

Consumer Attitude Towards Environmentally Friendly Cosmetics: an Empirical Study in Thiruvananthapuram Taluk

D.N. Calvin Kisto^{1*}, Dr.C.L. Jeba Melvin ²

¹Ph.D. Full Time Research Scholar, (Reg. No: 23213111061002), Research Centre of Management Studies, Nesamony Memorial Christian College, Marthandam, Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli - 627 012, Tamil Nadu, India,

E-mail: calvinkisto@gmail.com

²Associate Professor, Department of Management Studies, Nesamony Memorial Christian College, Marthandam, Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627 012, Tamil Nadu, India,

E-mail: jebamelwyn@gmail.com

Cite this paper as: D.N. Calvin Kisto, Dr.C.L. Jeba Melvin, (2024) Consumer Attitude Towards Environmentally Friendly Cosmetics: an Empirical Study in Thiruvananthapuram Taluk. *Frontiers in Health Informatics*, Vol.13, No 6.2024, 1516-1528

ABSTRACT

The growing concern for environmental sustainability has increased consumer interest in environmentally friendly cosmetic products. The present study examines consumer attitudes towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk. The study specifically focuses on consumer awareness, attitude, factors influencing attitude, and the relationship between consumer attitude and purchase behaviour. The study is based on primary and secondary data. Primary data were collected from 110 respondents through a structured questionnaire using convenience sampling. The data were analysed using Percentage Analysis, Reliability Analysis, KMO and Bartlett's Test, Exploratory Factor Analysis, Multiple Regression Analysis, and Pearson Correlation Analysis. The findings indicate that a considerable proportion of respondents have a high level of awareness towards environmentally friendly cosmetic products. The consumer attitude scale demonstrates satisfactory internal consistency. The factor analysis identifies Environmental Awareness, Product Quality and Safety, Price and Availability, and Sustainable Packaging as important factors associated with consumer attitude. The regression analysis indicates that these factors significantly influence consumer attitude towards environmentally friendly cosmetic products. The study also reveals a significant positive relationship between consumer attitude and purchase behaviour. The study suggests that cosmetic manufacturers and marketers should focus on product quality and safety, sustainable packaging, reasonable pricing, wider availability, consumer awareness, and transparent communication to encourage environmentally responsible consumption. The study concludes that favourable consumer attitudes towards environmentally friendly cosmetics can contribute to sustainable purchasing behaviour and support the development of a more environmentally responsible cosmetic market.

Keywords: Consumer Attitude, Environmentally Friendly Cosmetics, Consumer Awareness, Sustainable Packaging, Purchase Behaviour, Green Consumer Behaviour..

INTRODUCTION

The cosmetics industry has emerged as one of the rapidly expanding segments of the global consumer market, driven by increasing awareness of personal appearance, changing lifestyles, rising disposable income, and the growing influence of social media and digital marketing. Cosmetics and personal care products have become an integral part of consumers' daily lives, encompassing skincare, haircare, fragrances, makeup, and other personal grooming products. Alongside this growth, increasing attention is being given to the environmental consequences associated with the production, packaging, distribution, consumption, and disposal of cosmetic products. Issues such as excessive plastic packaging, chemical ingredients, resource consumption, waste generation, and environmental pollution have contributed to growing interest in more sustainable alternatives.

Environmentally friendly cosmetics, often referred to as green or sustainable cosmetics, represent an emerging category of products designed to reduce negative environmental impacts while satisfying consumers' personal care requirements. These products may incorporate naturally derived or responsibly sourced ingredients, environmentally conscious production processes, recyclable or biodegradable packaging, cruelty-free practices, and reduced use of harmful chemicals. The increasing availability of such products reflects the broader movement towards sustainable consumption and responsible business practices. For businesses, sustainability is no longer limited to corporate environmental initiatives; it has increasingly become a component of product development, branding, marketing communication, and consumer relationship management.

Consumer attitude plays a significant role in determining the acceptance and purchase of environmentally friendly cosmetics. Attitude reflects consumers' beliefs, perceptions, feelings, and behavioural tendencies towards a particular product or concept. In the context of sustainable cosmetics, consumers may consider several factors before developing a favourable or unfavourable attitude. These include environmental awareness, perceived product quality, health and safety considerations, product effectiveness, price, brand reputation, availability, packaging, ingredient transparency, and trust in environmental claims. Although consumers may express concern about environmental protection, their positive environmental attitudes do not necessarily translate into actual purchasing behaviour. This difference between environmental concern and consumer action represents an important area of investigation for marketers and researchers.

From a managerial perspective, understanding consumer attitudes towards environmentally friendly cosmetics is particularly important. Cosmetic companies need to identify the factors that encourage consumers to consider sustainable products and the barriers that prevent their adoption. Consumers may perceive environmentally friendly cosmetics as safer, healthier, more ethical, or environmentally responsible, while factors such as higher prices, limited availability, lack of information, doubts regarding product effectiveness, and concerns about misleading green claims may influence their purchase decisions. Therefore, examining consumer attitudes can assist cosmetic manufacturers, retailers, and marketers in developing appropriate product strategies, pricing approaches, promotional messages, packaging decisions, and distribution channels.

The growth of digital platforms has further transformed the way consumers obtain information about cosmetic products. Social media, online reviews, influencers, e-commerce platforms, and digital advertising have increased consumers' exposure to information relating to ingredients, sustainability, ethical production, animal testing, packaging, and environmental impacts. At the same time, the availability of large amounts of information can create uncertainty regarding the credibility of environmental claims made by brands. Consequently, consumer trust and perceived authenticity have become important considerations in the sustainable cosmetics market.

In India, the growing emphasis on environmental sustainability, changing consumer lifestyles, increasing awareness of personal health and wellness, and expansion of organised retail and e-commerce have created opportunities for environmentally friendly cosmetic products. Consumers are increasingly exposed to concepts such as natural ingredients, organic products, recyclable packaging, cruelty-free cosmetics, and sustainable brands. However, the extent to which these concepts influence consumer attitudes may vary according to demographic characteristics, awareness levels, purchasing power, product preferences, and individual perceptions. Hence, consumer behaviour towards environmentally friendly cosmetics requires examination within specific geographical and socio-economic contexts.

REVIEW OF LITERATURE

Upadhyaya and Sijoria (2024), in their study titled "Customers' Purchase Intention of Green Cosmetics in India: Empirical Validations Using an Extended Theory of Planned Behavior (TPB)," examined the factors influencing consumers' intention to purchase green cosmetics in India. The study employed an extended Theory of Planned Behavior to understand consumer decision-making. The authors found that psychological and behavioural factors play an important role in shaping consumers' intention towards green cosmetic products. The study highlighted the importance of consumers' attitudes in developing favourable purchase intentions. It also examined the role of perceived behavioural factors in green cosmetic consumption. The findings indicated that sustainable consumption considerations are increasingly relevant to Indian cosmetic consumers. The study emphasized the importance of understanding consumer attitudes when developing green marketing strategies. It suggested that cosmetic companies should focus on factors that strengthen consumers' positive perceptions of environmentally friendly products. The study concluded that consumer-related psychological factors are important determinants of

green cosmetic purchase intention. These findings are particularly relevant to the present study, which examines consumer attitudes towards environmentally friendly cosmetics in Thiruvananthapuram Taluk.

Nav, Bharguvanshi, Seth and Singh (2024), in their study titled “Going Green: Assessing Perceived Value and Purchase Intentions in Indian Cosmetic Market,” examined consumers’ perceived value and purchase intentions towards green cosmetics in India. The study collected primary data from 210 cosmetic users and examined functional, social, emotional, health, and environmental dimensions of perceived value. The findings revealed that consumers perceived green cosmetics to have significantly higher value than conventional cosmetics across several dimensions. The authors found that quality and health consciousness were important factors influencing consumers’ preference for green cosmetics. The study highlighted the increasing importance of health and environmental considerations in cosmetic consumption. It also indicated that consumers evaluate green cosmetics on both functional and environmental grounds. The authors observed that perceived value plays an important role in developing purchase intentions. The study suggested that cosmetic marketers should communicate the functional, health, and environmental benefits of green products effectively. It concluded that perceived value is an important factor in understanding consumer responses to environmentally friendly cosmetics. These findings provide useful support for analysing consumer attitudes towards green cosmetics in Thiruvananthapuram Taluk

Limbu and Ahamed (2023), in their study titled “What Influences Green Cosmetics Purchase Intention and Behavior? A Systematic Review and Future Research Agenda,” reviewed the factors influencing consumers’ purchase intention and behaviour towards green cosmetics. The study systematically examined previous empirical research on green cosmetic consumption. The authors identified several important determinants of green cosmetic purchase intention and behaviour. The findings highlighted the importance of environmental consciousness, consumer attitudes, perceived value, social influence, and product-related factors. The study showed that consumers’ environmental concerns can influence their willingness to purchase environmentally friendly cosmetics. It also emphasized the role of consumer knowledge and perceptions in shaping green purchasing decisions. The authors observed that psychological and marketing-related factors interact in influencing consumer behaviour. The study suggested that future research should examine green cosmetic consumption in different geographical and cultural contexts. It concluded that consumer attitudes and environmental considerations are important components of green cosmetic purchasing behaviour. These findings provide a strong theoretical foundation for examining consumer attitudes towards environmentally friendly cosmetics in Thiruvananthapuram Taluk.

Chaudhary and Bhatia (2023), in their study titled “Consumer Behaviour Towards Green Cosmetics: The Paradigm Shift Towards Circularity and Sustainability,” examined the factors influencing consumers’ choices of environmentally friendly green cosmetics. The study focused on sustainable and circular consumption practices in the cosmetics sector. The authors found that attitude and perceived behavioural control significantly influenced consumers’ purchase intention towards green cosmetics. The study also examined the influence of product knowledge, health consciousness, emotions, trust, and environmental awareness on consumer attitudes. The findings indicated that these factors positively contributed to consumers’ attitudes towards environmentally friendly cosmetics. The authors observed that price, product attributes, quality, availability, eco-labels, and certifications were important considerations in consumer decision-making. The study highlighted the growing importance of sustainability and circularity in cosmetic consumption. It suggested that cosmetic companies should improve consumer knowledge and trust through effective product information and credible environmental claims. The study concluded that consumer attitudes and perceived behavioural control are important factors influencing green cosmetic purchase intention. These findings are highly relevant to the present study of consumer attitudes towards environmentally friendly cosmetics.

Nguyen et al. (2022), in their study titled “Predictors of Green Cosmetics Purchase Intentions among Young Female Consumers in Vietnam,” examined the factors influencing young female consumers’ intention to purchase green cosmetics. The study employed the Information–Motivation–Behavioral Skills model to explain green cosmetic purchase intention. Data were collected from 433 young female consumers and analysed using statistical methods. The findings revealed that green-cosmetics-related knowledge was positively associated with purchase intention. The study also found that consumer attitudes and subjective norms positively influenced consumers’ intention to purchase green cosmetics. The authors highlighted the importance of consumer knowledge in developing favourable attitudes towards environmentally friendly products. The study indicated that social influences can also contribute to consumers’ green cosmetic purchasing decisions. It suggested that marketers should improve consumers’ environmental and product-related knowledge. The authors concluded that

knowledge, attitude, and social influences are important determinants of green cosmetics purchase intention. These findings are relevant to the present study because they provide a basis for examining the relationship between consumer awareness and attitude towards environmentally friendly cosmetics.

Ekasari, Rahayu, Pratamo, Hidayat and Maharani (2022), in their study titled “Factors Affecting Consumers’ Intention to Buy Green Cosmetics,” examined the factors influencing consumers’ intention to purchase green cosmetics. The study investigated the relationship between green self-identity, global self-identity, green knowledge, green trust, and purchase intention. Data were collected from 400 consumers and Structural Equation Modelling was used for hypothesis testing. The findings revealed that green self-identity and global self-identity positively influenced green knowledge. The study also found that green knowledge contributed positively to green trust. Green trust was found to have a positive influence on consumers’ purchase intention towards green cosmetics. The authors emphasized the importance of consumer knowledge and trust in promoting sustainable cosmetic consumption. The study suggested that marketers should develop communication strategies that strengthen consumers’ green identity and knowledge. It concluded that knowledge and trust are important mechanisms connecting consumer identity with green cosmetic purchase intention. These findings are relevant to understanding the factors shaping consumer attitudes towards environmentally friendly cosmetics.

STATEMENT OF THE PROBLEM

The cosmetics industry has witnessed significant growth in recent years due to changing lifestyles, increasing personal grooming awareness, rising disposable income, and the wide availability of cosmetic products through both physical and online retail channels. At the same time, growing environmental concerns have encouraged consumers and businesses to pay greater attention to sustainable consumption. Conventional cosmetic products may be associated with issues such as excessive plastic packaging, non-biodegradable waste, chemical ingredients, resource consumption, and environmental pollution. As a result, environmentally friendly cosmetics have gained increasing attention as an alternative that seeks to combine personal care with environmental responsibility. Despite the growing availability of environmentally friendly cosmetics, consumer acceptance and adoption of these products may not always correspond with increasing environmental awareness. Consumers may have positive attitudes towards environmental protection but may hesitate to purchase green cosmetics because of higher prices, limited availability, lack of product information, uncertainty about product effectiveness, unfamiliarity with ingredients, and doubts regarding environmental claims. Thus, understanding consumer attitude is important for identifying the factors that encourage or discourage the acceptance of environmentally friendly cosmetics.

Consumer attitude towards environmentally friendly cosmetics can be influenced by several factors, including environmental awareness, health consciousness, perceived quality, perceived value, product effectiveness, eco-friendly packaging, brand image, trust, price, and availability. These factors may differ according to consumers’ demographic and socio-economic characteristics. Therefore, it is necessary to examine whether consumers in a particular geographical area demonstrate favourable attitudes towards environmentally friendly cosmetics and to identify the major factors associated with such attitudes. Although several studies have examined green cosmetics, much of the existing research has focused on purchase intention, green consumer behaviour, or specific consumer groups and geographical markets. There is comparatively less empirical evidence focusing specifically on consumer attitude towards environmentally friendly cosmetics among consumers in Thiruvananthapuram Taluk. The local socio-economic environment, purchasing patterns, exposure to digital marketing, and awareness of environmental issues may influence consumer attitudes differently from those observed in other regions. Therefore, the present study attempts to examine consumer attitude towards environmentally friendly cosmetics in Thiruvananthapuram Taluk. The study seeks to understand consumers’ level of awareness and perceptions of environmentally friendly cosmetics and to examine the factors influencing their attitudes towards such products. It also aims to provide useful insights for cosmetic manufacturers, marketers, retailers, and consumers regarding the adoption and promotion of environmentally responsible cosmetic products. The study is expected to contribute to a better understanding of sustainable consumer behaviour in the cosmetics sector and provide a basis for developing appropriate marketing strategies for environmentally friendly cosmetic products.

SCOPE OF THE STUDY

The scope of the present study is to examine the attitude of consumers towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk. The study focuses on consumers’ awareness, beliefs, perceptions,

feelings, and behavioural tendencies regarding environmentally friendly cosmetics. It covers consumer perceptions of natural ingredients, product safety, quality, effectiveness, sustainable packaging, environmental benefits, price, availability, and brand image. The study also examines the factors that influence consumers' attitudes and their purchase behaviour towards environmentally friendly cosmetic products. Different categories of cosmetic products, including skin-care, hair-care, personal-care, and beauty products, are considered within the scope of the study. The study considers the role of information sources such as social media, online reviews, advertisements, and recommendations in shaping consumer attitudes. The geographical scope is limited to Thiruvananthapuram Taluk, and the findings are intended to provide an understanding of consumer attitudes within this specific geographical area. The study may be useful to cosmetic manufacturers, marketers, retailers, consumers, researchers, and policymakers in understanding the growing importance of environmental considerations in the cosmetic industry.

CONSUMER ATTITUDE

Consumer attitude refers to the overall positive or negative evaluation that a consumer develops towards a particular product, service, brand, or idea. It represents what consumers think, feel, believe, and intend to do regarding a product based on their knowledge, perceptions, experiences, values, needs, and expectations. Consumer attitude generally consists of three important components: cognitive, which relates to consumers' beliefs and knowledge; affective, which reflects their feelings and emotions; and behavioural, which indicates their intention to purchase, use, recommend, or avoid a product. A favourable attitude can encourage consumers to purchase and recommend a product, whereas an unfavourable attitude may lead to rejection or avoidance. In the context of environmentally friendly cosmetics, consumer attitude reflects consumers' beliefs, feelings, perceptions, and behavioural tendencies towards eco-friendly ingredients, sustainable packaging, environmental benefits, product safety, quality, and effectiveness.

CONSUMER ATTITUDE AND PURCHASE BEHAVIOUR

Consumer attitude and purchase behaviour are closely related concepts that explain how consumers' thoughts, feelings, beliefs, and perceptions influence their actual buying decisions. Consumer attitude represents the favourable or unfavourable evaluation that consumers develop towards a product, brand, or service. Purchase behaviour refers to the actual actions taken by consumers, such as searching for information, comparing alternatives, purchasing, using, repurchasing, or recommending a product. A positive attitude towards a product generally increases consumers' willingness to purchase it. However, a positive attitude does not always result in actual purchase behaviour because consumers may be influenced by price, income, availability, product quality, brand reputation, and perceived value. In the case of environmentally friendly cosmetics, consumers may have a positive attitude because of environmental concerns, natural ingredients, sustainable packaging, and perceived health benefits. Their purchase behaviour may also depend on the product's effectiveness, safety, affordability, accessibility, and credibility of environmental claims. Social media, online reviews, advertisements, and recommendations from friends or influencers can further influence both attitude and purchasing decisions. Consumers who trust green claims and perceive greater environmental and personal benefits may show stronger willingness to buy sustainable cosmetics. Therefore, understanding the relationship between consumer attitude and purchase behaviour is important for identifying whether positive perceptions towards environmentally friendly cosmetics are actually translated into purchasing decisions.

COSMETICS

Cosmetics are substances, products, or preparations used by individuals to clean, protect, enhance, or improve the appearance of the body, particularly the skin, hair, face, lips, nails, and other external parts. They include a wide range of products such as face creams, moisturisers, lotions, cleansers, shampoos, conditioners, soaps, perfumes, lipsticks, foundations, sunscreens, nail products, and makeup items. Cosmetics are mainly used for personal grooming, beauty enhancement, skin and hair care, and maintaining a desirable appearance. Consumer preferences for cosmetics are influenced by factors such as product quality, safety, ingredients, effectiveness, price, brand image, packaging, availability, and personal needs. In recent years, growing awareness of environmental and health concerns has increased interest in cosmetics containing natural or responsibly sourced ingredients and using sustainable packaging. Thus, cosmetics have become an important part of personal care and consumer lifestyle, while environmental considerations are increasingly influencing consumers' attitudes and purchasing behaviour.

OBJECTIVES OF THE STUDY

To study the level of consumer awareness towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk.

To examine the attitude of consumers towards environmentally friendly cosmetic products.

To identify the factors influencing consumers' attitudes towards environmentally friendly cosmetic products.

To analyse the relationship between consumer attitude and purchase behaviour towards environmentally friendly cosmetic products.

HYPOTHESES OF THE STUDY

H₀1: There is no significant relationship between consumer awareness and consumer attitude towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk.

H₁1: There is a significant relationship between consumer awareness and consumer attitude towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk.

H₀2: There is no significant difference in consumers' attitudes towards environmentally friendly cosmetic products based on their demographic characteristics.

H₁2: There is a significant difference in consumers' attitudes towards environmentally friendly cosmetic products based on their demographic characteristics.

H₀3: There are no significant factors influencing consumers' attitudes towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk.

H₁3: There are significant factors influencing consumers' attitudes towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk.

H₀4: There is no significant relationship between consumer attitude and purchase behaviour towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk.

H₁4: There is a significant relationship between consumer attitude and purchase behaviour towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk.

RESEARCH METHODOLOGY

The research methodology describes the systematic procedures followed for collecting, analysing, and interpreting data relating to consumer attitude towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk.

Population of the Study

The population of the study consists of consumers who purchase and use cosmetic products in Thiruvananthapuram Taluk.

Sample Design

The study consists of 110 respondents selected through the convenience sampling method under the non-probability sampling technique.

Data Collection

The study uses both primary and secondary sources of data for examining consumer attitude and purchase behaviour towards environmentally friendly cosmetic products.

Primary Data Collection

The primary data was collected from 110 respondents using a structured questionnaire. The questionnaire was designed to obtain information relating to consumer awareness, perceptions, attitudes, preferences, and purchase behaviour towards environmentally friendly cosmetic products.

Secondary Data Collection

Secondary data was collected from:

- Research Papers
- Academic Journals
- Books and Articles

- Websites
- Reports and Other Relevant Publications

Data Analysis

The data collected from the respondents was classified, tabulated, and analysed using appropriate statistical techniques. The following six statistical tools were used for the analysis:

Percentage Analysis

Reliability Analysis (Cronbach's Alpha)

Correlation Analysis

Multiple Regression Analysis

KMO and Bartlett's Test

Exploratory Factor Analysis,

LIMITATIONS OF THE STUDY

The study uses convenience sampling, which is a non-probability sampling technique. Hence, the responses may not fully represent the opinions and purchasing behaviour of all consumers of environmentally friendly cosmetic products.

The study is limited to the specific period during which the primary data was collected. Changes in consumer preferences, awareness, market conditions, product availability, and environmental concerns over time may influence the findings.

ANALYSIS

Table 1: Demographic Profile Of The Respondents

Demographic Variable	Category	Frequency	Percentage
Gender	Male	38	34.55
	Female	72	65.45
	Total	110	100.00
Age	Below 20 years	18	16.36
	21–30 years	42	38.18
	31–40 years	31	28.18
	Above 40 years	19	17.27
	Total	110	100.00
Educational Qualification	Higher Secondary	14	12.73
	Undergraduate	32	29.09
	Postgraduate	43	39.09
	Professional Qualification	13	11.82
	Others	8	7.27
	Total	110	100.00
Occupation	Student	24	21.82
	Government Employee	18	16.36
	Private Employee	29	26.36
	Business/Self-employed	21	19.09
	Homemaker	12	10.91
	Others	6	5.45
	Total	110	100.00
Monthly Income	Below ₹15,000	20	18.18

	₹15,001–₹25,000	27	24.55
	₹25,001–₹35,000	30	27.27
	₹35,001–₹50,000	21	19.09
	Above ₹50,000	12	10.91
	Total	110	100.00
Marital Status	Married	58	52.73
	Unmarried	52	47.27
	Total	110	100.00
Place of Residence	Urban	46	41.82
	Semi-urban	39	35.45
	Rural	25	22.73
	Total	110	100.00

Source: Primary Data

Table 1 presents the demographic profile of the 110 respondents included in the study. With regard to gender, 72 respondents (65.45%) are female, while 38 respondents (34.55%) are male. This indicates that female respondents constitute a larger proportion of the sample. In terms of age, 42 respondents (38.18%) belong to the 21–30 years category, followed by 31 respondents (28.18%) in the 31–40 years category. A total of 19 respondents (17.27%) are above 40 years, while 18 respondents (16.36%) are below 20 years. Thus, respondents in the 21–30 years age group form the largest category. Regarding educational qualification, 43 respondents (39.09%) are postgraduates, followed by 32 respondents (29.09%) who are graduates. Fourteen respondents (12.73%) have higher secondary education, 13 respondents (11.82%) possess professional qualifications, and 8 respondents (7.27%) belong to other educational categories. The data indicate that a considerable proportion of the respondents have higher educational qualifications. With respect to occupation, 29 respondents

Table 2: Level Of Consumer Awareness Towards Environmentally Friendly Cosmetic Products

Level of Awareness	Frequency	Percentage
Low Awareness	18	16.36
Moderate Awareness	39	35.45
High Awareness	53	48.18
Total	110	100.00

Source: Primary Data Table 2 presents the level of consumer awareness towards environmentally friendly cosmetic products among the 110 respondents. The table shows that 53 respondents (48.18%) have a high level of awareness, while 39 respondents (35.45%) have a moderate level of awareness. Only 18 respondents (16.36%) have a low level of awareness. Thus, the findings indicate that a considerable proportion of consumers are aware of environmentally friendly cosmetic products and their environmental benefits. The relatively high level of awareness may be associated with increasing exposure to environmental information, social media, advertisements, product labels, and recommendations.

Table 3: Reliability Analysis Of Consumer Attitude Scale

Construct	Number of Items	Cronbach's Alpha
Consumer Attitude	10	0.874

Source: Computed Data

Table 3 presents the reliability analysis of the consumer attitude scale. The scale consists of 10 items and produces a Cronbach's Alpha value of 0.874. Since the obtained alpha value is above the generally accepted threshold of 0.70, the scale demonstrates a high level of internal consistency. Therefore, the items used to measure consumer attitude towards environmentally friendly cosmetic products are considered reliable and suitable for further statistical analysis.

Table 4: Kmo And Bartlett's Test

Test	Value
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	0.821
Bartlett's Test of Sphericity – Approx. Chi-Square	486.327
Degrees of Freedom	45
Significance	0.000

Source: Computed Data

Table 4 presents the KMO and Bartlett's Test results for determining the suitability of the data for factor analysis. The KMO value is 0.821, indicating adequate sampling adequacy for conducting factor analysis. Bartlett's Test of Sphericity produces a chi-square value of 486.327 with 45 degrees of freedom and a significance value of 0.000. Since the significance value is less than 0.05, the null hypothesis that the correlation matrix is an identity matrix is rejected. Therefore, the variables have sufficient interrelationships and the data are suitable for Exploratory Factor Analysis.

Table 5: Exploratory Factor Analysis Of Factors Influencing Consumer Attitude

Factor	Factor Name	Eigenvalue	Percentage of Variance
1	Environmental Awareness	3.214	32.14
2	Product Quality and Safety	2.187	21.87
3	Price and Availability	1.436	14.36
4	Sustainable Packaging	1.182	11.82
	Total Variance Explained		80.19

Source: Computed Data

Table 5 presents the results of Exploratory Factor Analysis conducted to identify the major factors influencing consumers' attitudes towards environmentally friendly cosmetic products. Four underlying factors have been extracted based on eigenvalues greater than 1. The first factor, Environmental Awareness, explains 32.14% of the total variance and represents the most prominent factor. Product Quality and Safety accounts for 21.87% of the variance, followed by Price and Availability with 14.36% and Sustainable Packaging with 11.82%. Together, the four factors explain 80.19% of the total variance. The findings indicate that consumer attitudes towards environmentally friendly cosmetics are influenced by a combination of environmental, product-related, economic, and sustainability-related considerations.

Table 6: Multiple Regression Analysis Of Factors Influencing Consumer Attitude

Predictor Variable	Beta (β)	t-value	Significance
Environmental Awareness	0.326	3.842	0.000
Product Quality and Safety	0.281	3.214	0.002
Price and Availability	0.214	2.637	0.010
Sustainable Packaging	0.193	2.318	0.022

Source: Computed Data

Model Summary

R	R ²	Adjusted R ²	F-value	Significance
0.782	0.612	0.597	41.287	0.000

Source: Computed Data

Table 6 presents the multiple regression analysis conducted to examine the factors influencing consumer attitude towards environmentally friendly cosmetic products. The R value of 0.782 indicates a strong relationship between the predictor variables and consumer attitude. The R^2 value of 0.612 indicates that 61.2% of the variation in consumer attitude is explained by Environmental Awareness, Product Quality and Safety, Price and Availability, and Sustainable Packaging. The overall regression model is statistically significant with an F-value of 41.287 and a significance value of 0.000. Among the predictors, Environmental Awareness has the highest standardised beta coefficient ($\beta = 0.326$), followed by Product Quality and Safety ($\beta = 0.281$), Price and Availability ($\beta = 0.214$), and Sustainable Packaging ($\beta = 0.193$). All four predictors are statistically significant at the 5% level

Table 7: Correlation Between Consumer Attitude And Purchase Behaviour

Variables	Consumer Attitude	Purchase Behaviour
Consumer Attitude	1.000	0.756**
Purchase Behaviour	0.756**	1.000

Source: Computed Data

Note: Correlation is significant at the 0.01 level (2-tailed).

Table 7 presents the Pearson correlation between consumer attitude and purchase behaviour towards environmentally friendly cosmetic products. The correlation coefficient is 0.756, indicating a strong positive relationship between consumer attitude and purchase behaviour. The positive coefficient indicates that consumers with more favourable attitudes towards environmentally friendly cosmetics tend to report more favourable purchase behaviour. The relationship is statistically significant at the 1% level. Therefore, consumer attitude is significantly associated with purchase behaviour towards environmentally friendly cosmetic products.

FINDINGS

The demographic analysis shows that female respondents constitute the majority of the sample, accounting for 65.45%, while male respondents account for 34.55%. The largest age group is 21–30 years, representing 38.18% of the respondents.

With regard to educational qualification, postgraduate respondents form the largest group, accounting for 39.09%, followed by undergraduate respondents at 29.09%. This indicates that a substantial proportion of the respondents possess higher educational qualifications.

In terms of occupation, private employees constitute the largest group at 26.36%, followed by students at 21.82% and business/self-employed respondents at 19.09%. Regarding monthly income, the largest proportion of respondents (27.27%) belongs to the ₹25,001–₹35,000 income group.

The awareness analysis indicates that 48.18% of the respondents have a high level of awareness towards environmentally friendly cosmetic products, while 35.45% have a moderate level of awareness and 16.36% have a low level of awareness. Thus, a considerable proportion of consumers demonstrate awareness of environmentally friendly cosmetics.

The reliability analysis shows a Cronbach's Alpha value of 0.874 for the consumer attitude scale consisting of 10 items. The value indicates a high level of internal consistency among the items used to measure consumer attitude.

The KMO value of 0.821 indicates adequate sampling adequacy for factor analysis. Bartlett's Test of Sphericity is statistically significant ($\chi^2 = 486.327$, $p < 0.001$), confirming that the correlation matrix is suitable for Exploratory Factor Analysis.

The Exploratory Factor Analysis identifies four major factors influencing consumer attitudes towards environmentally friendly cosmetic products: Environmental Awareness, Product Quality and Safety, Price and Availability, and Sustainable Packaging. These factors together explain 80.19% of the total variance.

The multiple regression analysis indicates that the identified factors significantly influence consumer attitude. The model explains 61.2% of the variation in consumer attitude ($R^2 = 0.612$). Environmental Awareness has the highest standardised beta coefficient ($\beta = 0.326$), followed by Product Quality and Safety ($\beta = 0.281$), Price and Availability ($\beta = 0.214$), and Sustainable Packaging ($\beta = 0.193$).

The correlation analysis reveals a strong positive relationship between consumer attitude and purchase behaviour, with a Pearson correlation coefficient of 0.756. The relationship is statistically significant, indicating that favourable consumer attitudes are associated with more favourable purchase behaviour towards environmentally friendly cosmetic products.

SUGGESTIONS

Cosmetic manufacturers should create greater awareness among consumers about the environmental and health benefits of environmentally friendly cosmetic products through educational campaigns, product information, and digital media. Manufacturers should maintain high standards of product quality, safety, and effectiveness. Clear information about ingredients, certifications, testing, and product benefits should be provided on product labels to strengthen consumer confidence. Companies should adopt environmentally sustainable packaging by increasing the use of recyclable, reusable, biodegradable, and minimum-packaging materials. Clear information about the environmental characteristics of packaging can help consumers make informed purchase decisions. The price of environmentally friendly cosmetic products should be made more affordable and competitive. Companies may consider cost-effective production methods and different product sizes or price options to make such products accessible to a wider range of consumers. Cosmetic brands should provide reliable and transparent information about environmental claims. Information regarding natural ingredients, cruelty-free practices, sustainable sourcing, recyclable packaging, and environmentally responsible production should be communicated clearly and accurately. Social media platforms, online reviews, websites, and digital advertising can be effectively used to communicate information about environmentally friendly cosmetics. Companies should provide informative content rather than relying only on promotional messages. Retailers and marketers should provide consumers with adequate information to help them distinguish genuinely environmentally friendly products from products making unsupported environmental claims. Appropriate certification and credible product information can improve consumer trust. Consumers should be encouraged to consider product ingredients, safety, quality, packaging, environmental impact, and certification before purchasing cosmetic products. Consumer awareness programmes can support more informed and environmentally responsible purchasing decisions. Government agencies and relevant organisations may promote awareness programmes concerning sustainable consumption and environmentally friendly cosmetic products. Such initiatives can help consumers understand the environmental implications of their purchasing decisions. Cosmetic manufacturers should continuously study changing consumer preferences and conduct market research to understand the factors affecting attitudes and purchasing behaviour. Consumer feedback can be used to improve product quality, packaging, pricing, availability, and communication strategies.

CONCLUSION

The present study examined consumer attitudes towards environmentally friendly cosmetic products in Thiruvananthapuram Taluk. The study focused on consumer awareness, attitudes, factors influencing attitudes, and the relationship between consumer attitude and purchase behaviour. The findings indicate that a considerable proportion of consumers have awareness of environmentally friendly cosmetic products and show favourable attitudes towards products associated with environmental sustainability, product safety, quality, and responsible consumption. The study identified Environmental Awareness, Product Quality and Safety, Price and Availability, and Sustainable Packaging as important factors associated with consumer attitudes towards environmentally friendly cosmetic products. The findings further indicate that these factors contribute significantly to explaining variations in consumer attitude. In addition, the study reveals a significant positive relationship between consumer attitude and purchase behaviour, suggesting that favourable perceptions and evaluations of environmentally friendly cosmetics are associated with more favourable purchasing behaviour. The study highlights the growing importance of environmental considerations in the cosmetic products market. Consumers are increasingly concerned not only with the quality, safety, and effectiveness of cosmetic products but also with their environmental characteristics. Sustainable packaging, environmentally responsible production, product information, affordability, and accessibility can therefore play an important role in shaping consumer perceptions and purchasing decisions. Overall, the study concludes that promoting environmentally friendly cosmetic products requires a combination of consumer awareness, product quality, reasonable pricing, wider availability, sustainable packaging, and transparent communication. Cosmetic manufacturers, marketers, retailers, consumers, and other stakeholders can contribute to the development of more sustainable consumption practices by addressing these factors. The study provides useful insights into consumer attitudes and purchase behaviour towards environmentally friendly cosmetics in Thiruvananthapuram Taluk and may serve as a reference for future

researchers interested in sustainable consumption and green consumer behaviour.

REFERENCE

1. Upadhyaya, A. S., & Sijoria, C. (2024). Customers' purchase intention of green cosmetics in India: Empirical validations using an extended Theory of Planned Behavior (TPB). *Indian Journal of Marketing*, 54(8), 60–77. DOI: 10.17010/ijom/2024/v54/i8/174187.
2. Nav, T., Bharguvanshi, S., Seth, V., & Singh, P. (2024). Going green: Assessing perceived value and purchase intentions in Indian cosmetic market. *Journal of Informatics Education and Research*, 4(2). DOI: 10.52783/jier.v4i2.795
3. Limbu, Y. B., & Ahamed, A. F. M. J. (2023). What influences green cosmetics purchase intention and behavior? A systematic review and future research agenda. *Sustainability*, 15(15), 11881. DOI: 10.3390/su151511881. \
4. Chaudhary, S., & Bhatia, M. (2023). Consumer behaviour towards green cosmetics: The paradigm shift towards circularity and sustainability. *Journal of Informatics Education and Research*, 3(1). DOI: 10.52783/jier.v3i1.498.
5. Nguyen, T. T. H., et al. (2022). Predictors of green cosmetics purchase intentions among young female consumers in Vietnam. *Sustainability*, 14(19), 12599. DOI: 10.3390/su141912599.
6. Ekasari, A., Rahayu, F., Pratomo, L. A., Hidayat, D. P., & Maharani, B. A. (2022). Factors affecting consumers' intention to buy green cosmetics. *Proceedings of the International Conference on Business and Economics*. DOI: 10.4108/eai.10-8-2022.2320812.
7. Chhetri, S., Fernandes, S., & Baby, S. (2021). Validating purchase intentions for green cosmetic products: Applying and extending Theory of Planned Behavior. *Information Technology in Industry*, 9(1). DOI: 10.17762/it-in-industry.v9i1.198.
8. An innovation resistance theory perspective on purchase of eco-friendly cosmetics. (2021). *Journal of Retailing and Consumer Services*, 59, 102369. DOI: 10.1016/j.jretconser.2020.102369.
9. Chhetri, S., Fernandes, S., & Baby, S. (2021). Validating purchase intentions for green cosmetic products: Applying and extending Theory of Planned Behavior. *Information Technology in Industry*, 9(1). <https://doi.org/10.17762/it-in-industry.v9i1.198>
10. Limbu, Y. B., & Ahamed, A. F. M. J. (2023). What influences green cosmetics purchase intention and behavior? A systematic review and future research agenda. *Sustainability*, 15(15), 11881. <https://doi.org/10.3390/su151511881>
11. Limbu, Y. B., Pham, L., & Nguyen, T. T. T. (2022). Predictors of green cosmetics purchase intentions among young female consumers in Vietnam. *Sustainability*, 14(19), 12599. <https://doi.org/10.3390/su141912599>
12. Upadhyaya, A. S., & Sijoria, C. (2024). Customers' purchase intention of green cosmetics in India: Empirical validations using an extended Theory of Planned Behavior (TPB). *Indian Journal of Marketing*, 54(8), 60–77. <https://doi.org/10.17010/ijom/2024/v54/i8/174187>
13. Al Mamun, A., Nawi, N. C., Hayat, N., & Zainol, N. R. B. (2020). Predicting the purchase intention and behaviour towards green skincare products among Malaysian consumers. *Sustainability*, 12(24), 10663. <https://doi.org/10.3390/su122410663>
14. Amberg, N., & Fogarassy, C. (2019). Green consumer behavior in the cosmetics market. *Resources*, 8(3), 137. <https://doi.org/10.3390/resources8030137>
15. Chen, X., Rahman, M. K., Rana, M. S., Gazi, M. A. I., Rahaman, M. A., & Nawi, N. C. (2022). Predicting consumer green product purchase attitudes and behavioral intention during COVID-19 pandemic. *Frontiers in Psychology*, 12, 760051. <https://doi.org/10.3389/fpsyg.2021.760051>
16. Khan, S., & Salim, A. (2021). Saudi females' buying behavior of green cosmetics: A pertinent motivational aspect. *Journal of Marketing Communications*, 27(6), 594–606. <https://doi.org/10.1080/13527266.2020.1720268>
17. Lestari, D. D., & Roostika, R. (2022). Green cosmetic purchase intention: The impact of green brands positioning, attitude, and knowledge. *Selekta Manajemen: Jurnal Mahasiswa Bisnis & Manajemen*.
18. Liu, L., Al Mamun, A., Hayat, N., Salamah, A. A., Yang, Q., & Ali, M. H. (2022). Celebrity endorsement,

- brand equity, and green cosmetics purchase intention among Chinese youth. *Frontiers in Psychology*, 13, 860177. <https://doi.org/10.3389/fpsyg.2022.860177>
19. Pop, R.-A., Săplăcan, Z., & Alt, M.-A. (2020). Social media goes green—The impact of social media on green cosmetics purchase motivation and intention. *Information*, 11(9), 447. <https://doi.org/10.3390/info11090447>
 20. Samanta, P. (2020). Buying behavior of environmentally sustainable cosmetics: Indian context. *Psychology and Education Journal*, 57(9). <https://doi.org/10.17762/pae.v57i9.1209>
 21. Sharma, N., & Dayal, R. (2017). Drivers of green purchase intentions: Green self-efficacy and perceived consumer effectiveness. *International Journal of Business Insights & Transformation*, 9(2), 31–37.
 22. Zahan, I., Kaium, M. A., & Rahman, M. S. (2024). Accept or reject? Investigating customers' attitudes toward green cosmetics in Bangladesh. *Journal of Sustainability Research*, 6(2), e240025