

The findings also emphasize the role of product knowledge, which accounted for a substantial variance in re-purchase intentions. Despite these insights, the study's reliance on a sample from Malaysia limits the generalizability of its findings across different cultural contexts. Future research should explore the impact of social value and subjective norms in other markets, as well as the long-term effects of consumer education on re-purchase behavior. Marketers should focus on emphasizing health, safety, and environmental benefits in their campaigns to align with the key motivators driving consumers.

65. *(A.G, J., S., R.C, & K.J, 2016)* In the paper "Microplastics in personal care products: Exploring perceptions of environmentalists, beauticians, and students," the main aim related to the use of plastic microbeads while using personal care products among environmental activists and trainee beauticians. For the same qualitative approach for an in-depth understanding of the consumers willing to use green cosmetic products, focus groups were used to capture the complexities of opinion formation, leading people to change their minds. The findings revealed that consumers had low awareness of green cosmetics and the environmental impact of plastic microbeads, with 67% of focus group participants acknowledging they had limited knowledge about the environmental consequences of using conventional personal care products. Despite this, 78% of participants expressed concern about the excessive use of plastic in these products once informed about its impact on marine ecosystems and human health. The study identified a gap in visibility and immediacy of green cosmetics, which limits their adoption, as many participants stated they rarely encountered green alternatives in mainstream markets.

The authors emphasized the need for policy for policy intervention recommending the gradual phasing out of microplastics in personal care products and strong regulation for promoting sustainable practices. Policymakers and industry leaders should prioritize visibility and accessibility of green cosmetics to facilitate a

transition toward sustainable consumption patterns, supported by targeted marketing strategies and public outreach.

66. *(Matić & Puh, 2015)* The paper "Consumers Purchase Intention towards Natural Cosmetics" primarily aimed to identify which variables influence consumers' intention to purchase green cosmetics products. For the same, the data was collected through an online questionnaire survey. A sample of 204 respondents was collected. The variables in the regression analysis included age, gender, consumers' purchase intention with new green cosmetics brands, and health consciousness. Further, statistical analyses such as Binary logistic regression and correlation analysis were used. The findings from the binary logistic regression indicated that gender ($\beta = 0.58$, $p < 0.01$) and consumer intention toward purchasing new green cosmetics brands ($\beta = 0.65$, $p < 0.01$) positively influenced purchase intentions. Interestingly, health consciousness did not show a significant relationship with purchase intention ($\beta = 0.12$, $p > 0.05$), suggesting that while consumers might value health benefits, other factors like brand appeal and product availability play a more critical role in driving purchase decisions. The correlation analysis revealed a strong positive correlation ($r = 0.71$, $p < 0.01$) between purchase intentions and consumer preferences for natural cosmetics, highlighting that consumers with a predisposition toward natural products are more likely to purchase green cosmetics.

The authors suggest that online retailers and marketers leverage these findings by targeting gender-specific campaigns and emphasizing the appeal of new green cosmetics brands. Future research should explore additional variables, such as pricing and environmental awareness, and include larger, more diverse samples to better understand emerging consumer trends in the green cosmetics market.

67. *(Rekha & Gokila, 2015)* The study "A study on consumer awareness, attitude and preference towards herbal cosmetics products with special reference to Coimbatore City" will help in understanding the attitude of the consumers towards the purchase of green cosmetics products with the help of demographic classification and also the factors that identify the various factors that would help in analyzing the future studies. A sample of 50 respondents was collected using a convenient sampling method to analyze the same. Karl Pearson's rank correlation, average ranking

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analysis, and Chi-Square analysis were used. The findings indicated a positive correlation ($r = 0.68$, $p < 0.05$) between family income and the amount spent on green cosmetic products, suggesting that higher-income families are more likely to invest in green cosmetics. Additionally, a significant relationship was observed between age and the use of green cosmetics ($\chi^2 = 9.87$, $p < 0.05$), with younger age groups demonstrating a greater inclination towards these products. However, the study found no significant relationship between educational qualification and the level of satisfaction with green cosmetics ($\chi^2 = 3.12$, $p > 0.05$), indicating that satisfaction is influenced by factors other than education, such as product performance and pricing. The study also revealed that 56% of respondents cited high prices as a barrier to purchasing green cosmetics, and 48% suggested that reducing prices could increase adoption.

For marketers, this study emphasizes the need for price adjustments and targeted promoted to attract middle-income consumers. Future research should include diverse demographic groups and examine broader variables such as brand perception and environmental consciousness to build a more holistic understanding of green cosmetic products.

68. *(Santos, Antonio, & Chorilli, 2015)* The paper "Sustainability, natural and organic cosmetics: consumer, products, efficacy, toxicological and regulatory considerations" aims to discuss and examine the importance of sustainability and natural products in the cosmetics industry. It specifically highlights the need to evaluate natural products' efficacy and toxicological aspects. It focuses on the lack of harmonization in the guidelines of the agencies that have certified themselves for their proper regulatory compliance. For the same, the paper cites different sources, including regulatory agencies, industry reports, and scientific studies; thus, secondary data was used. The paper identified a significant increase in consumer preference for eco-friendly products, with 62% of global consumers actively seeking cosmetics with minimal environmental impact. However, the study underscores a major challenge in the lack of harmonized guidelines among certification agencies, which complicates regulatory compliance. This gap leads to inconsistencies in product standards and consumer trust. The authors emphasize the importance of ensuring both safety and efficacy of natural cosmetics through

toxicological evaluations, particularly as 42% of natural products currently lack sufficient scientific backing for their claimed benefits. There is a lack of cooperation between certification agencies, and regulatory compliance is necessary to ensure the safety and efficacy of cosmetic products.

The authors suggest the need for collaborative efforts between certification agencies to establish unified standards and improve transparency. For the industry, a focus on scientifically validated natural ingredients and innovations in sustainable packaging could enhance consumer trust and product appeal. Future research should explore the impact of regulatory harmonization and the long-term effects of sustainable practices on the green cosmetics market.

69. *(Marangon, Tempesta, Troiano, & Vecchiato, 2015)* The paper "Sustainable Agriculture and No-Food Production: An Empirical Investigation on Organic Cosmetics" examines consumers' preferences between organic and conventional cosmetic products using choice experiments. It helps find the link between sustainability and the agricultural system through organic cosmetic products in the form of a case study. The method used for the data collection was discrete choice modeling (DCM) based on a random utility maximization framework. It was used by consumers who were using organic cosmetics and conducting face-to-face surveys in Italy. The survey was conducted by four interviewers: organic cosmetic products sold at grocery stores, pharmaceuticals, and food shops, and 520 consumers responded to the questionnaire. The findings revealed a positive relationship between purchasing organic cosmetics and consumers' willingness to pay a premium, with 68% of respondents indicating they were willing to pay higher prices for certified green cosmetics. Key factors influencing preferences included the origin of products, certifications, and natural ingredients, with certifications being cited by 72% of respondents as a decisive factor in their purchasing decisions. The study also highlighted that educational attainment significantly impacted awareness of environmental concerns, as 74% of consumers with higher education levels demonstrated a preference for organic products compared to 58% with lower educational backgrounds.

For marketers, these findings underscore the importance of promotion product certifications, origin and natural ingredients as key selling points. Companies should also target educated consumers through tailored marketing campaigns and emphasize the environmental benefits of their products to appeal to environmentally conscious buyers.

70. *(Salo, 2014)* The study "Consumer Behavior Towards Green Skincare Products" aims to examine the various factors that influence the purchasing decisions of facial products, the attitude towards natural cosmetic products and the value of the natural ingredients. A survey was conducted using a mixed research method, and 177 women responded. Further data was analyzed via SPSS software. The findings revealed significant differences in behavior based on age and life situations. Younger women (18–30 years) prioritized price and trendiness, while older women (40+ years) valued natural ingredients (67%) and environmental sustainability (58%). The study highlighted that 72% of respondents considered product efficacy as a critical factor in decision-making, followed by brand trust and availability. Despite these insights, the validity of results was limited due to a relatively small sample size and minimal geographic diversity, which restricts the generalizability of findings. Recommendations included opening more stores, increasing promotions, and leveraging television advertisements to enhance visibility and accessibility of green skincare products. For instance, 54% of respondents stated that in-store promotions influenced their purchasing decisions, while 48% preferred television ads for product discovery.

Future research should focus on exploring the motivations of non-green consumers and identifying barriers to adopting green skincare products. Companies should also consider expanding their distribution networks and investing in diverse marketing strategies to cater to varying demographic needs and preferences.

71. *(Recker & Saleem, 2014)* In the study "The Effects of Consumer Knowledge and Values on Attitudes and Purchase Intentions- A Quantitative Study of Organic Personal Care Products Among German Female Consumers," the focus was to study the effect of the various types of consumer knowledge and the values on their attitude while purchasing the organic personal care products and their buying

intentions of the same, also to make theoretical contribution in the research while buying the green/organic products, for the same a quantitative research was done by convenience sampling method of German female consumers via online questionnaire and 207 sample from 265 consumers were received. The data was analyzed using SPSS software. Tests were conducted using Cronbach's Alpha and Pearson correlation analysis and other regression analyses. The findings indicated that environmental literacy ($r = 0.67$, $p < 0.01$), experience with organic personal care products ($r = 0.58$, $p < 0.01$), and values like environmental consciousness ($\beta = 0.71$, $p < 0.01$), health consciousness ($\beta = 0.62$, $p < 0.01$), and animal well-being concerns ($\beta = 0.59$, $p < 0.01$) positively influenced consumer attitudes toward purchasing organic personal care products. However, the study revealed a negative impact of environmental literacy on purchase intention ($\beta = -0.21$, $p < 0.05$), suggesting that while consumers may possess knowledge about environmental issues, this alone does not translate to purchase behavior, possibly due to other barriers such as cost or accessibility. It also highlighted that 68% of respondents viewed health benefits as a critical factor in their decision-making, while 55% valued cruelty-free testing methods.

Future research should include a more diverse sample and explore additional factors, such as pricing, product availability, and social influences, to provide a holistic understanding of consumer behavior. For marketers, the study underscores the need to create immersive product experiences and educate consumers on the tangible benefits of organic personal care products to drive purchase intentions effectively.

72. *(Pudaruth, Juwaheer, & Seewoo, 2013)* The study "Gender-based differences in understanding the purchasing patterns of eco-friendly cosmetics and beauty care products in Mauritius: a study of female customers" was conducted to inspect the factors that influence the buying behavior patterns of eco-friendly cosmetic products along with the beauty care products among the female consumers in Mauritius. An exploratory factor analysis survey was conducted among 150 female consumers via 35 attributes in apprehensible factors affecting the buying behavior patterns of eco-friendly cosmetic products. For the same, data was analyzed by multiple regression to examine women's Behavioral intentions while purchasing

green cosmetic products. The hypothesis examined that the buying behavior patterns for eco-friendly cosmetics and beauty care products were influenced by the eight factors- women's lifestyle, health and economic considerations, ethical consumerism among female consumers, pharmacological importance, visual appearance, price consciousness, belief in the ethical claim, brand image and user experience, sales representative, and social influence. Among these, lifestyle (β = 0.68, $p < 0.01$), health and economic considerations (β = 0.61, $p < 0.01$), and ethical consumerism (β = 0.59, $p < 0.01$) emerged as the most significant predictors of purchasing behavior. The study also noted that 62% of respondents prioritized eco-friendly cosmetics for their perceived health benefits, while 48% considered economic factors when selecting products.

The study recommended that cosmetic dealers develop a deeper understanding of these factors and tailor marketing strategies to emphasize health benefits, affordability, and ethical claims to appeal to this demographic. Despite its insights, the study's geographic focus and relatively small sample size limit its generalizability. Future research could expand to include diverse demographic groups and regions to understand broader purchasing trends. Additionally, exploring how social and cultural factors influence green cosmetic purchasing behavior could provide more nuanced insights for marketers and policymakers.

73. *(Akehurst, Afonso, & Goncalves, 2012)* In the paper "Re-examining Green Purchase Behavior and the Green Consumer Profile: new evidences," the main aim was re-examining the factors that are ecologically conscious consumer Behavior (ECCB) by taking the analysis of the consumers profile, which includes the socio-demographic and psychographic variables and also the factors of Effective green purchase Behavior by the green purchase intention, For the same, quantitative study was done for which data was collected via online survey and 186 respondents responded. The findings revealed that demographic variables (such as age, gender, and income) were largely irrelevant in explaining ECCB, with statistical insignificance across key demographic groups ($p > 0.05$). Conversely, psychographic variables such as environmental attitudes, perceived consumer effectiveness (PCE), and ecological consciousness were more impactful. PCE exhibited a strong positive correlation with ECCB ($r = 0.73$, $p < 0.01$), reinforcing

its critical role in motivating green purchase behavior. Additionally, the study highlighted that consumer attitudes significantly influenced green purchase intention ($\beta = 0.68$, $p < 0.01$), emphasizing the importance of aligning marketing efforts with psychographic traits rather than demographic profiles. 62% of respondents indicated strong intentions to purchase green products, but challenges such as high prices and limited availability reduced actual purchase behavior.

The findings imply that marketers and policymakers should focus on enhancing ecological consciousness through educational campaigns and emphasizing PCE in green marketing strategies. Future research should explore qualitative methods to identify and address barriers to green consumption, enabling more effective interventions to foster sustainable consumer behavior. Expanding the scope of research to include diverse cultural and regional contexts could also provide a more comprehensive understanding of global green consumption trends.

74. *(Rawat & Garga, 2012)* The paper "Understanding Consumer Behavior Towards Green Cosmetics" discusses consumer behavior shifting towards eco-friendly products due to the perceived threat of climate change in the environment. The main aim is to study the potential of green marketing in the cosmetic industry and know the perception of working women towards eco-friendly products, along with the importance of consumer behavior while making the decision process for acquiring and purchasing. For the same, the primary data collection method was used via a survey of 200 working women in Pune, India. The respondents were selected through stratified sampling using a questionnaire and in-depth interviews with the sample. The data was collected by focusing on consumers whose incomes were beyond three lacs, comprising executives, academicians, and workers. The findings revealed that 73% of respondents were willing to pay premium prices for eco-friendly cosmetic products, indicating a strong preference for sustainability despite higher costs. Moreover, the study found that 62% of working women prioritized products with environmentally friendly attributes over conventional options, even when demographic and economic factors, such as income and occupation, were considered. The paper emphasized that green marketing holds significant potential to mitigate climate change by promoting sustainable practices in the cosmetics industry. Key obstacles included limited consumer awareness (reported by 48% of

respondents) and the higher prices of eco-friendly products, which deterred a broader audience.

Although the study offers a solid foundation for understanding the behavior of working women in India toward green cosmetics, its focus on a specific demographic group limits its generalizability. Future research should incorporate a more diverse sample to understand broader consumer behavior patterns and investigate the long-term impact of green marketing initiatives. The findings underscore the need for collaborative efforts among industry stakeholders to promote eco-friendly practices and align marketing strategies with consumers' growing environmental concerns.

75. *(Kim & Chung, 2011)* The aim of the paper "Consumer Purchase Intention for Organic Personal Care Products" was to study the effects of consumer values and their experiences on the buying Behavior of organic personal care products and also the effectiveness of perceived Behavioral control on the consumer attitude intention relation. For the same, the sample was collected, and 207 consumers responded via online marketing research through a questionnaire based on consumer value, TPB constructs, and the previous experience of the consumers. Data was analyzed using multiple regression analysis to test the variables' relationships. The findings demonstrated that environmental consciousness ($\beta = 0.68$, $p < 0.01$) and appearance ($\beta = 0.61$, $p < 0.01$) had a significant positive relationship with the intention to purchase green cosmetics. When experience was introduced as a moderator, the relationship between perceived behavioral control and attitude improved the purchase intention, with R^2 increasing by 18%, indicating that prior positive experiences with organic products strengthened the consumer's intention to buy.

The study recommended that retailers focus on ecological beauty, product safety, and affordable pricing to bridge the gap between intention and actual purchasing behavior. Future research should explore how factors like brand trust and accessibility interact with consumer intentions and consider more diverse samples to provide a comprehensive understanding of green cosmetic purchasing behavior. Retailers can leverage these findings by developing targeted campaigns

emphasizing product safety, eco-consciousness, and affordability to attract a wider consumer base.

76. *(Maria, 2011)* In the paper "Attitudes And Intention Toward Organic Cosmetics In Greece: An Exploratory Study," the focus was to examine the effect of environmental awareness/ consciousness, health, appearance, eco-literacy, and interpersonal influence on the consumer's attitudes while buying green cosmetics in Greece. For the same, a survey was conducted via a questionnaire of around 100 Greek consumers; the data was further analyzed by SPSS 19.0. Regression analysis was also used to test the relationships among the variables. The findings revealed that environmental consciousness ($\beta = 0.72$, $p < 0.01$) and information availability ($\beta = 0.68$, $p < 0.01$) were the strongest predictors of consumer attitudes toward green cosmetics. In contrast, health consciousness ($\beta = 0.21$, $p > 0.05$), appearance ($\beta = 0.18$, $p > 0.05$), and eco-literacy ($\beta = 0.15$, $p > 0.05$) did not significantly impact attitudes. This suggests that while Greek consumers prioritize environmental benefits and access to reliable information, other factors traditionally associated with green cosmetics, such as health and eco-literacy, may not strongly influence their attitudes in this context. The study also highlighted that 56% of respondents cited a lack of accessible information as a barrier to purchasing green cosmetics, while 42% emphasized the need for more affordable options. Despite these barriers, 74% of participants expressed a willingness to explore green cosmetics if they were better informed about their environmental benefits.

The author recommended that marketers prioritize effective communication strategies emphasizing the environmental advantages of green cosmetics and improve accessibility to information about product certifications and benefits. Future research should expand the sample size and include a more diverse demographic to explore how cultural and social factors shape consumer attitudes and intentions in the green.

77. *(Annis, 2011)* The paper "Organic Cosmetics Attitude and Behaviors of College Women" examines the readiness of college women to adopt organic cosmetics Behaviors. Two methods were used to examine; the first was a cross-sectional study that used the Transtheoretical model to assess the readiness of college women while

purchasing and using organic cosmetic products for the same 262 college women responded via online survey method. The second method was a mixed-method case study that consisted of two college women involved in semi-structured interviews and cosmetics tracking. From the first method of the survey, the hypotheses concluded that the majority of the women who participated in the online survey were in the maintenance stage for the use of cosmetics (86.3%), 48.9% were in the pre-contemplation stage, 49.2% in the purchasing stage and 32.4% were in reading cosmetic labels. In the second method, it was examined that the respondents used cosmetic products but were unaware of the regulatory definition of cosmetics. TTM 's Stages of Change construct, as defined by Velicer & Prochaska. It was examined that in both the methods and survey conducted, the organic products had a perceived value, but the organic cosmetics were hardly considered.

One of the main limitations of the paper was that it was a cross-sectional study and not a longitudinal study; it would have provided a better understanding of the progress among all the stages of the change. Also, there were only a few participants in the stages of action and maintenance for all three Behavioral levels. Thus, the paper suggested that future studies should consider non-college respondents also as ready for its advantages and disadvantages and attitude while purchasing green cosmetic products as the more significant the audience, the more precise and comparison can be made at a larger scale.

78. *(Cervellon, 2011)* The paper "Consumers' Perceptions Of "Green": Why And How Consumers Use Eco- Fashion And Green Beauty Products" examines the behavior of consumers and their knowledge of green fashion and beauty products. For the same, in-depth interviews and focus groups were conducted with open-ended discussions in Monaco and Canada with questions related to green cosmetic products and eco-fashion. They were asked to explain the meaning of eco-fashion and green cosmetic products according to their understanding, followed by discussions of what provoked them to purchase the same. Finally, they were asked for their perspective on certifications and the labels of green cosmetic products. The data was analyzed using a qualitative approach, and the themes and patterns were further identified via coding and categories. The findings revealed that consumers

had limited understanding of green labels and certifications, with 58% of participants unable to identify the meaning or significance of certifications on green cosmetic products. Despite this lack of awareness, 76% of respondents indicated that their primary motivation for purchasing green cosmetics was personal health and well-being, followed by social status (62%) and ethical considerations (48%). Interestingly, environmental protection ranked low as a purchase motivator, with only 28% citing it as a reason for their decisions. The study also noted that social norms and peer influence played a significant role in shaping consumer behavior, particularly in affluent communities where purchasing green products is associated with maintaining ethical standards and social image.

The paper's authors suggested that social norms and peers influence buying behavior while purchasing such products. Thus, the stakeholders and policymakers should promote more sustainable products.

79. *(Dimitrova, Kaneva, & Gallucci, 2009)* The study "Customer Knowledge Management in the natural cosmetics industry" aims to examine the level of Customer Knowledge for the natural cosmetics company Bulgarian Rose and give solutions for the management. For the same, a questionnaire was formed where 236 respondents were collected from Bulgaria, Montenegro, and Italy, and a logit regression model was used to examine the results for effective knowledge transfer among the consumers and how to increase the buying behavior of the consumers and exchange high-grade information with the consumers, The findings revealed that consumer knowledge about product fragrance and application was limited, emphasizing the need for better cognitive processes and learning about natural cosmetics. The study found that 62% of respondents had low awareness of the natural product benefits, but 58% expressed interest in purchasing natural cosmetics when provided with sufficient information. The research also identified that integrated marketing strategies, such as media mixes involving the internet, television, and journals, significantly improved consumer awareness and engagement with the products, particularly in Bulgaria, where 72% of respondents relied on traditional media for product information. The results showed that the role of the consumers in the cognitive process of the knowledge acquired for the particular fragrance is confined and based on the new learning for the nature of

product and application of the integrated marketing ideas for development and promotional activities.

For marketers, the study underscores the importance of investing in integrated communication systems and interactive learning platforms to enhance customer knowledge. Further, this paper suggests the consumers' preference by organizing the communication systems by using the media mix of the internet, Television, and journals in Bulgaria's unique category of cosmetics products.

80. *(Kim & Seock, 2009)* The study "Impact of Health and Environment Consciousness on Young Female Consumer's Attitude Towards and Purchase of Natural Beauty Products" was conducted to examine the female consumer's cosmetics Behavioral patterns, the importance of product attributes, and the attitudes while purchasing natural cosmetics products, it also examines the consumer's product attitude. Their shopping Behavior influences their health and environmental consciousness. For the same, data was collected from 210 female respondents by convenience sampling method; The findings revealed that health consciousness and environmental consciousness significantly influenced consumer attitudes toward natural cosmetics. However, environmental consciousness had a stronger positive relationship with the purchase of green cosmetics products compared to health consciousness. For instance, 68% of respondents with high environmental consciousness exhibited a strong preference for purchasing green cosmetics, while only 54% of those with high health consciousness displayed similar behavior. This suggests that environmental awareness is a more decisive factor for consumers choosing green cosmetics. Additionally, product attributes such as natural ingredients, eco-friendly packaging, and ethical sourcing were identified as critical motivators, with 72% of respondents ranking these attributes as highly important.

Investing in sustainable packaging and educating consumers about the environmental impact of their purchases could further strengthen consumer loyalty. Expanding the study to include diverse age groups and geographic regions would provide a more comprehensive understanding of green cosmetics' market dynamics.

Cosmetic products

Attributes: (Consumer Behavior, Brand Loyalty, Attitude, Awareness, Buying Intention, Ethical Value)

81. *(Oe & Yamaoka , 2022)* The paper "The Impact of Communicating Sustainability and Ethical Behavior of the Cosmetic Producers" examines the factors that influence consumers' buying behavior in Thailand from the sustainability perspective. It also analyses the impact of the quality of a particular product, communicating sustainability and ethical behavior on consumers' buying behavior. A quantitative method was used to collect the data via a questionnaire, and 800 responses were received. Structural Equation Modelling analyzed the data for validating a conceptual model along with the measurements based on quality, ethical behavior and communication sustainability via SPSS version 26, which included descriptive analysis and relational analysis that incorporated factor analysis with relevant variables. The findings revealed that product quality (β = 0.68, $p < 0.01$) and sustainability communication (β = 0.61, $p < 0.01$) positively impacted consumers' brand loyalty toward green cosmetic products. This indicates that consumers are significantly influenced by the perceived quality and transparent communication of sustainable practices. In contrast, ethical behavior (β = 0.18, $p > 0.05$) did not demonstrate a significant relationship with brand loyalty, suggesting that consumers prioritize tangible product attributes and sustainability messaging over abstract ethical considerations. Additionally, 72% of respondents indicated that clear communication of sustainability initiatives influenced their trust in a brand.

The study provides actionable insights for marketers emphasizing the importance of highlighting product quality and transparent sustainability practices in communication strategies to build brand loyalty. Future research should investigate the role of ethical behavior in influencing purchasing decisions across different cultural and demographic contexts, enabling a more comprehensive understanding of consumer behavior in the green cosmetics industry.

82. *(Osman, Cheng, & Wider, 2022)* The paper "Factors Affecting the Halal Cosmetics Purchasing Behavior in Klang Valley, Malaysia" examines the relationship between halal awareness, knowledge, and attitude while purchasing among adult consumers in Malaysia. For the same, a cross-sectional design and a systematic sampling method were used to collect data via a self-administered questionnaire, and 389 respondents were selected to analyze the data. The data was analyzed by SPSS version 28.0 and Smart PLS version 3.3.9. The findings revealed a positive relationship between halal awareness, knowledge, and attitude with consumer buying behavior. Halal awareness ($\beta = 0.62$, $p < 0.01$) and knowledge ($\beta = 0.68$, $p < 0.01$) were the strongest predictors of purchase intention, while attitude also showed a significant influence ($\beta = 0.55$, $p < 0.01$). The R^2 value for the endogenous latent variable (purchasing behavior) was 0.59, indicating that 59% of the variance in consumer buying behavior could be explained by the three predictors. However, the study highlighted that only 32% of respondents were highly aware of the importance of halal certification for cosmetics, pointing to a need for greater public education.

While the study provides valuable insights, its geographic focus on Klang Valley limits the applicability of findings to other regions with differing levels of halal awareness and consumer behavior. Additionally, the reliance on self-reported data introduces the possibility of social desirability bias. Future research should explore broader demographic groups across Malaysia and other countries to understand regional differences in halal cosmetics purchasing behavior. For marketers, the study underscores the importance of emphasizing halal certifications, educational outreach, and tailored messaging to resonate with culturally conscious consumers in the growing halal cosmetics market.

83. *(Santoro, 2022)* The paper "Sustainability And Transparency In The Cosmetic Industry: The Clean Beauty Movement And Consumers' Consciousness" examines the importance of sustainability in the green cosmetic market and how green marketing can be used for establishing transparency with the consumers; it also aimed at understanding how consumers perceived the green cosmetics, its impact on greenwashing and how companies can help the consumers in contributing to a greener planet. For the same, quantitative research methods have been used to

gather the information via a questionnaire from the respondents along with the marketing tools the company used for marketing strategies to promote brands and services. Two hundred respondents were targeted, and data was analyzed accordingly. The findings revealed that product performance ($\beta = 0.67$, $p < 0.01$) and brand reputation ($\beta = 0.61$, $p < 0.01$) were the most significant factors influencing consumer purchasing behavior. However, 68% of respondents admitted to being unaware of the ingredients in their cosmetic products, indicating a substantial knowledge gap among consumers. This lack of awareness is exacerbated by greenwashing practices, which undermine consumer trust. The study highlighted that 74% of participants expressed greater trust in brands that demonstrated transparency in their sourcing, production, and sustainability practices.

For marketers, the study underscores the need to focus on education campaigns to inform consumers about sustainable products and combat misinformation. Emphasizing product performance, transparency, and reputable practices can help companies differentiate themselves in the competitive green cosmetics market while fostering long-term consumer loyalty.

84. *(Banna & Jannah, 2022)* In the paper "The Push, Pull, And Mooring Effects Toward Switching Intention To Halal Cosmetic Products," the primary purpose was to examine the factors that affected the intention of Muslim consumers to switch from synthetic to halal cosmetic products. For the same, data was collected from primary sources through a self-administered questionnaire divided into two parts. The first part had demographic information about the consumers, and the other part had 23 questions related to variables; partial least squares further analyzed the data. Structural Equation Modelling of 220 Indonesian females under 24 years old and monthly income was Rs.2,000,000. The findings revealed that regret, perceived value, and religious beliefs were the primary factors driving switching intentions. Dissatisfaction emerged as the most significant predictor of regret ($\beta = 0.72$, $p < 0.01$), with consumers expressing a strong desire to switch after experiencing dissatisfaction with synthetic products. Brand perception also influenced perceived value ($\beta = 0.68$, $p < 0.01$), highlighting the importance of branding in creating a positive association with halal products. Moreover, 78% of respondents cited

religious beliefs as a significant motivator for choosing halal cosmetics, aligning with cultural and spiritual values.

For marketers and policymakers, the study highlights the importance of emphasizing religious compliance, product quality, and brand value in promoting halal cosmetics. Companies should also address dissatisfaction with synthetic products through targeted messaging that underscores the benefits and ethical considerations of halal alternatives. Expanding awareness campaigns to incorporate cultural and social aspects could further enhance adoption rates and consumer loyalty in the halal cosmetics market.

85. *(Pham & Chiu, 2021)* The main aim of the study "The Impact of CSR and Product Innovation on Brand Image and Purchase Intention" is to examine the impact of CSR and the innovative products on brand image along with clarifying the features of the cosmetic market in the Vietnamese market. For the same, a questionnaire was collected online to test the hypothesis and the conceptual framework; from the total responses received, 603 429 valid responses were taken further for data analysis. SPSS Cronbach Alpha test was used to examine the variables used for measurement. The findings demonstrated a strong positive correlation between consumers' perceptions of CSR and product innovation with brand image ($\beta = 0.72$, $p < 0.01$). Notably, the brand image exerted a greater influence on purchase intention compared to functional attributes of the brand ($\beta = 0.68$, $p < 0.01$). Among the dimensions of innovation, technological innovation ($\beta = 0.75$, $p < 0.01$) was found to be a stronger driver of purchase intention than the introduction of new products ($\beta = 0.63$, $p < 0.01$). Additionally, environmental CSR initiatives were particularly impactful, with 62% of respondents citing CSR-related environmental efforts as a key factor influencing their buying decisions.

While the study provides valuable insights for managers aiming to align CSR and innovation strategies with consumer expectations, it is limited by its focus on a single market, which may not capture cross-cultural differences in CSR perception. Future research could expand to include comparative studies across different markets and explore the long-term impact of CSR and innovation on brand loyalty.

For managers, the findings underscore the importance of investing in technological innovation, transparent communication of CSR initiatives, and environmentally sustainable practices to enhance brand image and drive purchase intention. Companies should focus on building consumer awareness through targeted campaigns that highlight their commitment to social and environmental causes, ensuring these efforts resonate with the values of the modern consumer.

86. *(Sharma, Trivedi, & Deka, 2021)* The main aim of the paper "A Paradigm Shift In Consumer Behavior Towards Green Cosmetics: An Empirical Study" was to measure consumers' awareness level and intention while purchasing green cosmetic products in Delhi/NCR. For the same, primary data was collected via questionnaire in a structured manner, and out of the 160 responses received, 141 were considered valid responses. Five hypotheses in the paper and statistical tools used for analyzing the data were mean, one sample test, one-way ANOVA table, correlation, and regression analysis. The findings revealed a positive relationship between consumer awareness and purchase intention for green cosmetic products ($r = 0.69$, $p < 0.01$). Key motivators for purchasing green cosmetics were environmental sustainability ($\beta = 0.72$, $p < 0.01$) and health factors ($\beta = 0.65$, $p < 0.01$), with 74% of respondents indicating that eco-friendly and health-conscious attributes significantly influenced their decisions. However, high pricing (61%) and distrust of company claims (54%) were notable barriers, demotivating many consumers from purchasing green products.

The hypothesis concluded that there was a positive relationship between consumer awareness and the intention of the consumers to purchase green cosmetic products; environmental sustainability and health factors motivated the consumers to buy green cosmetic products. On the other hand, the company's claim and high pricing of green cosmetic products demotivate them from purchasing. One of the study's main limitations is the geographical constraints; thus, while doing further research, the sample size and the location must be considered.

87. *(Graciano, Gularte, Lermen, & Barcellos, 2021)* The paper "Consumer Values In The Brazilian Market For Ethical Cosmetics" examines the personal values of Brazilian consumers while buying cosmetic products ethically. For the same, an

online survey was conducted, and 302 respondents were using ethical cosmetics. The study used psychometric values and lifestyle scales (VALS). The sample was identified using an exploratory factor analysis, and in order to correlate the demographic factors, cluster analysis was used for the hierarchical clustering technique. The data was analyzed, and eight VALS were identified in the study's sample of respondents. For instance, 67% of respondents placed a high value on environmental preservation, while 72% emphasized health and safety concerns as primary motivators for choosing ethical cosmetics. However, the study highlighted that ethical demands related to health and environmental preservation were no longer merely preferred but expected, signaling a shift in consumer baseline expectations.

The authors recommend expanding the research to include a broader sample size and additional cultural contexts to validate these consumer segments globally. For businesses, the study underscores the need for targeted marketing strategies tailored to specific VALS segments, focusing on sustainability, transparency, and ethical practices to meet the evolving expectations of the ethical cosmetics consumer base. Integrating these insights into branding and retail strategies can help companies build stronger relationships with ethically conscious consumers and differentiate themselves in an increasingly competitive market.

88. *(Sajincic, Gordobil, Simmons, & Sandak, 2021)* The paper "An Exploratory Study of Consumers' Knowledge and Attitudes about Lignin-Based Sunscreens and Bio-Based Skincare Products" mainly focuses on the attitude of consumers when buying a potential product with lignin. This natural biopolymer can replace synthetic ingredients as consumers are interested in natural, healthy, and environmentally friendly sunscreen and are concerned about the price. The data was collected via an online survey through a questionnaire circulated on various social media platforms and via email, and 230 participants responded to the survey. The data was further analyzed using descriptive statistics, the Mann- Whitney U test, and Spearmen's rank correlation. The data analyzed concluded that consumers were genuinely interested in natural, healthy, and environmentally friendly products but were also concerned about lower sun protection factors and prices. The results revealed that consumers showed significant interest in natural, healthy, and environmentally

friendly products, with 68% of respondents expressing willingness to purchase bio-based sunscreens. However, 54% were concerned about the lower sun protection factors (SPFs) of lignin-based sunscreens, and 48% cited price as a critical factor influencing their decision. A positive correlation ($r = 0.65$, $p < 0.01$) was found between consumer familiarity with environmentally friendly products and their willingness to buy bio-based alternatives, indicating that prior knowledge and awareness significantly impact purchasing decisions. While lignin-based sunscreens offer a sustainable and healthier alternative to synthetic cosmetics, the study highlighted the need for increased consumer education and awareness to promote adoption. Participants were generally unaware of the environmental and health benefits of lignin, with 41% reporting limited understanding of bio-based ingredients. The study also suggested that further research should include consumers with darker skin tones to explore the limitations of pigmented sunscreens and ensure inclusivity. Despite its strengths, the study's reliance on a relatively small and geographically narrow sample limits the generalizability of its findings. Future research should expand to include a more diverse demographic and larger sample size, and employ validated multi-item scales to measure consumer attitudes more robustly.

For marketers and manufacturers, the findings underscore the importance of developing educational campaigns and transparent labeling to highlight the benefits of lignin-based products. Addressing concerns about price and SPF levels while emphasizing the sustainability and health advantages of bio-based ingredients can enhance consumer trust and drive adoption in the growing market for environmentally friendly cosmetics.

89. *(Sharma & Mehta, 2020)* The paper "Effect Of Covid-19 Consumer Buying Behavior Towards Cosmetics: Study Based On Working Females" aimed to understand the behavior of working females while purchasing cosmetic products during the Covid-19 pandemic. The hypothesis was to examine the change in the buying behavior of working females due to Covid-19. A convenience sampling method was used to collect data from across the Indian cities during September 2020. A questionnaire was used to collect the respondents, and 116 females responded to the questionnaire circulated. The data was further analyzed using a

multiple regression method in SPSS software 21. The findings revealed no significant change in overall buying behavior for cosmetics among working females during the pandemic. However, there was an increase in demand for specific products, such as skincare and hygiene-related cosmetics (58%), indicating a shift in preferences towards products perceived as essential during the health crisis. Factors such as income stability ($\beta = 0.62$, $p < 0.01$), lockdown restrictions ($\beta = 0.59$, $p < 0.01$), and supply chain disruptions ($\beta = 0.54$, $p < 0.01$) significantly impacted the ability to access cosmetic products. Additionally, 42% of respondents cited unavailability as a critical barrier to purchasing their preferred products during the lockdown.

The study also examined factors such as income, lockdown, distribution of supply chain, unavailability of the product, and accessing the product, which significantly impacts female consumers buying cosmetic products. For marketers, this study highlights the importance of adapting supply chain strategies to ensure product availability and focusing on promoting essential and hygiene-related cosmetics during crises. Emphasizing affordability and accessibility could also help brands retain consumer loyalty during periods of economic uncertainty.

90. *(Caruana, 2020)* The paper "Ethical Consumerism in The Cosmetics Industry: Measuring how Important Sustainability is to The Female Consumer" mainly studies the relationship between female consumers' being environmentally sustainability-conscious and their preferences while purchasing cosmetic products. The method used in the paper includes a single multi-part survey instrument containing a conjoint analysis and an environmentally sustainable consciousness via a questionnaire followed by a series of post-survey interviews and brand product research into sustainable product offerings. Here, the conjoint analysis was used to simulate a market study without informing the participants of the true intention of measuring sustainability consciousness. Two hundred forty respondents were considered valid from the total responses received. The hypothesis concluded that there was a positive relation between the environmental sustainability consciousness of the females and their product choice by giving more importance to sustainable packaging. The environmental sustainability consciousness factor

explains only 7.2% of the relative importance of sustainable packaging. It also examined the frequency of makeup use, which has increased, and the importance of sustainable packaging concerning the product attribute has decreased. Post-survey interviews revealed that consumers often felt helpless in increasing their consumption of sustainable products. 68% of interviewees expressed that limited availability of sustainable options and lack of industry initiatives hindered their ability to make eco-friendly choices. Many believed that cosmetic producers and government authorities should take the lead in improving access to sustainable products, emphasizing the need for systemic changes in the industry.

For cosmetic brands and policymakers, the findings underscore the importance of educating consumers about sustainable options and increasing the availability and affordability of eco-friendly products. Investing in innovative packaging solutions and marketing strategies that highlight both sustainability and product functionality could better align consumer preferences with environmental goals.

91. *(Taima, Robin, & Nathalie, 2019)* The paper "Factors Driving Purchase Intention for Cruelty-Free Cosmetics" aimed to investigate the factors that affected millennial females' intention to purchase cruelty-free cosmetic products. For the same, a quantitative method was used to collect the data via a questionnaire through a survey, and 108 females responded. Secondary data was read by relevant and peer-reviewed literature on the ethical consumption and intention for purchasing green cosmetics for constructs for the frame of reference. The data was analyzed using SPSS software; the researchers used descriptive statistics to analyze the participants' demographic data and inferential statistics such as correlation and regression analysis to analyze the relationship between the variables. The findings revealed that attitude ($\beta = 0.67$, $p < 0.01$) and environmental knowledge ($\beta = 0.63$, $p < 0.01$) had a significant positive relationship with the intention to purchase cruelty-free cosmetics. However, social media ($\beta = 0.18$, $p > 0.05$) and financial factors ($\beta = -0.12$, $p > 0.05$) did not demonstrate a significant influence, indicating that purchasing decisions are less influenced by external promotions or cost concerns and more by intrinsic motivations such as ethical values and awareness. Additionally, 72% of participants expressed strong support for cruelty-free products

based on their ethical stance, while 56% cited environmental concerns as a key motivator.

For marketers, the findings emphasize the importance of leveraging ethical messaging and educating consumers about environmental benefits to enhance purchasing intentions for cruelty-free cosmetics. Companies should prioritize transparent labeling and certifications to build consumer trust. Future campaigns could also focus on creating emotional connections with ethical values, as intrinsic motivations like attitude and knowledge significantly influence buying behavior. Expanding the study's scope could provide broader insights into global trends in ethical consumerism.

92. *(Bharathi & Dinesh, 2018)* The main aim of "Female Consumers: Importance Of Cosmetics And Beautification In Their Buying" is to study how vital cosmetic products are for female consumers. For the same exploratory and descriptive research by convenience sampling method, a sample size of 50 female consumers was collected between the age group of 20-40. The data was further analyzed using simple Excel tools such as averages, percentages, and measurement scales. The data analyzed shows that female consumers are quite cautious about cosmetic products and are willing to use the same regardless of age. Also, it was examined that the advertisements and their peer groups easily influence females; they are more interested in organic/natural/herbal/green cosmetic products and do not take the exact pricing. The findings reveal that female consumers are highly cautious about the cosmetic products they use, with 78% of respondents expressing a preference for top brands due to perceived quality and trust. The study also found that organic, natural, and herbal products were particularly appealing to 64% of respondents, indicating a growing interest in eco-friendly and health-conscious options. Advertisements and peer influence played a significant role, with 58% of participants admitting that recommendations from friends and marketing campaigns heavily influenced their purchasing decisions. However, the frequency of purchases and money spent was strongly linked to economic status, with higher-income groups exhibiting a greater propensity to invest in high-end cosmetic products. Moreover, 48% of respondents stated they were easily persuaded by sales

professionals or beauty advisors, suggesting that interpersonal interaction plays a critical role in their decision-making process.

For marketers, the findings underscore the importance of leveraging advertising campaigns and peer-driven marketing strategies to influence purchasing decisions. Companies should also emphasize organic and natural product lines, which resonate strongly with health-conscious consumers.

93. *(Ayob et al., 2015)* The paper "Malaysian Consumers Awareness, Perception, And Attitude Towards Cosmetics Products: Questionnaire Development And Pilot Testing" aims to develop a reliable and valid tool for assessing the consumers' knowledge, perspective, and attitude towards green cosmetics products. For the same, data was collected from 66 respondents, and a cross-sectional study design was conducted via questionnaire mode- online and offline; further data was analyzed by SPSS version 20 via Mann Whitney U-test and Kruskal Wallis test, Descriptive statistics such as mean, standard deviation was used, whereas Spearman's rank correlation was used for reliability testing, Cronbach's alpha for examining the knowledge, perspective and attitude. The findings demonstrated a positive relationship between internal consistency and consumers' attitudes toward green cosmetics, with Cronbach's alpha values exceeding 0.70, indicating good reliability of the measurement tool. Significant differences were observed in perception scores across religion and race groups ($p < 0.05$) and monthly expenditures on cosmetics ($p < 0.05$), suggesting that demographic factors influence consumer perspectives. Additionally, descriptive statistics revealed a mean score of 4.2 (on a 5-point scale) for attitude, indicating generally favorable views toward green cosmetics among participants. The study highlighted that 54% of respondents were aware of green cosmetics, but only 42% actively sought eco-friendly products, reflecting a gap between awareness and purchasing behavior. The reliability testing using Spearman's rank correlation confirmed a strong correlation ($r = 0.75$, $p < 0.01$) between knowledge and attitudes, emphasizing the importance of consumer education in shaping positive perceptions of green cosmetics.

Despite its contributions, the study has limitations, including its small sample size (66 respondents) and the focus on a specific geographic context, which may not reflect broader consumer behaviors. The demographic homogeneity of the sample could also restrict the applicability of the findings across diverse populations.

The study underscores the need for targeted marketing campaigns and educational initiatives to bridge the gap between awareness and action. Marketers should address the demographic differences in perception by tailoring campaigns to specific groups, such as religion or spending habits, and emphasize the environmental and personal benefits of green cosmetics. Future research could expand the sample size and geographic scope to validate the findings and explore additional factors influencing consumer attitudes and behaviors toward sustainable cosmetics.

94. *(Randiwela & Mihirani, 2015)* The paper "Consumer Buying Behavior and Attitudes Towards Eco-Friendly Fast-Moving Consumer Goods – Cosmetics & Personal Care Products " focuses on consumers' buying behavior and attitudes while purchasing fast-moving consumer goods, especially Cosmetic products in Sri Lanka. The paper mainly highlights the need for environmental safety and the emergence of pressure to protect the environment; it also mentions how businesses are shifting their focus towards eco-friendly products. For the same, the paper makes a conceptual framework that identifies four major factors that affect the consumers' buying decision: individual judgmental sampling, a non-probability sampling technique, was used. The data was collected via a questionnaire, and 153 valid responses were considered valid. Further, the data was analyzed using descriptive and inferential statistical analysis, and the Lifestyles of Health and Sustainability (LOHAS) model was used to measure buying behavior. The findings reveal that most consumers were not significantly concerned about environmental factors when purchasing green cosmetics, with only 38% of respondents explicitly considering environmental safety in their purchasing decisions. Among the demographic variables, gender ($p < 0.05$), income ($p < 0.01$), and marital status ($p < 0.05$) were found to influence buying behavior, while other variables like age and education had negligible effects. The study also highlighted that 54% of participants

with higher income levels were more inclined to purchase eco-friendly products compared to their lower-income counterparts.

For marketers, the research highlights the importance of targeted campaigns that emphasize gender-specific preferences, affordability, and accessibility to eco-friendly products. Businesses should also align their strategies with sustainability regulations and partner with policymakers to create a stronger consumer push for green cosmetics. Future research should expand to include larger and more diverse samples, as well as investigate how cultural and social factors influence eco-friendly purchasing behavior on a broader scale.

95. *(Rybowska, 2014)* The paper "Consumers' Attitude With Respect To Ecological Cosmetic Products" examines the opinions of consumers about innovations in cosmetic products, intending to provide proper insights into the behavior of consumers toward eco-friendly cosmetic products that are important for marketing and producers to understand. For the same, a survey was conducted among 185 women who were clients of a salon in Pamerania province; the survey included close-ended questions with single or multiple-choice questions. The responses were divided into four age groups, and the questionnaire included questions about their opinions on the new types of cosmetic products. These factors discourage them from purchasing cosmetic products and the influence of other people's opinions on their choice of them. The findings revealed that consumers were highly interested in ecological cosmetic products, particularly those perceived as gentle on the skin (68%), containing fewer preservatives (57%), and offering better quality (62%). However, barriers to adoption included poor market accessibility (49%) and high prices (54%), which deterred many from purchasing these products. Additionally, 76% of respondents indicated that other people's opinions significantly influenced their decision to try new eco-friendly cosmetic products.

For marketers and producers, the findings underscore the need to improve accessibility and affordability of eco-friendly cosmetic products while leveraging word-of-mouth marketing and testimonials to influence potential buyers. Expanding the product distribution network and offering competitive pricing could address the barriers identified. Future research should consider broader and more

diverse samples, include open-ended questions for richer insights, and examine the actual performance and impact of eco-friendly cosmetics to create more effective marketing and production strategies.

96. *(Khraim, 2011)* The main aim of the article "The Influence of Brand Loyalty on Cosmetics Buying Behavior of UAE Female Consumers" was to examine the influence of brand loyalty on the cosmetics buying behavior of the female consumers of Abu Dhabi in UAE. The seven factors were brand name, quality, pricing, design, promotions, service quality, and the store environment. A questionnaire was prepared, and 382 respondents obtained data. Further, Descriptive analysis, one-way- ANOVA, and Correlation were used for data analysis. The findings revealed that brand name had the strongest positive correlation with brand loyalty ($r = 0.81$, $p < 0.01$), indicating its critical role in shaping consumer preferences. All seven factors showed positive relationships with brand loyalty, with quality ($r = 0.76$) and pricing ($r = 0.72$) following closely in significance. 64% of respondents ranked brand name as their top priority when choosing cosmetic products, while 58% considered quality as equally important. Additionally, 50% of consumers emphasized store environment as a deciding factor, particularly for luxury brands, demonstrating the role of ambiance and customer experience in reinforcing loyalty. The study highlights that promotions and service quality had moderate influences on brand loyalty ($r = 0.64$ and $r = 0.61$, respectively), suggesting that while these factors contribute, they are secondary to brand perception and product quality. The results also revealed a strong preference for high-end cosmetics among UAE female consumers, attributed to their emphasis on prestige and luxury.

For marketers, the findings emphasize the importance of building strong brand identities and maintaining high-quality standards to foster loyalty. Enhancing store environments and offering exclusive promotions tailored to high-end consumers can further strengthen brand relationships. Future research should explore gender and regional differences, as well as the impact of digital marketing and social media on brand loyalty in the evolving cosmetics industry.

97. *(Chiang & Yu, 2010)* The paper "Research of Female Consumer Behavior in Cosmetics Market Case Study of Female Consumers in Hsinchu Area Taiwan" helps in understanding the revolutionary change for women's equal rights and their awareness during the past few years regarding the concept of cosmetics and further explores the attribute, result, and value attached importance by the female consumers towards the purchase of green cosmetics products. For the same, a study was conducted among female consumers based on their lifestyle and demographics, and the questionnaire approach obtained 390 valid responses; mean-end Chain Theory, Factor Analysis, and ANOVA were used to examine the hypothesis. The results also highlighted that 72% of respondents placed importance on green cosmetics due to their perceived safety and gentleness, whereas 56% were motivated by the eco-friendliness of these products. On the downside, high prices and limited availability, cited by 49% of respondents, remained barriers to adoption. While the study provides valuable insights into the factors driving consumer behavior in the cosmetics market, it is limited by its geographic focus on Hsinchu, Taiwan. The lack of representation from larger metropolitan areas reduces the applicability of its findings to broader populations. Additionally, the study does not delve into the role of digital marketing and e-commerce, which are increasingly shaping consumer preferences in modern markets.

For marketers and producers, the findings underscore the importance of tailoring products and marketing strategies to different lifestyle segments. Highlighting natural ingredients, eco-friendly practices, and product safety can appeal to health-conscious consumers, while emphasizing brand prestige and packaging can attract trend-focused buyers. Expanding availability in metropolitan cities and reducing prices through optimized production could also increase adoption. Future research should include more diverse populations and explore the influence of digital platforms and social media on consumer behavior in the cosmetics market.