International Journal of Accounting and Economics Studies, 12 (SI-1) (2025) 118-131

International Journal of Accounting and Economics Studies

Website: www.sciencepubco.com/index.php/IJAES
https://doi.org/10.14419/kxs1mn59
Research paper

A Study on Buyers Purchase Behaviour Towards Herbal Cosmetics in Malappuram District

A.P. Anandan [1] *, Dr.K.K. Saritha Mol [2]

[1] Ph.D. Research Scholar (Commerce), Department of Commerce, Karpagam Academy of Higher Education, Coimbatore, India.
[2] Assistant Professor&Research Supervisor, Department of Commerce, Karpagam Academy of Higher Education, Coimbatore, India.
**Corresponding author E-mail: anand91784@gmail.com*

Received: May 15, 2025, Accepted: June 7, 2025, Published: August 28, 2025

Abstract

Purpose: This study aims to investigate consumer purchasing behaviour for herbal cosmetics in Malappuram District. It focuses on key factors such as environmental awareness, price perception, and product. quality and brand image, to provide insights that support marketers and cosmetic companies in promoting sustainable consumption.
Method:A quantitative research approach was adopted, collecting data through a structured survey of 384 respondents. Statistical analysis was conducted using SPSS and AMOS to test hypotheses and establish relationships between the identified factors and consumer behaviour.
Results: According to the research, brand image ($\beta = 0.903$, $p < 0.05$), product quality ($\beta = 0.865$, $p < 0.05$), & environmental awareness ($\beta = 0.690$, $p < 0.05$) all have a favourable impact on customer purchasing behaviour, highlighting their significance as major motivators. Conversely, price perception ($\beta = -0.177$, $p < 0.05$) negatively affects purchase behaviour, indicating that higher perceived prices act as a barrier. A significant gender-based difference in purchase behaviour was also identified.
Conclusion: The study highlights the critical role of environmental awareness, quality, and brand image in shaping consumer behaviour towards herbal cosmetics. Companies can leverage these insights to develop effective branding, pricing, and sustainability strategies, thereby enhancing consumer trust and promoting sustainable consumption.

Keywords: *Consumer Behaviour; Herbal Cosmetics; Environmental Awareness; Product Quality; Brand Image; Price Perception.*

1. Introduction

Herbal cosmetics improve both look and health by harnessing nature's power. These products are based on traditional methods, including old wisdom, using the natural advantages of herbs, botanicals, and botanical preparations. Herbal cosmetics emphasize simplicity, purity, and the use of natural substances, in contrast to conventional cosmetics, which typically involve artificial chemicals(Consumer et al., 2024). This strategy meets the increasing need of contemporary customers for safe, moderate, and natural cosmetics. Herbal cosmetics are created using plant-based components found for their healing and restorative qualities. Among other treatments, skincare and haircare are supposed to feed, protect, and rejuvenate the body while avoiding synthetic chemical negative effects. Demand for herbal cosmetics has increased, as growing environmental awareness and sustainability issues cause more questions. Many businesses are focusing more and more on ethical sourcing methods and herbal packaging to attract consumers who give personal well-being and environmental sustainability top importance (Laghareh et al., 2015; Aman&Ghahremani, 2018).
Herbal cosmetics have developed quite quickly. Traditionally, these basic homemade cures made from therapeutic herbs and plants were created. Hand down over the generations, they were utilized to treat common health and beauty issues(Matea Matic & Barbara Puh, 2016). Because of technological developments and increasing customer desire for natural replacements, the herbal cosmetics sector has undergone major change. Modern herbal cosmetics include formulations backed by research that are as successful as those developed from synthetic compounds. Since its inception, herbal cosmetics have held a significant position in the cosmetic industry, appealing to consumers looking for safe, eco-friendly, and effective beauty products. Toothpaste, shampoo, and soap are just a few of the cosmetic products that many women use on a regular basis. One's life now depends on using these products(Lakshmi Prabha & Sindhuja, 2022). Many of the chemicals that are included in conventional cosmetics are likely to have negative effects not just on the natural environment but also on the well-being of individuals. Since the beginning of the previous decade, consumers have been aware of the need to lead a lifestyle that is both healthy and sustainable. It has been brought to their attention that the dangerous chemical components of cosmetics, such as parabens, might have a severe influence on their health. It is widely acknowledged that the advent of natural cosmetic goods is not only a means of satisfying the customer's need for products that are healthy, ecologically friendly, and ethical, but also a means of encouraging the whole cosmetics sector to flourish in a manner that remains sustainable(Sharifuddin et al., 2018; Moradi & Taheri, 2017).
Consumers are essential assets for any organization. A consumer may be an individual or group that chooses, purchases, utilises, or expels goods, services, ideas, or experiences to fulfill their wants and preferences(Desai, 2014).To put it simply, customers are the people who end up receiving the items and services that are offered. Consumer behaviour is the study of how people, groups, or organizations decide

which products and services to buy and how to utilise them. Price perception substantially affects consumer buying behaviour, so it shapes how customers see and react to product pricing. Along with both positive and negative viewpoints, it has seven main parts that help to explain how consumers decide what to do.

All of a customer's views, preferences, intentions, and choices concerning their interactions with the market to obtain a product or service are often referred to as consumer buying behaviour(Buying patterns, 2023). Consumer behaviour study incorporates a broad variety of social science disciplines, such as "anthropology, psychology, sociology, & economics" (Bhatt & Sankhla, 2017). Attaching good positioning depends on marketers having a strong awareness of consumer purchasing behaviour. Should marketers be able to spot these behaviours, they will be better able to target goods and services to the proper audience. Knowing how these requirements connect to the choices customers make is crucial, as the fundamental determinant of purchasing behaviour is either personal, collective, or organizational need. To really understand consumer buying behaviour, one must see how they engage with the marketing mix. This theory is predicated on the idea that consumer choices are influenced by individual psychology formed by society, attitudes, previous events, and perceptions(Kamaruniza et al., 2022). Based on these factors, the consumers decide whether to buy the items and where they would want to buy them.

2. Theoretical Framework

2.1 Price Perception

Price perception significantly influences consumer purchasing behaviour by altering the way in which customers perceive and respond to product prices. It encompasses seven critical factors that delineate the decision-making process of consumers, as well as both positive and negative feedback(Este & Tachble, 2009).

Consumers' need for value and savings is brought into sharper focus by the negative effects of pricing. Value consciousness refers to consumers' desire to achieve the best possible balance between a product's quality and its price (Hutomo et al., 2020). Pricing awareness, on the other hand, reflects customers' desire to pay the lowest possible price, which frequently prioritizes cost savings over product features. Consumers are more likely to respond positively to the purchase offers in the form of coupons because they regard them as further discounts. The phenomenon we are discussing here is known as coupon proneness.

In the same line, sale proneness is a measurement of the tendency of buyers to be enticed by brief price reductions or sales events. This is a similar concept to sales proneness. Price mavenism is another key notion that relates to the activity of customers actively searching out and distributing information about pricing to aid others in making more informed purchasing decisions themselves. This conduct is known as price mavenism(Liu & Lee, 2016).

On the other hand, the favourable impact of price reveals the benefits of a higher price in terms of changing customer sentiments. According to the price-quality schema, consumers like to link more expenses with items of better quality and are inclined to use price as an assessment heuristic. The phenomenon known as prestige sensitivity occurs when people buy costly goods meant for the demonstration of their wealth or degree of expertise. They see this because they think that higher costs reflect their social level and the importance they give themselves(Anwar & Andrean, 2021).This theoretical framework offers a complete justification of how consumers see price, as well as shows how attitudes of consumers affect the decisions they make regarding purchases. Knowing these elements helps companies to change their pricing policies to meet a wide range of customer requirements. Businesses must have adaptable pricing strategies that would satisfy the various wants of their customers, as some of them give more attention to price while others are more worried about quality or reputation. In several respects, including brand loyalty, consumer satisfaction, and profitability optimization, this information might be of use to businesses.

2.2 Brand Image

According to(Xian, 2011)A brand is a combination of a name, symbol, or design that can be utilised to identify a company's goods and services and set them apart from those of competitors. This identification is the foundation for creating a brand image, which is a unique impression that creates impact and adds to the organization's worth. Brand image is the overall perception of the traits, purposes, and meanings that consumers associate with a certain brand. It reflects how customers perceive and understand a brand based on their experiences and the amount of time they have spent with it. Further explanation is provided by (Tu &. H.-C. C. (2012)who state that how customers prioritise their ideas, emotions, and actions about a brand is what shapes the brand image overall. This concept is a representation of the connections, along with mental impressions, that are formed in the minds of customers when they recall a certain brand or product.

The assessments that customers make about the quality, distinctiveness, and relevance of a brand to their requirements are the foundation of a powerful brand image. Customers often choose the brand that is the most compatible with their tastes and expectations after going through the process of comparing numerous different brands(Ranjbarian et al., 2012). Having a marketing plan that is well implemented helps one build a good picture of the company. With this strategy, the unique value propositions of the brand should be highlighted and the benefits of the brand relative to other brands on the market underlined. Among consumers, a good brand image helps to establish trust, loyalty, and long-term ownership in the business. A good brand image is so vital.

Building a favourable brand image necessitates a sound marketing strategy. It requires building a strong visual identity and ensuring that the company's messaging is relevant to its target audience. Any marketing effort should revolve around the brand's distinct value propositions. Customers choose one brand over another and set it apart from competitors, mostly based on these value propositions. For example, if a business prides itself on being sustainable and eco-friendly, this attribute should be emphasised in marketing campaigns, corporate communications, and product design. By focusing on these differentiators, a business might become the preferred choice for clients who appreciate these qualities.

2.3 Product Quality

Customer's degree of enjoyment and dedication is largely influenced by the quality of the product. Based on (Sihombing et al., 2023)a good has both physical and intangible qualities. These qualities include colour, pricing, brand recognition, retailer credibility, and customer service provided by both retailers and manufacturers. These features, considered together, are intended to meet the preferences and desires of clients. According to (Yuen & Chan, 2010)product quality is defined as the distinctive characteristics inherent in a product or outcome that enable it to serve the purpose for which it was originally developed. The study that defined 'product quality' as the capacity of a

product to properly provide the benefits that it claims. Accuracy, dependability, and durability are examples of characteristics that contribute to an increase in the perceived worth of a product or service to consumers. There is a strong emphasis placed on encouraging businesses to continuously enhance the quality of their products to guarantee the happiness of their customers. This strengthens the consumer's loyalty to the brand and fosters long-term success for the firm. When a customer is delighted with a product, they are more inclined to buy that product again.

Moreover,(Diputra & Yasa, 2021) underline that the phrase 'product quality' describes the traits of a good or service that either match or beyond consumer expectations. Among the qualities that could fit this category are durability, simplicity of use, safety, and visual attractiveness. These components help one define the quality of a product by allowing one to ascertain how much it meets consumer wants and expectations. Excellent performance, reliability, and lifetime, as well as lack of defects or drawbacks, describe good products. Businesses that give product quality top attention have an opportunity to gain a dynamic advantage in the market, boost customer confidence, and strengthen brand recognition.

2.4 Environmental Awareness

Environmental awareness is the information, viewpoints, and behavior of an individual about environmental problems. It shows how well someone understands the need for environmental preservation and their eagerness to adopt sustainable living. High degrees of environmental awareness have made them more inclined to participate in activities consistent with sustainable attitudes and beliefs, including buying green goods that advance environmental quality. Individuals with strong EA exhibit it via their beliefs, personality, and commitment to environmental conservation(Rama et al., 2024; Alamsyah et al., 2020). Their dedication to sustainable practices influences their purchasing decisions, particularly when environmentally friendly products are more costly. EA is a well-rounded philosophy that considers knowledge, ideas, attitudes, and emotional involvement in environmental issues. It acts as a psychological motivator for pro-environmental conduct, encouraging customers to choose green alternatives. These eco-conscious customers, sometimes known as 'green consumers', are concerned about the environmental and technical aspects of goods. Their shopping choices are impacted by the perceived environmental effect of the goods they purchase(Mittal & Kaur, 2023).

2.5 Buyers' Purchase Behaviour

The field of research known as buyer behaviour examines individuals, clusters, or consortia & the procedures they use to choose, purchase, utilize, and eventually get rid of products, services, experiences, or concepts that fulfil their requirements and preferences. This study analyses the ramifications that these processes have for consumers as well as for society as a whole(Swati Parkash & Banerjee, 2020).Buyers serve three important roles: users, payers, along decision-makers. According to research, even specialists struggle to forecast customer behaviour(Anisha & Kalaivani, 2016). They then weigh their alternatives, considering pricing, brand reputation, and product attributes, before making a final purchasing decision.

There are four main categories of consumer purchasing behaviour, each with a distinct amount of engagement and decision complexity. Furthermore, various variables impact customer purchasing choices. Consumers make educated decisions by finding items that give the greatest utility, considering their available financial resources, along with analysing product costs. Consumer attitude is warped by cultural, social, personal, psychological, & marketing factors. These variables influence consumers' preferences, motives, and purchase patterns, eventually guiding their decision-making process. Understanding consumer behaviour is critical for organisations because it allows them to develop focused marketing strategies, increase customer happiness, and drive sales growth.

3. Literature Review

Consumer Buying Behaviour regarding Organic Cosmetics against Non-Organic Cosmetics, which was conducted by(Shakeel & Karim, 2019)The researcher analyzed the factors that influence the purchasing behaviour of consumers. In the study, primary data have been gathered, and the findings of this research have shown that consumers are demonstrating a greater interest in purchasing organic cosmetic items as opposed to non-organic cosmetic products.

(Cachero-Martínez, 2020) Buying behavior towards organic cosmetic products. In the contemporary era, heightened consumer awareness extends to both internal and external product choices, with a notable emphasis on skincare post-pandemic. Organic products have gained substantial favor, particularly in the realm of skincare. Despite the broad definition of cosmetics, prevalent in many countries, Western perspectives often limit it to makeup items like lipstick, mascara, and others.

In this research, conducted by Ishaq et al. (2021) Impact of women's purchase behaviour for organic cosmetic goods was considered. The goal of this research is to interrogate consumers' purchase habits concerning organic cosmetic items. Consumers' thoughts are tied to the environmental & health benefits of these items. As a result of the study's results, customers are more conscious of the products they use for skincare, and as a result, their thoughts have changed towards other things rather than cosmetic products.

(Anuradha & Anupriya, 2024)published on the effects of well-being & environmental knowledge on young female customers' attitudes towards purchasing organic goods. Specifically, the purpose of this research was to explore the purchasing patterns of thirty-one young female college students in the United States, with a particular emphasis on their preferences for natural cosmetics. Considerations pertaining to health and the environment have a considerable influence on the prioritization of the characteristics of beauty products. Since organic beauty products were readily accessible on the market, their frequency of purchase and environmental awareness showed a more significant relationship. Furthermore, correlated were the respondents' perceived knowledge of cosmetic items with their capacity to distinguish between natural and synthetic options. This was discovered in response to environmental and health issues raising questions.

(Malik & Sharma, 2020). Using a closed-ended questionnaire and multiple regression analysis running on software, the research was carried off in the Colombo zone with a sample of 200 clients aged over 15. Especially, Consumer Attitude seems to be the most crucial indicator. The poll suggests that companies should concentrate on ecological beauty, product safety, and pricing to promote to enhance their marketing strategies.

The research conducted by (*Buying Patterns of People in Trivandrum Who Purchased Cosmetic Products.*, 2023)focuses on the purchasing habits of Trivandrum residents who bought cosmetics. This study was carried out to look at consumer purchase behaviour as well as the buying process under the influence of media communication (Emmanuel et al., 2023). According to the study's findings, a diverse range of variables has a substantial significance on individuals' purchase behavior. Furthermore, this information aids the comprehension of a wide range of cosmetic firms by allowing them to swiftly appreciate client purchase habits.

This research by (Fatima, 2015)sought to determine the factors influencing customer buying behaviour in the cosmetics company. The research aimed to investigate consumer conduct, particularly about cosmetic purchases, as well as the effect of income level on behaviour. The findings revealed statistically significant differences across the elements of social and cultural consumer behavior. Still, there was no statistically significant variation between the psychological and personal aspects.
(Alam, 2020)sought to determine the primary elements that influence the decisions that consumers make when purchasing cosmetic products, as well as to investigate the attitudes, preferences, and intents of consumers while they are in the process of making a purchase. Finally, the researcher wanted to find out which cosmetic brand was the most requested by the people who participated in the survey (Emmanuel et al., 2023). Based on the results, it was discovered that consumers place a high value on quality when it comes to buying cosmetics, as well as most people do not want to spend a significant amount of money on such items.
(Selvi & Arts, 2023)explore consumer attitudes concerning cosmetic goods. The research sought to investigate the impact of attitude and identify the primary principles influencing a consumer's buying behaviour. The study found that age, profession, and marital status all had a favourable influence on purchasers' attitudes towards such things, although pay had no significant effect.

3.1 Research Gap

Despite the growing consumer interest in herbal cosmetics, there is a limited understanding of the combined influence of key factors such as environmental awareness, price perception, and product quality on consumer purchase behaviour. While previous research has investigated these components singly, it often fails to give an integrated view of how these elements combine to influence purchasing choices. This fragmentation hampers cosmetic businesses and marketers' ability to create successful strategies that connect with customer preferences for sustainable goods.
Furthermore, most of the existing research relies on specialist consumer groups, such as inhabitants of certain places, which limits the generalizability of the findings. The influence of more demographic variables, such as age, gender, and lifestyle, on consumer views towards herbal cosmetics remains unclear.
Moreover, the change in consumer preferences after the global health crisis highlights the necessity of environmentally friendly goods along with ones with health consciousness. Little attention has been paid, however, to how this shift has changed consumer expectations of herbal cosmetics, particularly in terms of price sensitivity as well as product quality. Establishing a thorough understanding of current consumer behaviour depends on closing this gap, which will enable companies to adapt their products to the evolving demands of environmentally aware consumers.

3.2 Problem Statement

The herbal cosmetics industry has expanded in line with the growing trend of sustainable living. Consumers' buying decisions are influenced by the environmental impact, product quality, and cost, which increasingly worry them. Although earlier research has tackled these subjects independently, little is known about how consumer purchase behaviour for herbal cosmetics is influenced by environmental awareness, cost perception, and product quality taken together. Without this insight, companies face the risk of mismatching their products with consumer needs, therefore reducing market share and customer loyalty. This study seeks to address this issue by means of a thorough analysis of the connections among environmental awareness, price perception, and product quality to affect customer purchasing behaviour. The findings will be valuable to politicians, marketers, as well as cosmetic companies striving to support sustainable consumption, raise consumer satisfaction, and boost competitiveness in the fast-growing herbal cosmetics industry.

3.3 Aim & Objectives

Aim: The main purpose of this study is to investigate Malappuram District consumer purchasing behaviours for herbal cosmetics. It looks at customer buying choices about perceived cost, product quality, brand image, environmental concern, and so on. By analysing the combined effect of these components, the research explores insights that will enable marketers and cosmetic companies to create effective strategies to promote sustainable consumption and fulfil the growing demand for herbal cosmetic products.

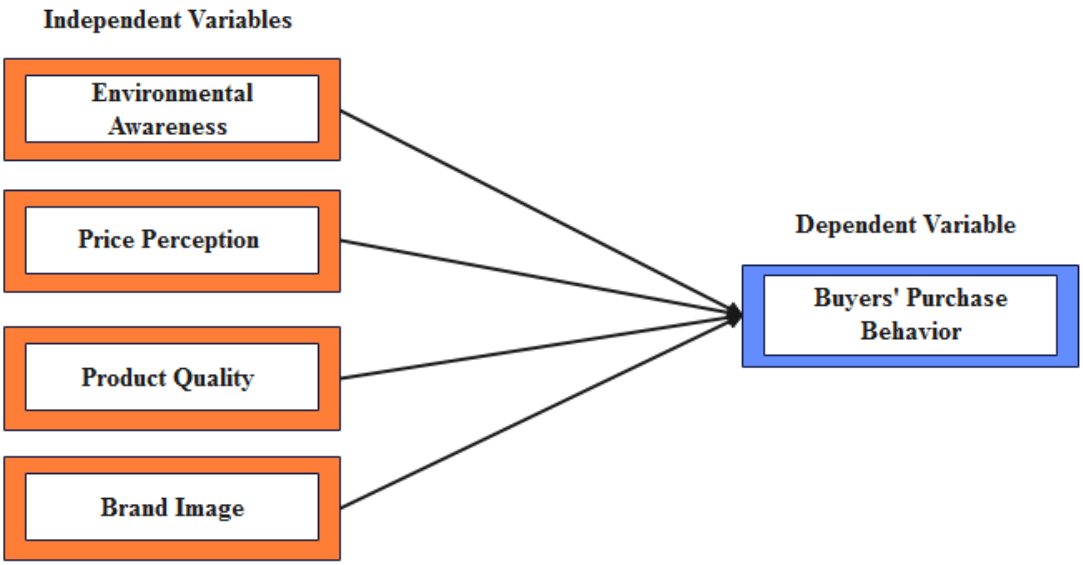
3.4 Objectives

- To investigate how consumers of herbal cosmetics behave in response to awareness of the environment.
- To examine how consumers' purchase behaviour toward herbal cosmetics is influenced by their perspective on pricing.
- To look at how brand image and product quality influence consumer buying behaviour.

3.5 Hypotheses

Environmental Awareness has a significant positive effect on Buyers' Purchase Behavior.
H2: Price Perception has a significant negative effect on Buyers' Purchase Behavior.
H3: Product Quality has a significant positive effect on Buyers' Purchase Behavior.
H4: Brand Image has a significant positive effect on Buyers' Purchase Behavior.

3.6 Conceptual Framework



4. Methodology

This study examined Malappuram district customers' purchasing behaviours for herbal cosmetics employing a quantitative research approach. This research proposes to assess how customers' purchasing decisions are influenced by their perceptions of brand image, price, product quality, and environmental concerns. With a sample size of 384 people, a standardized questionnaire is used for the survey. Analyses of the data are carried out using software tools such as SPSS and AMOS to test hypotheses and find relationships between certain factors and customer purchase behaviour. This method helps one to get a thorough understanding of the elements influencing the choice of herbal cosmetics.

4.1 Population & Sample size

4.1.1 Population

The research was conducted on a sample group of 1,000 clients from 10 different cosmetic product companies in the Malappuram region. This was done to guarantee that the study was both representative and varied. Over four weeks, the survey was sent to 30 to 50 customers daily, with each firm providing four to five consumers from their organization. The population of this inquiry is comprised of individuals who are purchasers of native cosmetic products in the Malappuram region. The research was carried out with the successful gathering of answers from 384 participants out of the 1,000 consumers intended for the study. These consumers include those who have either bought herbal cosmetics or have the potential to buy them in the future.

4.2 Sample Size Calculation

To determine the sample size from a population consisting of 1000 people who purchase herbal products, the formula that follows for sample size is utilized:

$$SS = \frac{ZS^2.PP.(1-PP)}{d^2}$$

Where:
Z = Z-score (1.96 for 95% confidence)
PP = Population
d = margin of error (0.05)

- Calculate initial Sample Size (SS) assuming an infinite population.

$$SS = \frac{(1.96)^2.0.5.(1-0.5)}{(0.05)^2} = 384.16$$

Based on a population of 1,000 customers, the sample size that has been adjusted is approximately 384 respondents.

4.3 Data Collection

To evaluate the relationship among price perception, environmental awareness, product quality, and brand image, this study focused on consumer behavior towards a cosmetic brand in the Malappuram district. A sample of 384 participants was selected, comprising consumers of cosmetic products from various firms in the region.In this study, data collection was primarily carried out using a structured questionnaire, a widely utilized tool for consumer research. The researcher conducted personal visits to cosmetic product firms, directly engaging with each participant to ensure clarity and encourage accurate responses. The purpose of each question was explained thoroughly, allowing participants to respond confidently. Questionnaires were also distributed via email to broaden reach and convenience for respondents.
The study achieved a total of 384 valid responses, all of which have been securely stored for future research reference. Data analysis was performed using SPSS and AMOS software to derive insights into consumer preferences, purchase behaviour, satisfaction, and brand

loyalty in the cosmetic sector. This analytical approach provided a panoramic understanding of the factors influencing consumer buying behaviour for herbal cosmetic products.

4.4 Inclusion & Exclusion Criteria

Inclusion Criteria:
- **Age**: Participants aged 30 years and above.
- **Customer Profile**: Both male and female customers of cosmetic product firms, regardless of the firm's size or service type.
- **Location**: Residents of the Malappuram district.
- **Purchase History**: Individuals with a prior history of purchasing and using cosmetic products.

Exclusion Criteria:
- **Age**: Participants below 30 years of age.
- **Location**: Firms and customers outside the Malappuram district.
- **Purchase History**: Individuals with no prior experience purchasing or using cosmetic products.

4.5 Data Analysis

After collecting data through random sampling, we analyzed the influence of various factors using structural equation modelling. Below, we provide a concise overview of SEM.

4.6 Structural Equation Modelling

SEM is a multivariate technique that is driven by hypotheses and focuses on the causal linkages between different variables. It uses a structural model to describe these relationships.
This equation may be used to provide a concise summary of the statistical framework of standard SEM.

$$x = Px + v$$

The distinction between the observable and simulated covariance matrices is minimized to achieve parameter estimation. $\sum$. Transforming the equation allows you to calculate $\sum$. regardless of the mix of characteristics.

$$\begin{aligned} x &= (J - P)^{-1}v \\ \sum &= xx^T \\ &= (J - P)^{-1}vv^T(J - P)^{-1^T} \end{aligned}$$

The identity matrix is denoted by "J". The initial equation may be seen as a generative model that explains how the functioning of a system is influenced by its structural connections. The observed time series, denoted as y, is generated by accomplished through adding an equation of the interregional connection matrix, which is denoted by the letter u, $(J - P)^{-1}$to the Gaussian innovations.

5. Analysis &Interpretation

5.1 Demographic Variables

Demographic variables refer to specific characteristics or attributes of individuals or groups in a population that are typically used for categorization, analysis, or profiling. These characteristics are often related to the social and personal characteristics of individuals and can include factors such as respondent'sgender, age, education level, occupation, and income.
Table 1 displays the respondents' demographic data. The demographic table provides a thorough summary of all the individuals who took part in the study. The age distribution shows a well-proportioned representation; the age group 31–40 years has the largest percentage (28.9%), followed by 24.7% are 21–30 years age group, 21.6% are 41–50 years age group, 13.8% are below 20 years age group, and 10.4% are above 50 years age group. In terms of gender, 77.6% of respondents in the study are female, while 22.4% are male. According to the occupation, most respondents are Homemakers (23.7%), 20.8% are Self-Employed, 19.8% are students, 18.5% are employed and 17.2% are Unemployed. According to the education level, most of the respondent's level of education was Master's degree (23.2%), followed by Associate degree (22.7%), 20.3% are with Doctorate, 19.8% are with Bachelor's degree and High School Diploma or equivalent (14.1%). Although there is variation in the distribution of monthly income, most people with monthly income more than 60,000-79,999 (21.4%), followed by those who earn between 80,000 and 99,999 (20.6%), 40,000-59,999 are (18.8%), 100,000 and above (16.7%), 20,000-39,999 (12.5%), and less than 20,000 (10.2%). The frequency of shopping for herbal cosmetic products reveals diverse purchasing behaviour. Most of the respondents, 30.2% buy products once a week, 26.0% buy 2-3 times in a month, 23.4% of the respondents buy products more than once a week, and 20.3% buy products once a month.

Table 1: Demographic Descriptive

		Frequency	Percent
What is your age?	Below 20 years	55	14.3
	21–30 years	95	24.7
	31–40 years	111	28.9
	41–50 years	83	21.6
	Above 50 years	40	10.4
	Total	384	100.0
What is your gender?	Male	86	22.4
	Female	298	77.6

	Total	384	100.0
What is your Occupation?	Student	76	19.8
	Employed	71	18.5
	Self-employed	80	20.8
	Unemployed	66	17.2
	Homemaker	91	23.7
	Total	384	100.0
What is your highest level of education?	High School Diploma or equivalent	54	14.1
	Associate degree	87	22.7
	Bachelor's Degree	76	19.8
	Master's Degree	89	23.2
	Doctorate Degree	78	20.3
	Total	384	100.0
What is your monthly income level?	Less than 20,000	39	10.2
	20,000 - 39,999	48	12.5
	40,000 - 59,999	72	18.8
	60,000 - 79,999	82	21.4
	80,000 - 99,999	79	20.6
	100,000 and above	64	16.7
	Total	384	100.0
How often do you purchase herbal cosmetic products?	Once a month	78	20.3
	2-3 times a month	100	26.0
	Once a week	116	30.2
	More than once a week	90	23.4
	Total	384	100.0

5.2 Reliability

Table 2: Reliability (Alpha Values of Variables)

Variable	TotalItems	Mean	alpha
Environmental Awareness (ENVAW)	5	3.737	.852
Price Perception (PRPE)	4	3.530	.776
Product Quality (PRODQ)	5	3.683	.833
Brand Image (BRNDIM)	7	3.783	.886
Purchase Behaviour (BPB)	8	3.767	.871

Reliability is performed to determine the internal consistency of the variables used in this research. The alpha is a generally used statistic in social science research, which was made for this specific objective. Within the field of social psychology research, a reliability coefficient that surpasses 0.7 is generally considered to be satisfactory. More precisely, the alpha values varied between 0.775 and 0.890.

5.3 Measurement Model Results

A measurement model is used to find out the relationships between latent variables and indicators. It specifies how latent variables are measured, and provides a basis for evaluating the reliability and validity of the variables or constructs.

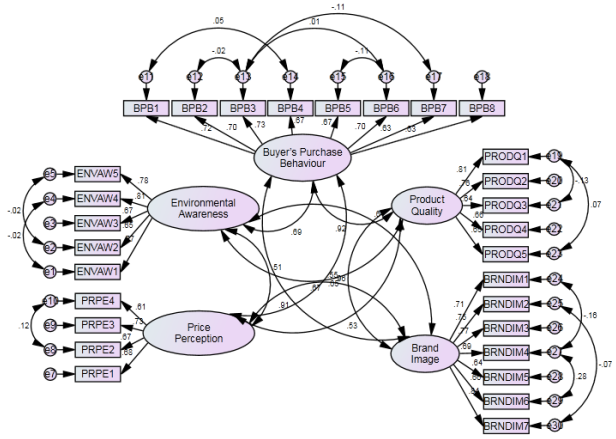


Fig.1:CFA Model

Table 3: Regression Weights of the variables Buyers Purchase Behaviour, Environmental Awareness, Price Perception, Product Quality, and Brand Image

	Unstandardized	S.E.	C.R.	P
ENVAW1 <--- Environmental Awareness	1.000			
ENVAW2 <--- Environmental Awareness	.721	.061	11.758	***
ENVAW3 <--- Environmental Awareness	.873	.070	12.510	***
ENVAW4 <--- Environmental Awareness	1.093	.069	15.851	***
ENVAW5 <--- Environmental Awareness	.890	.063	14.215	***
PRPE1 <--- Price Perception	1.000			
PRPE2 <--- Price Perception	.988	.097	10.237	***
PRPE3 <--- Price Perception	1.025	.092	11.174	***
PRPE4 <--- Price Perception	.816	.085	9.566	***
BPB1 <--- Buyer's Purchase Behaviour	1.000			
BPB2 <--- Buyer's Purchase Behaviour	.969	.073	13.228	***

BPB3 <--- Buyer's Purchase Behaviour	1.038	.075	13.748	***
BPB4 <--- Buyer's Purchase Behaviour	.885	.068	13.028	***
BPB5 <--- Buyer's Purchase Behaviour	.885	.070	12.620	***
BPB6 <--- Buyer's Purchase Behaviour	1.073	.082	13.160	***
BPB7 <--- Buyer's Purchase Behaviour	.805	.068	11.847	***
BPB8 <--- Buyer's Purchase Behaviour	.862	.071	12.058	***
PRODQ1 <--- Product Quality	1.000			
PRODQ2 <--- Product Quality	.814	.049	16.587	***
PRODQ3 <--- Product Quality	.682	.054	12.660	***
PRODQ4 <--- Product Quality	.700	.051	13.841	***
PRODQ5 <--- Product Quality	.672	.048	14.038	***
BRNDIM1 <--- Brand Image	1.000			
BRNDIM2 <--- Brand Image	1.021	.073	14.017	***
BRNDIM3 <--- Brand Image	1.358	.094	14.411	***
BRNDIM4 <--- Brand Image	1.007	.083	12.115	***
BRNDIM5 <--- Brand Image	.857	.071	12.027	***
BRNDIM6 <--- Brand Image	.839	.068	12.415	***
BRNDIM7 <--- Brand Image	1.351	.087	15.598	***

Table 4: Fit Values

Variable	CMIN	DF	CMIN/DF	p-val	GFI	AGFI	TLI	CFI	RMSEA
Value	2110.109	745	2.832	.081	.946	.928	.917	.953	.061

Model fit values are presented in Table 4 is observable that the quality of fit for the data was good; GFI, AGFI, TLI, and CFI have significantly higher values than 0.90. Similarly, the value of RMSEA is less than the crucial threshold of 0.080. The results revealed a good fit for the model provided, including GFI, CFI, and RMSEA.

5.4 Convergent and Discriminant Validity

We performed the tests KMO and Bartlett's to evaluate the suitability for factor analysis. The value obtained was 0.916, indicating excellent sampling adequacy. Bartlett's test was significant (P-val= 0.00), further supporting the appropriateness of conducting factor analysis.

Table 5: Bartlett's and KMO

KMO Sampling Adequacy Measure.		**.916**
Bartlett's Test	**Chi-Square**	**7313.520**
	df	406
	p-val	.000

We used CFA to thoroughly assess the validity of our instrument.

Table 6: Post CFA factor loadings, Cronbach's alpha, and AVE

Variables with items	Cronbach Alpha	Factor loadings of post-CFA	Average Variance Extracted
Environmental Awareness (ENVAW)	.852		0.544
ENVAW1		.775	
ENVAW 2		.647	
ENVAW 3		.665	
ENVAW 4		.811	
ENVAW 5		.777	
Price Perception (PRPE)	.776		0.515
PRPE 1		.680	
PRPE 2		.665	
PRPE 3		.734	
PRPE 4		.615	
Product Quality (PRODQ)	.833		0.519
PRODQ 1		.813	
PRODQ 2		.758	
PRODQ 3		.640	
PRODQ 4		.658	
PRODQ 5		.648	
Brand Image (BRNDIM)	.886		0.525
BRNDIM1		.708	
BRNDIM2		.751	
BRNDIM3		.768	
BRNDIM4		.695	
BRNDIM5		.639	
BRNDIM6		.661	
BRNDIM7		.835	
Buyer'sPurchaseBehaviour (BPB)	.871		
BPB1		.720	
BPB2		.698	0.503
BPB3		.730	
BPB4		.666	
BPB5		.666	
BPB6		.697	
BPB7		.626	
BPB8		.635	

Table 7: Discriminant validity

	ENVAW	PRPE	PRODQ	BRNDIM	BPB
ENVAW	0.737				
PRPE	0.506	0.717			
PRODQ	0.673	.532	0.720		
BRNDIM	0.610	.553	0.662	0.725	
BPB	0.686	.655	0.619	0.608	0.709

From Table 6 is observable that each item factor loadings surpassed the threshold of 0.6, demonstrating the item's capacity to precisely assess the targeted constructs. This result demonstrates the resilience of our measurement model. To examine the scales' internal consistency, we calculated AVE. Table 6 shows the post-CFA outcomes, including Cronbach's Alpha and AVE.
Discriminant validity is established when the square root of the AVE for a variable surpasses its correlation values with other variables. The results presented in Table 7 contribute to the evaluation of Discriminant validity.

5.5 Hypothesis Testing

Environmental Awareness significantly and positively influences Buyers' Purchase Behavior.

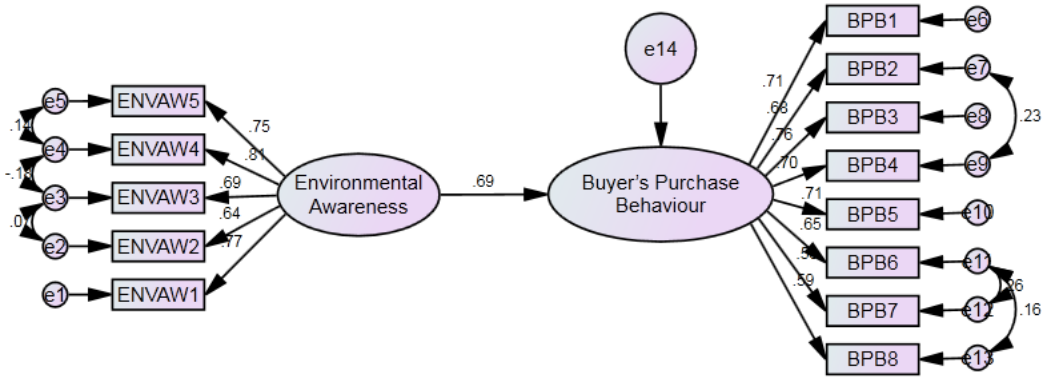


Fig. 2: Impact of Environmental Awareness on Buyer's Purchase Behaviour

Table 8: Regression Weights of Environmental Awareness and Buyers' Purchase Behaviour

Paths	Unstandardized	Std. Err..	Standardized	C.R.	P
Buyer's Purchase Behaviour<---Environmental Awareness	.634	.061	.690	10.317	***
ENVAW1<--- Environmental Awareness	1.000		.766		
ENVAW2<---EnvironmentalAwareness	.723	.060	.641	11.971	***
ENVAW3<---EnvironmentalAwareness	.920	.074	.693	12.436	***
ENVAW4<--- Environmental Awareness	1.105	.078	.810	14.262	***
ENVAW5<--- Environmental Awareness	.870	.064	.751	13.647	***
BPB1<---Buyer'sPurchaseBehaviour	1.000		.706		
BPB2<--- Buyer's Purchase Behavior	.960	.080	.678	12.019	***
BPB3<--- Buyer's Purchase Behavior	1.110	.082	.765	13.513	***
BPB4<--- Buyer's Purchase Behavior	.943	.077	.695	12.316	***
BPB5<--- Buyer's Purchase Behavior	.964	.076	.711	12.646	***
BPB6<--- Buyer's Purchase Behavior	1.013	.088	.648	11.540	***
BPB7<--- Buyer's Purchase Behavior	.734	.073	.559	10.035	***
BPB8<--- Buyer's Purchase Behavior	.816	.077	.589	10.547	***

Table 8 presents a hypothetical structural equation model demonstrating the interdependence of two factors: Independent and Dependent variables, 'Environmental Awareness' and 'Buyers Purchase Behaviour'. For the path from "Environmental Awareness" to 'Buyer's Purchase Behaviour', the standardized coefficient is (β=.690, P<.05), suggesting a positive relation between both the variables. The C.R. value is quite high, indicating that the relationship is statistically significant. The fit indices indicate that the model fits well, as shown in Table 8. Seven fit indices were considered to evaluate the overall model fit, and the results demonstrated that Environmental Awareness positively influences Buyer's Purchase Behaviour.

Table 9: Fit Values

Variable	CMIN	DF	CMIN/DF	p-val	GFI	AGFI	TLI	CFI	RMSEA
Value	102.551	58	1.768	.063	.960	.937	.972	.979	.045

Model fit Values are presented in Table 9. It is observable that the quality of fit for the data was good; GFI, AGFI, TLI, and CFI have significantly higher values than 0.90. Similarly, the value of RMSEA is less than the crucial threshold of 0.080. The results revealed a good fit for the model provided, including RMSEA, GFI, and CFI.
H2: Price Perception significantly negatively influences Buyers Purchase Behavior.

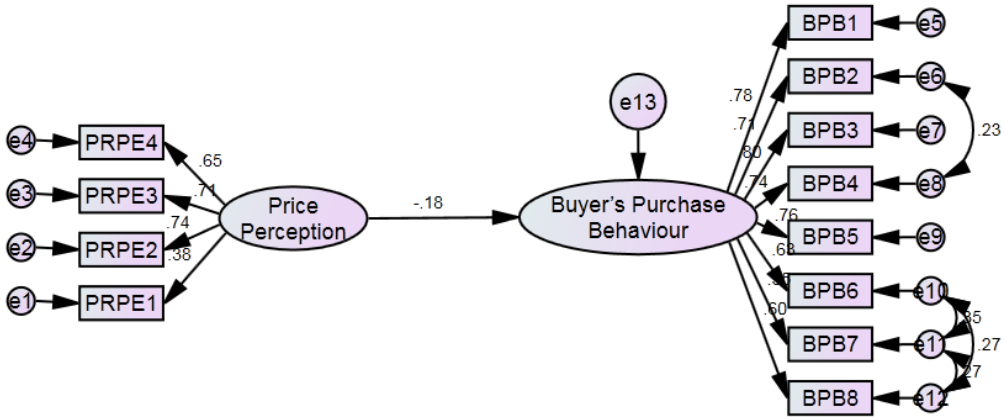


Fig.3: Price Perception Impact on Buyer's Purchase Behaviour

Table 10: Regression Weights of Price Perception and Buyers' Purchase Behaviour

Paths	Unstandardized	Std. Err.	Standardized	C.R.	P
Buyer's Purchase Behaviour<--- Price Perception	-.370	.074	-.177	-9.563	***
PRPE1<---PricePerception	1.000		.379		
PRPE2<--- Price Perception	2.121	.319	.737	6.649	***
PRPE3<--- Price Perception	1.911	.289	.706	6.613	***
PRPE4<--- Price Perception	1.679	.259	.652	6.490	***
BPB1<---Buyer's Purchase Behaviour	1.000		.783		
BPB2<--- Buyer's Purchase Behavior	.861	.061	.713	14.064	***
BPB3<--- Buyer's Purchase Behavior	1.012	.062	.805	16.311	***
BPB4<--- Buyer's Purchase Behavior	.855	.058	.736	14.616	***
BPB5<--- Buyer's Purchase Behavior	.888	.058	.761	15.312	***
BPB6<--- Buyer's Purchase Behavior	.842	.068	.635	12.395	***
BPB7<--- Buyer's Purchase Behavior	.598	.057	.546	10.456	***
BPB8<--- Buyer's Purchase Behavior	.694	.060	.596	11.546	***

Table 10 presents a hypothetical structural equation model demonstrating the interdependence of two factors: Independent and dependent variables, 'Price Perception' and 'Buyer's Purchase Behaviour'. For the path from "Price Perception" to 'Buyer's Purchase Behaviour', the standardized coefficient is (β= -.177, P<.05), suggesting a negative relation between both the variables. The fit indices indicate that the model fits well, as shown in Table 11. Seven fit indices were considered to evaluate the overall model fit, and the results demonstrated that Price Perception negatively influences Buyer's Purchase Behaviour.

Table 11: Fit Values

Variable	CMIN	DF	CMIN/DF	p-val	GFI	AGFI	TLI	CFI	RMSEA
Value	1105.728	385	2.872	.097	.940	.914	.948	.952	.062

Model fit values are presented in Table 11 above. From the table, it is observable that the quality of fit for the data was good; GFI, AGFI, TLI, and CFI have significantly higher values than 0.90. Similarly, the value of RMSEA is less than the crucial threshold of 0.080. The results revealed a good fit for the model provided, including RMSEA, GFI, and CFI.

H3: Product Quality significantly positively influences Buyers' Purchase Behavior.

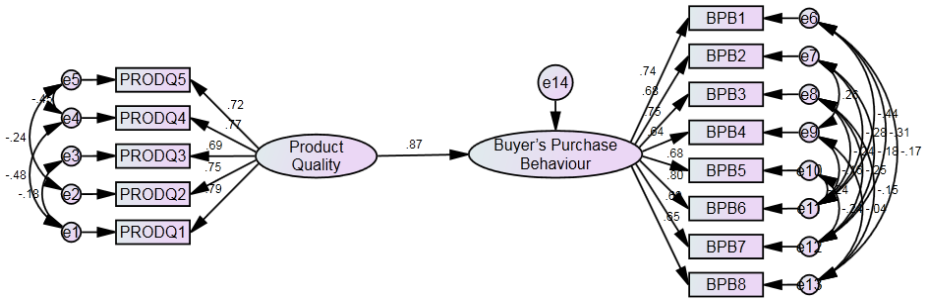


Fig. 4: Impact of Product Quality on Buyer's Purchase Behaviour

Table 12: Regression Weights of Product Quality and Buyer's Purchase Behaviour

Paths	Unstandardized	Std. Err.	Standardized	C.R.	P
Buyer's Purchase Behaviour<--- Product Quality	.705	.052	.865	13.488	***
PRODQ1 <--- Product Quality	1.000		.793		
PRODQ2 <--- Product Quality	.830	.055	.753	15.220	***
PRODQ3 <--- Product Quality	.753	.057	.688	13.102	***
PRODQ4 <--- Product Quality	.845	.064	.773	13.274	***
PRODQ5 <--- Product Quality	.768	.054	.722	14.227	***
BPB1 <--- Buyer's Purchase Behaviour	1.000		.741		
BPB2 <--- Buyer's Purchase Behaviour	.906	.072	.675	12.668	***
BPB3 <--- Buyer's Purchase Behaviour	1.040	.074	.754	14.099	***
BPB4 <--- Buyer's Purchase Behaviour	.827	.068	.644	12.136	***
BPB5 <--- Buyer's Purchase Behaviour	.874	.068	.679	12.769	***
BPB6 <--- Buyer's Purchase Behaviour	1.179	.092	.796	12.857	***

BPB7 <--- Buyer's Purchase Behaviour	.860	.074	.694	11.689	***
BPB8 <--- Buyer's Purchase Behaviour	.856	.074	.652	11.647	***

Table 12 presents a hypothetical structural equation model demonstrating the interdependence of two factors: Independent and dependent variables, 'Product Quality' and 'Buyer's Purchase Behaviour'. For the path from 'Product Quality' to "Buyer's Purchase Behaviour", the standardized coefficient is (β=.865, P<.05), suggesting a positive relation between both the variables. The C.R. value is quite high, indicating that the relationship is statistically significant. The fit indices indicate that the model fits well, as shown in Table 13. Seven fit indices were utilized to evaluate the overall model fit, and the results demonstrated that Product Quality positively influences Buyer's Purchase Behaviour.

Table 13: Fit Values

Variable	CMIN	DF	CMIN/DF	p-val	GFI	AGFI	TLI	CFI	RMSEA
Value	1105.728	385	2.872	.097	.940	.914	.948	.952	.062

Model fit values are presented in Table 13. It is observable that the quality of fit for the data was good; GFI, AGFI, TLI, and CFI have significantly higher values than 0.90. Similarly, the value of RMSEA is less than the crucial threshold of 0.080. The results revealed a good fit for the model provided, including RMSEA, GFI, and CFI.

H4: Brand image significantly positively influences buyers' purchase behavior.

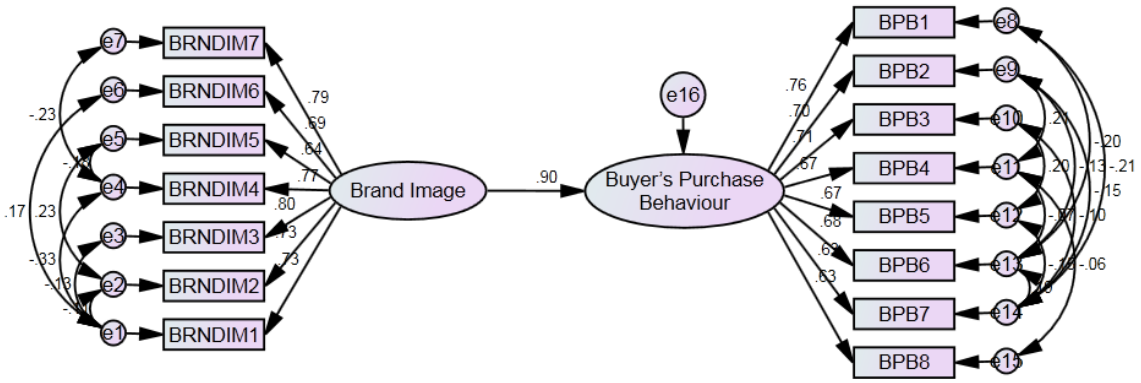


Fig.5: Brand Image Impact on Buyer's Purchase Behaviour

Table 14: Regression Weights of Brand Image and Buyer's Purchase Behaviour

Paths	Unstandardized	Std. Err.	Standardized	C.R.	P
Buyer's Purchase Behaviour<---Brand Image	.930	.072	.903	12.914	***
BRNDIM1<---BrandImage	1.000		.729		
BRNDIM2<---BrandImage	.961	.074	.731	13.035	***
BRNDIM3<---BrandImage	1.376	.096	.804	14.323	***
BRNDIM4<---BrandImage	1.082	.085	.774	12.704	***
BRNDIM5<---BrandImage	.823	.070	.635	11.747	***
BRNDIM6<---BrandImage	.844	.059	.687	14.184	***
BRNDIM7<---BrandImage	1.242	.085	.794	14.608	***
BPB1<---Buyer's Purchase Behaviour	1.000		.755		
BPB2<--- Buyer's Purchase Behavior	.931	.069	.704	13.543	***
BPB3<--- Buyer's Purchase Behavior	.969	.070	.715	13.890	***
BPB4<--- Buyer's Purchase Behavior	.851	.066	.672	12.915	***
BPB5<--- Buyer's Purchase Behavior	.845	.066	.667	12.865	***
BPB6<--- Buyer's Purchase Behavior	.992	.083	.676	11.890	***
BPB7<--- Buyer's Purchase Behavior	.778	.071	.635	10.974	***
BPB8<--- Buyer's Purchase Behavior	.818	.067	.632	12.218	***

Table 14 presents a hypothetical structural equation model demonstrating the interdependence of two factors: Independent and dependent variables, 'Brand Image' and 'Buyer's Purchase Behaviour'. For the path from "Brand Image" to 'Buyer's Purchase Behaviour', the standardized coefficient is (β=.903, P<.05), suggesting a positive relation between both the variables. The C.R. value is quite high, indicating that the relationship is statistically significant. The fit indices indicate that the model fits well, as shown in Table 15. Seven fit indices were considered to evaluate the overall model fit, and the results demonstrated that Brand Image positively influences Buyer's Purchase Behaviour.

Table 15: Fit Values

Variable	CMIN	DF	CMIN/DF	p-val	GFI	AGFI	TLI	CFI	RMSEA
Value	163.339	71	2.301	.073	.945	.907	.954	.969	.058

Model fit values are presented in the above table 15. From the table, it is observable that the quality of fit for the data was good, GFI, AGFI, TLI, and CFI have significantly higher values than 0.90. Similarly, the value of RMSEA is less than the crucial threshold of 0.080. The results revealed a good fit for the model provided, including RMSEA, GFI, and CFI.

H5: There is no significant mean difference in purchase behavior towards herbal cosmetics between male and female buyers.

For this hypothesis testing, we have considered the independent sample T-test. A statistical technique used in research to compare the means of groups to identify if there is a difference between them.

Table 16: Group Statistics

	Gender	No. of samples	Mean	Std. Deviation
Buyers Purchase Behaviour	Male	85	3.5809	.82999
	Female	299	3.8202	.68594

Table 16 depicts the gender wise group statistics of the variable Buyers' Purchase Behaviour. The male respondents' mean and standard deviation in purchase Behaviour is 3.5809 and.82999, the mean and standard deviation of female respondents is 3.8202 and.68594. The mean value of females is greater than the mean value of males.

Table 17: T-Test

		"Levene's Test for Equality of Variances"		t-test				
		F-val	p-val	t-val	df	p-val (2-tailed)	Mean diff	Std. Err Diff
Buyers Purchase Behaviour	Equal variances assumed	14.940	.000	-2.704	382	.007	-.23935	.08851
	Equal variances not assumed			-2.433	118.527	.016	-.23935	.09838

Table 17 shows the results of the independent sample t-test. According to "Levene's Test for Equality of Variances," the variances of two groups should be the same when their means are compared. Despite being the test's null hypothesis, the alternative hypothesis claims that the variances are not equal across the groups. The second row is used for further analysis if the p-value from "Levene's Test for Equality of Variances" is less than 0.05; if equal variances are assumed ($p > 0.05$), the first row's findings are used.
The results of the second row are used for the t-test values because the p-value in "Levene's Test for Equality of Variances" is less than 0.05. The calculated t-value is -2.433, and the p-value is less than 0.05. The t-value of less than -2 and the significance value of less than 0.05 indicate that the alternative hypothesis that there is a significant mean difference in the purchase behavior of herbal cosmetics between male and female buyers is accepted, while the null hypothesis that there is no significant mean difference in the purchase behavior of herbal cosmetics between male, as well as female buyers, is rejected.

6. Discussions

This research investigates buyers ' purchasing Behaviour towards Herbal Cosmetic products. The research is structured to explore five hypotheses:

1. Environmental Awareness significantly positively influences Buyers' Purchase Behavior.
2. Price Perception significantly negatively influences Buyers' Purchase Behavior.
3. Product Quality significantly positively influences Buyers' Purchase Behavior.
4. Brand images significantly positively influence buyers' purchase behavior.
5. There is no significant mean difference in purchase behavior towards herbal cosmetics between male and female buyers.

6.1 Demographic Insights

The demographic information presented in the study displays a well-distributed representation of the respondents across various age groups, with a significant female majority, representing the primary customer base for herbal cosmetic products. Respondents with different occupational backgrounds and educational levels indicated a broad appeal of these products among students and professionals. The monthly income levels are varied, with a presence of middle to upper-middle-class customers, reflecting their capability to invest in herbal cosmetics. This diversity of perspectives offers a robust foundation for understanding the factors influencing Environmental Awareness, Price Perception, Product Quality, Brand Image, and Buyers' Purchase Behaviour within the herbal cosmetic industry.

6.2 Reliability and Validity

The reliability study, performed utilizing Cronbach's alpha, verifies strong internal consistency for all variables, with values above the 0.7 criterion. The KMO & Bartlett's tests confirm that the data is appropriate for factor analysis, which strengthens the reliability of the studies instruments.

6.3 Hypothesis Testing and Structural Model Analysis

Hypothesis 1: Relation between Environmental Awareness and Buyers' Purchase Behavior.
The research reveals a significant positive relation between Environmental Awareness and Buyers' Purchase Behavior, with a standardised regression coefficient ($\beta = 0.690$, $p < 0.05$) indicating that Environmental Awareness is the key driver influencing buyers' purchase behaviour towards herbal cosmetics.
Hypothesis 2: Relation between Price Perception and Buyers' Purchase Behavior.
The research demonstrates a significant and negative relation between the Price Perception and Buyers' Purchase Behavior ($\beta = -0.177$, $p < 0.05$), demonstrating that higher price perception acts as a barrier to purchase behaviour.
Hypothesis 3: Relation between Product Quality and Buyers' Purchase Behavior.
The research demonstrates a significant positive relation between the Product Quality and Buyers' Purchase Behavior ($\beta = 0.865$, $p < 0.05$), and that the product quality is the key driver of purchase behaviour, and high quality can strengthen the customers' trust and increase purchases of herbal products.
Hypothesis 4: Relation between Brand Image and Buyers' Purchase Behavior.
The study demonstrates a significant positive relation between the Brand Image and Buyers' Purchase Behavior ($\beta = 0.903$, $p < 0.05$), and that the Brand Image plays a critical role in driving purchase behavior. This means that when buyers see a brand as trustworthy, reputable, and of high quality, they are more likely to purchase herbal cosmetics.

Hypothesis 5: Gender wise difference in purchase behavior towards herbal cosmetics.
The results of an independent sample test reveal that there is a significant difference between males and females in purchase behaviour towards herbal cosmetic products.

6.4 Model Fit and Statistical Significance

The model fit indices for all the studies suggest a satisfactory fit, with the GFI, AGFI, TLI, and CFI all having values more than 0.90. RMSEA value is lower than the essential criterion of 0.08. This provides further confirmation that the model adequately represents the data.

6.5 Implications

The study's results have significant ramifications for firms in the herbal cosmetics sector. To develop trust, businesses can prioritize enhancing product quality and emphasizing advantages such as organic components and efficacy. Consistent branding & ethical practices will help to strengthen the brand image and stimulate sales. To overcome price sensitivity, organizations might use value-based pricing or promotions to justify their costs. Promoting awareness of the environment will attract eco-conscious customers, and focused marketing methods may help firms reach certain audiences more successfully. Businesses that concentrate on these areas may increase client happiness, loyalty, and sales.

7. Conclusion

The research shows that environmental consciousness, product quality, and brand image favourably affect users' purchasing decisions for herbal cosmetics; however, price perception has a negative effect. This suggests that purchasers are more inclined to buy herbal cosmetics if they are ecologically sensitive, believe the items are of excellent quality, and have a favourable opinion of the brand. However, high price perception serves as a deterrent to purchasing. To stimulate purchasing behaviour, firms can work on enhancing product quality, developing a strong and trustworthy brand image, resolving pricing issues by stressing value for money, and raising awareness of the environment to attract eco-conscious customers. By addressing these aspects, firms may increase consumer interest and sales of herbal cosmetics.

Suggestions

To increase consumer interest in herbal cosmetics, businesses should focus on teaching clients about the benefits of eco-friendly and high-quality goods through digital marketing and educational initiatives. Price perception may be addressed by providing discounts, introducing loyalty programs, and highlighting the long-term benefits of herbal products. Collaborations with influencers and environmental efforts may help boost brand image and attract environmentally concerned customers. Tailored product offers and ongoing customer input can help organizations address various consumer wants while remaining competitive. Transparency in sourcing & eco-friendly methods can strengthen confidence & appeal to environmentally conscious clients.

Future Scope

Future studies might investigate consumer purchase habits across various geographic areas to determine regional differences in herbal cosmetic interests. Longitudinal research may give more detailed insights into shifting consumer views over time, particularly as knowledge of sustainability rises. Further research might include aspects such as social media impact, celebrity endorsements, as well as cultural attitudes. Increasing the sample size as well as including qualitative approaches like interviews, may provide a more complete picture of customer motives. Furthermore, researchers might investigate the function of new technologies such as Augmented Reality (AR) in improving consumer experience and marketing herbal cosmetic items on e-commerce platforms.

References

[1] Alam, M. F. E. (2020). The influence of quality on consumers' purchase intention between local and multinational cosmetic firms. Journal of International Business and Management, 1(1), 1–11.
[2] Alamsyah, D. P., Othman, N. A., & Mohammed, H. A. A. (2020). The awareness of environmentally friendly products: The impact of green advertising and green brand image. Management Science Letters, 10(9), 1961–1968.
[3] Khan, Z. (2025). Secure boot and firmware update mechanism for ARM Cortex-M series MCUs. Electronics, Communications, and Computing Summit, 3(1), 22–31.
[4] Aman, L. A., &Ghahremani, M. (2018). The influence of culture on organizational flexibility to revolute administrative system (Case study: education and nurture management in Western Azerbaijan province). International Academic Journal of Organizational Behavior and Human Resource Management, 5(2), 56–69. https://doi.org/10.9756/IAJOBHRM/V5I2/1810014
[5] Anisha, S., &Kalaivani, A. (2016). Factors influencing buyers behaviour while purchasing. Shanlax International Journal of Commerce, 4(3), 153–158.
[6] Sadulla, S. (2024). Next-generation semiconductor devices: Breakthroughs in materials and applications. Progress in Electronics and Communication Engineering, 1(1), 13–18. https://doi.org/10.31838/PECE/01.01.03
[7] Anuradha, G., &Anupriya, S. (2024). Global marketing strategies: A comparative analysis of scientific production and citation impact across nations. 44(3), 18618–18636.
[8] Anwar, M., &Andrean, D. (2021). The effect of perceived quality, brand image, and price perception on purchase decision. In Proceedings of the 4th International Conference on Sustainable Innovation 2020-Accounting and Management (ICoSIAMS 2020) (Vol. 176, pp. 78–82).
[9] Bhatt, K., &Sankhla, P. (2017). A study on consumer buying behavior towards cosmetic products. International Journal of Engineering Technology Science and Research, 4(2), 1244–1249. http://14.139.251.106:8080/jspui/handle/repository/19571
[10] Sadulla, S. (2024). A comparative study of antenna design strategies for millimeter-wave wireless communication. SCCTS Journal of Embedded Systems Design and Applications, 1(1), 13-18. https://doi.org/10.31838/ESA/01.01.03
[11] Buying patterns of people in Trivandrum who purchased cosmetic products. (2023).

[12] Cachero-Martínez, S. (2020). Consumer behaviour towards organic products: The moderating role of environmental concern. Journal of Risk and Financial Management, 13(12), 330. https://doi.org/10.3390/jrfm13120330
[13] Consumer, T., Using, O., & Analysis, S. (2024). Consumers' purchase intentions towards herbal cosmetics, 4(1), 201–210.
[14] Desai, K. (2014). A study on consumer buying behaviour of cosmetic products in Kolhapur. Reviews of Literature, 1(10), 1–11.
[15] Muralidharan, J. (2024). Machine learning techniques for anomaly detection in smart IoT sensor networks. Journal of Wireless Sensor Networks and IoT, 1(1), 15-22. https://doi.org/10.31838/WSNIOT/01.01.03
[16] Diputra, I. G. A. W., &Yasa, N. N. (2021). The influence of product quality, brand image, brand trust on customer satisfaction and loyalty. American International Journal of Business Management (AIJBM), 4(1), 25–34.
[17] Emmanuel, R., Basha, S. C., Venkateswrlu, B., &Babu, T. K. (2023). A study on consumer buying pattern of cosmetic products with reference to Andhra Pradesh-India. International Journal of Professional Business Review, 8(11), e04051. https://doi.org/10.26668/businessreview/2023.v8i11.4051
[18] Sadulla, S. (2024). Techniques and applications for adaptive resource management in reconfigurable computing. SCCTS Transactions on Reconfigurable Computing, 1(1), 6-10. https://doi.org/10.31838/RCC/01.01.02
[19] Este, D. C., &Tachble, A. A. (2009). The perceptions and experiences of Russian immigrant and Sudanese refugee men as fathers in an urban center in Canada. Annals of the American Academy of Political and Social Science, 624(1), 139–155.
[20] Fatima, S. (2015). Impact of advertisement on buying behaviours of the consumers: Study of cosmetic industry in Karachi city. International Journal of Management Sciences and Business Research, 4(10), 125–137.
[21] Gunawan, I. (2022). Customer loyalty: The effect of customer satisfaction, experiential marketing and product quality. KINERJA: JurnalManajemenOrganisasi Dan Industri, 1(1), 35–42.
[22] Hutomo, A., Marditama, T., Limakrisna, N., Sentosa, I., Lee, J., & Yew, K. (2020). Green human resource management, customer environmental collaboration and the enablers of green employee empowerment: Enhancing an environmental performance. DIJEFA, 1(2), 358–372.
[23] Ishaq, S., Badar, H., &Javed, H. (2021). Factors influencing female purchase behavior for organic cosmetic products in Pakistan. Global Social Sciences Review, VI(I), 396–407.
[24] Danh, N. T. (2025). Advanced geotechnical engineering techniques. Innovative Reviews in Engineering and Science, 2(1), 22-33. https://doi.org/10.31838/INES/02.01.03
[25] Kamaruniza, A., Kavin Mary, S., Latha, D. S., &Kavitha, C. (2022). A study on consumer's buying behavior towards herbal products with special reference to Chennai City. Journal of Positive School Psychology, 2022(7), 1765–1774.
[26] Laghareh, F. S., Mirabedini, S. J., &Abadi, A. H. (2015). Provide a method for validation of bank customers using data mining techniques. International Academic Journal of Science and Engineering, 2(2), 83–94.
[27] Lakshmi Prabha, S., &Sindhuja, M. (2022). A study on buying behavior of consumers towards organic cosmetic products in Madurai City. Shanlax International Journal of Arts, Science and Humanities, 9(S1), 36–40. https://doi.org/10.34293/sijash.v9is1-may.5941
[28] Liu, C. H. S., & Lee, T. (2016). Service quality and price perception of service: Influence on word-of-mouth and revisit intention. Journal of Air Transport Management, 52, 42–54.
[29] Malik, R., & Sharma, A. (2020). A study of customer attitude towards organic cosmetic products: Indian context. MuktShabd Journal, 9(4), 2467–2477.
[30] MateaMatic, & Barbara Puh. (2016). Consumers' purchase intentions towards natural cosmetics. EkonomskiVjesnik/Econviews - Review of Contemporary Business, Entrepreneurship and Economic Issues, 29(1), 53–64.
[31] Mittal, E., & Kaur, P. (2023). Green HRM, green innovation and environmental performance: The moderating role of servant leadership. Human Systems Management, 42(1), 27–40.
[32] Moradi, F., &Taheri, S. (2017). A Comparative Study Decorating and Form Incense Burners with Graffiti Seljuk Period. International Academic Journal of Social Sciences, 4(1), 9–21.
[33] Rama, A. S., Yasri, &Susanto, P. (2024). The effect of environmental awareness as a moderation on determinants of green product purchase intention. Global Journal of Environmental Science and Management, 10(2), 699–712.
[34] Botla, A., Kanaka Durga, G., & Paidimarry, C. (2024). Development of Low Power GNSS Correlator in Zynq SoC for GPS and GLONSS. Journal of VLSI Circuits and Systems, 6(2), 14–22. https://doi.org/10.31838/jvcs/06.02.02
[35] Ranjbarian, B., Sanayei, A., Kaboli, M. R., &Hadadian, A. (2012). An analysis of brand image, perceived quality, customer satisfaction and re purchase intention in Iranian department stores. International Journal of Business and Management, 7(6), 40–48.
[36] Selvi, D., & Arts, G. (2023). An analytical purview of consumer behavior towards personal care products.
[37] Shakeel, S., & Karim, E. (2019). Consumer buying behavior: Organic cosmetics versus non organic cosmetics. Munich Personal RePEc Archive (MPRA), 110098.
[38] Sharifuddin, J., Ahmad Mazlan, N., &Rezai, G. (2018). Consumer buying behavior towards herbal-based products in Malaysia. UNEJ E Proceeding, 410–423.
[39] Sihombing, L. A., Suharno, S., Kuleh, K., &Hidayati, T. (2023). The effect of price and product quality on consumer purchasing decisions through brand image. International Journal of Finance, Economics and Business, 2(1), 44–60.
[40] Swati Parkash, & Banerjee, D. S. (2020). Green HRM, green innovation and environmental performance: The moderating role of servant leadership. Future Prospects of E-Commerce in India, 4(6), 631–636.
[41] Tu, Y. T., & H. C. C. (2012). Corporate brand image and customer satisfaction on loyalty: An empirical study of Starbucks Coffee in Taiwan. Journal of Social and Development Sciences, 3(1), 24–32.
[42] Xian, G. L., (2011). A study on demonetization and its impact on corruption and black money. Saudi Journal of Humanities and Social Sciences, 2(5), 597–610.
[43] Yuen, E. F. T., & Chan, S. S. L. (2010). The effect of retail service quality and product quality on customer loyalty. Journal of Database Marketing and Customer Strategy Management, 17(3–4), 222–240.
[44] Patel, P., & Dusi, P. (2025). Optimization Models for Sustainable Energy Management: A Multidisciplinary Approach. Bridge: Journal of Multidisciplinary Explorations, 1(1), 1-10.
[45] Usikalua, M. R., & Unciano, N. (2025). Memory Reconsolidation and Trauma Therapy: A New Frontier in PTSD Treatment. Advances in Cognitive and Neural Studies, 1(1), 1-10.
[46] Sadulla, S. (2025). Effect of Pranayama on Lung Function in Post-COVID Rehabilitation among Middle-Aged Adults: A Clinical Study. Journal of Yoga, Sports, and Health Sciences, 24-30.