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An Exploratory Study to Identify the Gender-Based Purchase Behavior of Consumers of Natural Cosmetics

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Abstract: Consumers have become more open to the use of natural cosmetics. The production of natural cosmetics has grown in recent years because of demand from consumers who are concerned about skin health, product quality, and beauty. The presence of harmful chemicals in cosmetics has made consumers realize the importance of being “natural”. This paper focused on identifying the factors that influence Indian consumers’ purchase intentions and purchase behavior towards natural cosmetics. The theory of planned behavior (TPB) was used to study the purchase intentions and purchase behavior of male and female consumers of natural cosmetics. In India, there has, in recent years, been a growing demand among males for cosmetics and specifically natural cosmetics. We studied the differences between male and female consumers’ purchase intentions and purchase behaviors by using the structural equation modeling of SmartPLS 3.0. A study of 335 women and men in India revealed that Attitude towards Environment and Natural Cosmetics had a positive influence on Purchase Intention and, subsequently, Purchase Behavior. There was also a positive influence of Perceived Behavioral Control on Purchase Intention. Product Knowledge had an indirect impact on Purchase Intention through Attitude towards Environment and Natural Cosmetics, as well as an indirect impact on Purchase Behavior through Purchase Intention. Subjective Norms was the only factor that did not have a significant positive impact on Purchase Intention and Purchase Behavior. However, the influences of the variables on Purchase Intention and Purchase Behavior did not differ between male and female consumers, thereby offering evidence of the similarity between men and women in their natural cosmetics purchase behavior.

Keywords: natural cosmetics; natural skin care and hair care products; natural products; green cosmetics; theory of planned behavior; TPB; environmental concern; environmentally conscious; India; men; women



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1. Introduction

Much of today’s human population uses cosmetics on a regular basis. These cosmetics include hair dyes, lipsticks, lotions, UV filters, sunscreens, hair gels, shampoos, conditioners, toothpaste, and deodorant. These products have become regular necessities [1].

In India, the *Drugs and Cosmetics Act, 1940*, defines a “cosmetic” as “any article intended to be rubbed, poured, sprinkled, or sprayed on, or introduced into, or otherwise applied to, the human body, or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and includes any article intended for use as a component of cosmetic” [2].

The science of cosmetology seems to have originated in ancient Egypt and ancient India. The earliest record of the use of cosmetics is dated to circa 2500–1500 B.C. in the Indus Valley civilization [3]. Cosmetics use had, first and foremost, hygienic purposes and health advantages. Over the years, natural cosmetics were replaced by synthetic cosmetics due to improvements in chemical processes and the ability to produce many cosmetics at a lower cost with a fair degree of standardization [4]. However, to some extent, the natural environment has been damaged and the well-being of consumers compromised by the

use of synthetic chemical-based cosmetics. Cosmetics such as hair dyes, lipsticks, creams, deodorants, bath soaps, dental care products, shampoos, toothpaste, perfumes, UV filters, detergents, sunscreens, and fragrances, when used or applied, are known to negatively impact the aquatic environment as they are washed off the human body into lakes, rivers, and oceans [5,6].

Traditionally manufactured cosmetics contain microplastics and other chemicals that have a negative impact on humans and nature [7,8]. Consumers are more aware of the impact of their consumption behavior on their health as well as on the environment and hence are more careful in their choices [1,9]. Therefore, it would be appropriate for cosmetics companies to move in the direction of natural cosmetics. Natural cosmetic products are predominantly made of naturally occurring materials and from plant-based products [7,10,11]. Natural cosmetics are also made from plant-based and fruit extracts [12]. The dangerous synthetic chemicals are known to have an impact on the health of humans and other living organisms due to the fact that the chemicals drain into lakes, oceans, or rivers, thereby causing harmful effects on living organisms that depend on the water bodies for survival.

Hence, in the 21st century, consumer demand for cosmetics has changed from chemical cosmetics to natural cosmetics, and this shift of preference for natural beauty products has fostered the growth of the cosmetics market [13]. In India, there has been a growing trend in the use of cosmetics by men for various reasons, and it has been observed that both men and women are showing a growing preference for natural products. Currently, in 2022, the male grooming market size is approximately USD 1.2 billion [14]. Many previous studies have focused on women and their cosmetics use, but the current situation demands that men also be studied in terms of their cosmetics use and their preference for natural cosmetics.

2. Definition of Natural Cosmetics

In India, according to the *Drugs and Cosmetics (Amendment) Act, 2008* (Act No.26 of 2008), cosmetics are “any article intended to be rubbed, poured, sprinkled, or sprayed on, or introduced into, or otherwise applied to, the human body, or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and includes any article intended for use as a component of cosmetic” [2].

In the above act, natural cosmetics are not defined.

Natural, green, or environmentally friendly products are products manufactured so that they do not pollute the environment, are not harmful to humans, do not deplete natural resources, and can be recycled [15]. Natural cosmetics are cosmetics made from ingredients that involve a responsibility for safeguarding the environment and reducing pollution, resulting in a reduction in or the total absence of harmful impacts on humans and other living beings [16].

Natural cosmetic products are primarily made of plant-based materials and from agricultural-based production [11].

2.1. Significance of the Study

2.1.1. Male Cosmetics Consumers

A few years ago, a small amount of moisturizer or aftershave lotion was accepted among men, but anything more was not an acceptable norm. However, changes in society have influenced cosmetics use among men. In India, the value of this enhanced market is now INR 3800 (approximately USD 475 million), showing the impressive growth of the market. The male grooming market size is now worth approximately EUR 1.169 billion (USD 1.2 billion) [14].

Rahul Bhalchandra, co-founder of the Bangalore-based salon chain YLG (You Look Great), is also focused on serving the male market segment. “Today, 25% of our revenue comes from services offered to men despite our recent entry,” he has said. Amway India, the direct-to-consumer marketing firm, has witnessed a 32 percent growth rate for men’s

grooming and personal care cosmetics. “Men’s grooming is growing at nearly double the rate of overall personal care categories and modern retail is acting as a catalyst for this growth,” says Devendra Chawla, president of Food Bazaar, which is part of the Future Group [14].

2.1.2. Brands Listed under Natural Cosmetics

Table 1 lists a few natural cosmetics and personal care brands in India along with those that are listed under men’s natural cosmetics.

Table 1. List of natural cosmetics and personal care brands in India.

Sl. No.	List of Natural Cosmetics and Personal Care Brands	List of Natural Cosmetics and Personal Care Brands for Men
1	Tata Harper	Tata Harper
2	Innisfree	Innisfree
3	Vox	Vox
4	Joan Moais	Clinique for Men
5	Khadi Naturals	Burt’s bee
6	Ecco Verde	Ecco Verde
7	Vapour	Dr.Batra’s
8	Ilia	CaveMan Naturals
9	Au Naturale	Biotin
10	Biossance	Spruce
11	Mama Earth	Mama Earth
12	Apivita	Apivita
13	Hugo Naturals	Birch box

2.1.3. Global Natural Cosmetics Market Size

“The global market value for natural cosmetics expected a positive increase from almost 30.5 billion dollars in 2018 to roughly estimated to 50.5 billion dollars expected for the year 2027, and is projected to register a good CAGR of 5.2% from 2019 to 2025. According to Future Market Insights (FMI)” [17].

The growth is fueled by growing consumer concerns regarding the side effects of chemicals in cosmetics and toiletries, the dissemination of knowledge regarding the benefits of natural ingredients, and increasing ethical consumerism. The increasing demand for beauty products coupled with the rising awareness about environmentally friendly products is expected to drive growth. Rising consumer awareness about the side effects of chemical contents in cosmetics is driving manufacturers to introduce natural products. Tata Harper, a prominent player in the market of cosmetics, started the company after realizing the harmful effects of synthetic chemicals, from close quarters.

2.1.4. Indian Natural Cosmetics Market Growth Rate

According to the report “India Natural & Organic Personal and Beauty Care Products Market—Sizing and Growth”, India exhibited a CAGR of 17.27% by value from 2017 to 2022 [2].

2.2. Literature Review

2.2.1. Need for Natural Cosmetics

India, like any other developing economy, is facing a lot of environmental pressure due to chemical usage in various products and by-products. There is a growing concern over health risks associated with the usage of synthetic and non-natural cosmetics. The outcomes

could be deterioration in the quality of skin and hair and allergies. Indian consumers have realized the importance of adopting “natural/organic” products. Consumers’ concern over increasing pollution and their health consciousness have made it important to recognize the factors motivating them to buy natural cosmetics [18]. In Hungary, the reasons for using natural cosmetics among consumers were studied using cluster analysis by combining their intentions to purchase bio-foodstuffs and natural cosmetics and by using cluster analysis [19].

2.2.2. Men and Purchasing of Natural Cosmetics

In late 2000, men started to be a part of the beauty movement, sometimes to support their wives and in some other cases as founders of brands. Max Factor and Charles Revson included men in their beauty and wellness mission [20].

Much of the studies around the world and especially in India have focused more on studying women as customers for natural cosmetics and less on men. In fact, many of the studies specifically stated that their samples were women, and only a few studies have included men as samples, although in a much lower proportion of the final sample size considered for the study [21–26].

2.2.3. Literature Review Based on the Theory of Planned Behavior

Consumers’ purchase behavior can be explained using the causal model of the theory of planned behavior [27]. Behavioral intention is the antecedent to purchase behavior and is, in turn, explained by attitude, subjective norms, and perceived behavioral control (PBC), which act as antecedents to behavioral intention; all three factors positively influence outcomes.

The theory of planned behavior (TPB) is widely used in the marketing and consumer buying literature to explain online shopping behavior [28–36].

In this research, TPB was used to explain the purchasing behavior towards natural cosmetics of both men and women, and in turn, men and women were compared. Attitude “refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” [27]. Subjective norm “refers to the perceived social pressure to perform or not to perform the behavior” [27]. Subjective norms can be interpreted as perceived social norms (coming from important peer groups, relatives, friends, etc.) that support or oppose a particular behavior.

Subjective norms have been shown to explain purchase behavior towards green products [37–39]. Perceived behavioral control “refers to the perceived ease or difficulty of performing the behavior, and it is assumed to reflect past experience as well as anticipated impediments and obstacles” [37]. Purchase intention determines the real purchasing behavior of consumers [40]. Environmentally aware purchasers move towards actual purchasing, even paying a price premium for natural products [41].

2.3. Research Gaps and Problem Statement

2.3.1. Identification of Research Gaps

A critical review of research papers on the purchase of natural cosmetics led to the following observations:

- Much less research has been conducted to study the purchase behavior towards natural cosmetics of male consumers.
- There are fewer studies that have compared male consumers’ purchase behavior to female consumers’ purchase behavior towards natural cosmetics, and these studies are lacking in the Indian context.
- Comparative studies of male consumers’ vs. female consumers’ purchase behavior towards natural cosmetics using the theory of planned behavior are also lacking in the Indian context.

2.3.2. Problem Statement

The aim of this study was to identify the variables that determine men's and women's purchase intention and purchase behavior towards natural cosmetics in India, and to compare the differences between male and female consumers in the Indian context (Figure 1).

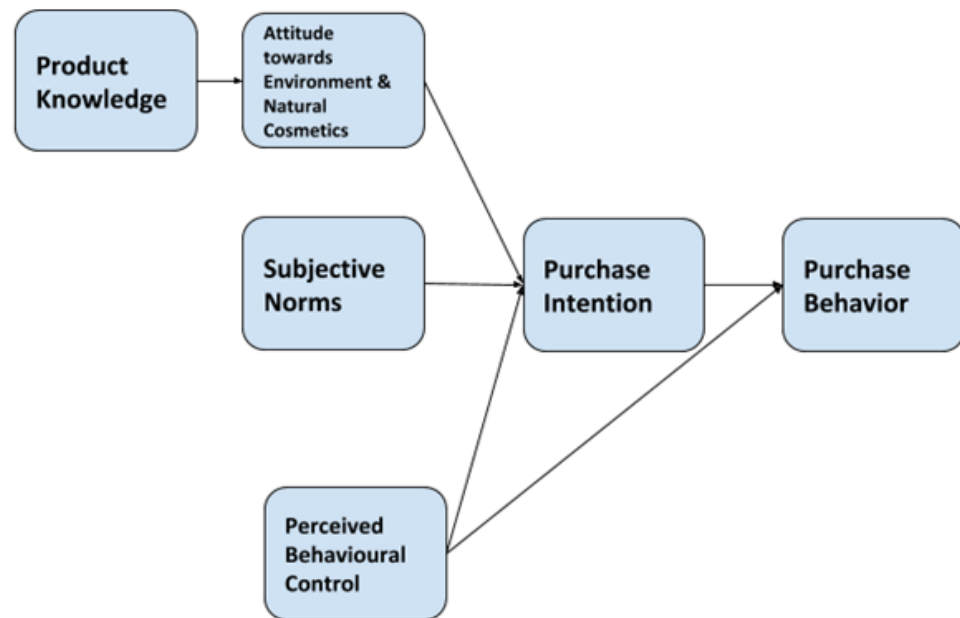


Figure 1. The conceptual model based on the theory of planned behavior.

3. Materials and Methods

Table 2 lists the objectives and appropriate methodology used in this study.

Table 2. Objectives and methodology table.

Research Objective Number	Statement of the Objective	Methodology	Resources Utilized
1.	To identify the variables that influence the purchase intention of both men and women towards natural cosmetics	Literature reviews	ABDC-listed journals' research papers found on Scopus Index, Emerald Insight, Research Gate, Wiley's Online Library, and Google Scholar
2.	To explore the relationship between variables that influence purchase intention and purchase behavior (of both men and women)	Structural equation modeling	SmartPLS
3.	To compare the purchase intention and purchase behavior of men and women towards natural cosmetics	Multi-group analysis using bootstrapping	SmartPLS
4.	To adopt a model for the purchase intention and purchase behavior of men and women	Findings from Objective 3	SmartPLS

Objectives

Objective RO1: To identify the variables that influence the purchase intention of both men and women towards natural cosmetics.

Objective RO2: To explore the relationship between variables that influence the purchase intention and purchase behavior of male and female consumers.

Objective RO3: To compare the purchase intention and purchase behavior of male and female consumers towards natural cosmetics.

Objective RO4: To adopt a model for the purchase intention and purchase behavior of male and female consumers.

Identified Variables: The identified variables were the variables belonging to each of the constructs to be measured in the theory of planned behavior. The independent variables were those belonging to the constructs (a) Attitude towards Environment, (b) Attitude towards Natural Cosmetics, (c) Perceived Behavioral Control, (d) Product Knowledge, and (e) Subjective Norms.

The dependent variables belonged to the constructs (a) Purchase Behavior and (b) Purchase Intention.

Hypothesis Development: The hypotheses were developed based on the theory of planned behavior, focusing on relationships between the independent variables (groups of variables constituted the factors), i.e., the relationship between Attitude towards Environment and Purchase Intention and Purchase Behavior; the relationship between Product Knowledge and Purchase Intention and Purchase Behavior; the relationship between Subjective Norms and Purchase Intention and Purchase Behavior; the relationship between Perceived Behavioral Control and Purchase Intention and Purchase Behavior; and the relationship between Purchase Intention and Purchase Behavior. These hypotheses were tested for men and women separately. Table 3 lists the hypotheses that were tested.

Pilot Study: A pilot study was conducted on 40 respondents to obtain an insight into the possible results. It was based on the conceptual model formed in the above figure. A five-point Likert scale was used in the survey, and the questions were segregated based on the variables. Cronbach's alpha for the pilot study was 0.899.

Survey Design: An online survey was distributed to 30 consumers. This survey measured the key factors that have an impact on purchase behavior towards natural cosmetics. The target audience was consumers, but emphasis was placed on keeping the samples equally distributed between male and female consumers above 25 years of age.

Main Study: The survey data were collected through an electronic survey method. Through the convenience sampling method, the total number of respondents for this survey was 335. Responses were taken from several major cities in the country to improve the generalizability of the data.

Description of respondents: A total of 54.6% of the respondents were women, and 45.4% were men; 43.9% of the respondents were married, while 56.1% were single; 26.9% of the respondents were aged above 35, being the majority of the respondents, whereas only 9.3% were between 30 and 35 years of age, while 22.4% of the respondents were aged between 26 and 30, and 26.3% of the respondents were aged between 22 and 26. Out of 335 respondents who completed the survey, only 7.8% of the respondents were not aware of natural cosmetics. The remaining 92.2% were aware of natural cosmetics. A total of 79.4% of the respondents said they used natural cosmetics, whereas 20.6% said they did not use natural cosmetics. Only 2.4% would pay more than USD 38 on natural cosmetics, while 5.2% said they would pay between USD 25 and USD 38, 24.4% said they would pay between USD 12 and USD 25, 35.5% said they would pay between USD 6 and USD 12, and 32.4% were willing to pay up to only USD 6.

Questionnaire Design: The first part consisted of demographics: gender, age, occupation, location, and monthly income. The second part consisted of questions regarding the price one is willing to pay for natural cosmetics per month. The third part consisted of five-point Likert scale questions of variables belonging to constructs of the theory of planned behavior (Figure 1). The scales were measured from strongly agree (5) to strongly disagree (1).

Table 3. Tested hypotheses.

RO	Hypothesis	Relationship	Hypotheses
RO2	H1	Attitude towards Environment and Natural Cosmetics	H ₀ = Attitude towards Environment and Natural Cosmetics does not have a positive and significant relationship with the Purchase Intention of male and female consumers H ₁ = Attitude towards Environment and Natural Cosmetics has a positive and significant relationship with the Purchase Intention of male and female consumers
RO2	H2	Attitude towards Environment and Natural Cosmetics	H ₀ = Attitude towards Environment and Natural Cosmetics does not have a positive and significant relationship with the Purchase Behavior of male and female consumers H ₁ = Attitude towards Environment and Natural Cosmetics has a positive and significant relationship with the Purchase Behavior of male and female consumers
RO2	H3	Product Knowledge	H ₀ = Product Knowledge does not have a positive and significant relationship with Attitude towards Environment and Natural Cosmetics and PCP of male and female consumers H ₁ = Product Knowledge has a positive and significant relationship with Attitude towards Environment and Natural Cosmetics and PCP of male and female consumers
RO2	H4	Product Knowledge	H ₀ = Product Knowledge does not have a negative and significant relationship with the Purchase Intention of male and female consumers H ₁ = Product Knowledge has a negative and significant relationship with the Purchase Intention of male and female consumers
RO2	H5	Product Knowledge	H ₀ = Product Knowledge does not have a negative and significant relationship with the Purchase Behavior of male and female consumers H ₁ = Product Knowledge has a negative and significant relationship with the Purchase Behavior of male and female consumers
RO2	H6	Subjective Norms	H ₀ = Subjective Norms does not have a positive and significant relationship with the Purchase Intention of male and female consumers H ₁ = Subjective Norms has a positive and significant relationship with the Purchase Intention of male and female consumers
RO2	H7	Subjective Norms	H ₀ = Subjective Norms does not have a positive and significant relationship with the Purchase Behavior of male and female consumers H ₁ = Subjective Norms has a positive and significant relationship with the Purchase Behavior of male and female consumers
RO2	H8	Perceived Behavioral Control	H ₀ = Perceived Behavioral Control does not have a positive and significant relationship with the Purchase Intention of male and female consumers H ₁ = Perceived Behavioral Control has a positive and significant relationship with the Purchase Intention of male and female consumers
RO2	H9	Perceived Behavioral Control	H ₀ = Perceived Behavioral Control does not have a positive and significant relationship with the Purchase Behavior of male and female consumers H ₁ = Perceived Behavioral Control has a positive and significant relationship with the Purchase Behavior of men and women
RO2	H10	Purchase Intention	H ₀ = Purchase Intention does not have a positive and significant relationship with the Purchase Behavior of male and female consumers H ₁ = Purchase Intention has a positive and significant relationship with the Purchase Behavior of male and female consumers

The hypothesis results (Table 4) show the following:

- (a) For both male and female consumers, PK (Product Knowledge) and PBC (Perceived Behavioral Control) had a significant positive impact on PI (Purchase Intention), which proves that knowledge about the products leads to purchase behavior itself. Similarly, Perceived Behavioral Control (PBC) and Attitude towards Environment and Natural Cosmetics (AE and AN) both had a significant impact on male and female consumers.
- (b) Subjective Norms did not have a significant impact on the Purchase Intention of both male and female consumers.
- (c) Attitude towards Environment and Natural Cosmetics (AE and AN) had a direct and positive impact on the Purchase Intention, and an indirect effect on the Purchase Behavior, of both male and female customers.
- (d) Product Knowledge (PK) had an indirect effect on Purchase Intention and Purchase Behavior through Attitude towards Environment and Natural Cosmetics.
- (e) Perceived Behavioral Control had a direct and positive impact on the Purchase Intention and Purchase Behavior of both male and female customers.
- (f) Subjective Norms did not have a direct or indirect significant impact on the Purchase Intention of both male and female customers.

Table 4. Hypothesis results.

RO3	Dependent Construct	Hypothesis	p and β Values	Inference
RO3	H1 Product Knowledge \geq Attitude towards Environment and Attitude towards Natural Cosmetics (Women)	H ₀ = Product Knowledge does not have a significant relationship with the Attitude towards Environment and Natural Cosmetics of female consumers H ₁ = Product Knowledge has a significant relationship with the Attitude towards Environment and Natural Cosmetics of female consumers	$\beta = 0.541$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Product Knowledge has a significant impact on the Purchase Intention of female consumers
RO3	H2 Product Knowledge \geq Attitude towards Environment and Attitude towards Natural Cosmetics (Men)	H ₀ = Product Knowledge does not have a significant relationship with the Attitude towards Natural Cosmetics of male consumers H ₁ = Product Knowledge has a significant relationship with the Attitude towards Natural Cosmetics of male consumers	$\beta = 0.601$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Product Knowledge has a significant impact on the Purchase Intention of male consumers
RO3	H3 Perceived Behavioral Control \geq Purchase Behavior (Women)	H ₀ = Perceived Behavioral Control does not have a significant relationship with the Purchase Behavior of female consumers H ₁ = Perceived Behavioral Control has a significant relationship with the Purchase Behavior of female consumers	$\beta = 0.449$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Perceived Behavioral Control has a significant impact on the Purchase Behavior of female consumers

Table 4. Cont.

RO3	Dependent Construct	Hypothesis	p and β Values	Inference
RO3	H4 Perceived Behavioral Control \geq Purchase Behavior (Men)	H ₀ = Perceived Behavioral Control does not have a significant relationship with the Purchase Behavior of male consumers H ₁ = Perceived Behavioral Control has a significant relationship with the Purchase Behavior of male consumers	$\beta = 0.480$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Perceived Behavioral Control has a significant impact on the Purchase Behavior of male consumers
RO3	H5 Attitude towards Environment and Natural Cosmetics \geq Purchase Intention (Women)	H ₀ = Attitude towards Environment and Natural Cosmetics does not have a significant relationship with the Purchase Intention of female consumers H ₁ = Attitude towards Environment and Natural Cosmetics has a significant relationship with the Purchase Intention of female consumers	$\beta = 0.441$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Attitude towards Environment has a significant impact on the Purchase Behavior of female consumers
RO3	H6 Attitude towards Environment and Natural Cosmetics \geq Purchase Intention (Men)	H ₀ = Attitude towards Environment and Natural Cosmetics does not have a significant relationship with the Purchase Behavior of male consumers H ₁ = Attitude towards Environment and Natural Cosmetics has a significant relationship with the Purchase Behavior of male consumers	$\beta = 0.272$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Attitude towards Environment has a significant impact on the Purchase Behavior of male consumers
RO3	H7 Purchase Intention \geq Purchase Behavior (Women)	H ₀ = Purchase Intention does not have a significant relationship with the Purchase Behavior of female consumers H ₁ = Purchase Intention has a significant relationship with the Purchase Behavior of female consumers	$\beta = 0.402$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Purchase Intention has a significant impact on the Purchase Behavior of female consumers
RO3	H8 Purchase Intention \geq Purchase Behavior (Men)	H ₀ = Purchase Intention does not have a significant relationship with the Purchase Behavior of male consumers H ₁ = Purchase Intention has a significant relationship with the Purchase Behavior of male consumers	$\beta = 0.341$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Purchase Intention has a significant impact on the Purchase Behavior of male consumers
RO3	H9 Perceived Behavioral Control \geq Purchase Intention (Women)	H ₀ = Perceived Behavioral Control does not have a significant relationship with the Purchase Intention of female consumers H ₁ = Perceived Behavioral Control has a significant relationship with the Purchase Intention of female consumers	$\beta = 0.349$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Perceived Behavioral Control has a significant impact on the Purchase Intention of female consumers

Table 4. Cont.

RO3	Dependent Construct	Hypothesis	p and β Values	Inference
RO3	H10 Perceived Behavioral Control \geq Purchase Intention (Men)	H ₀ = Perceived Behavioral Control does not have a significant relationship with the Purchase Intention of male consumers H ₁ = Perceived Behavioral Control has a significant relationship with the Purchase Intention of male consumers	$\beta = 0.525$ p -value = 0.000	H ₀ is rejected H ₁ is accepted: Perceived Behavioral Control has a significant impact on the Purchase Intention of male consumers
RO3	H11 Subjective Norms \geq Purchase Intention (Women)	H ₀ = Subjective Norms does not have a significant relationship with the Purchase Intention of female consumers H ₁ = Subjective Norms has a significant relationship with the Purchase Intention of female consumers	$\beta = 0.112$ p -value = 0.185	H ₁ is rejected H ₀ is accepted: Subjective Norms does not have a significant impact on the Purchase Intention of female consumers
RO3	H12 Subjective Norms \geq Purchase Intention (Men)	H ₀ = Subjective Norms does not have a significant relationship with the Purchase Intention of male consumers H ₁ = Subjective Norms has a significant relationship with the Purchase Intention of male consumers	$\beta = 0.086$ p -value = 0.366	H ₁ is rejected H ₀ is accepted: Subjective Norms does not have a significant impact on the Purchase Intention of male consumers

4. Results

In the first objective, the variables were identified from the literature, which specifically belonged to constructs of the theory of planned behavior.

In the second objective, the relationships between variables that influenced the purchase intention and purchase behavior of male and female consumers were studied using the theory of planned behavior (TPB) and by testing the TPB using structural equation modeling (Figure 2).

Relevant hypotheses were tested using SEM through SmartPLS 3.0. The relationships between the variables were tested to see if they were significant. After the hypotheses were tested, they were used to create the final model for purchase intention.

It was found that Subjective Norms did not have a positive and significant impact on Purchase Intention. Attitude towards Environment, Attitude towards Natural Cosmetics, Product Knowledge, and Perceived Behavioral Control had a positive and significant impact on Purchase Intention. It was also observed that Product Knowledge had an indirect effect on Purchase Intention through Attitude towards Environment and Attitude towards Natural Cosmetics. Attitude towards Environment and Attitude towards Natural Cosmetics did not directly have a significant relationship with Purchase Behavior; however, they did indirectly affect Purchase Behavior through Purchase Intention.

Regarding the third objective, for both men and women, Attitude towards Environment, Attitude towards Natural Cosmetics, Perceived Behavioral Control, and Product Knowledge had a significant impact on Purchase Intention, whereas Subjective Norms did not have a significant impact on Purchase Intention. Hence, it can be observed that there were no significant differences between men and women in terms of their purchase intention and its antecedents.

The fourth objective was to adopt a model for purchase intention and purchase behavior for male and female consumers.

Figure 2 provides the modeling details, and Table 5 describes the nature of the relationships between variables. We observed that there were no significant differences in the relationships between variables when compared between men and women.

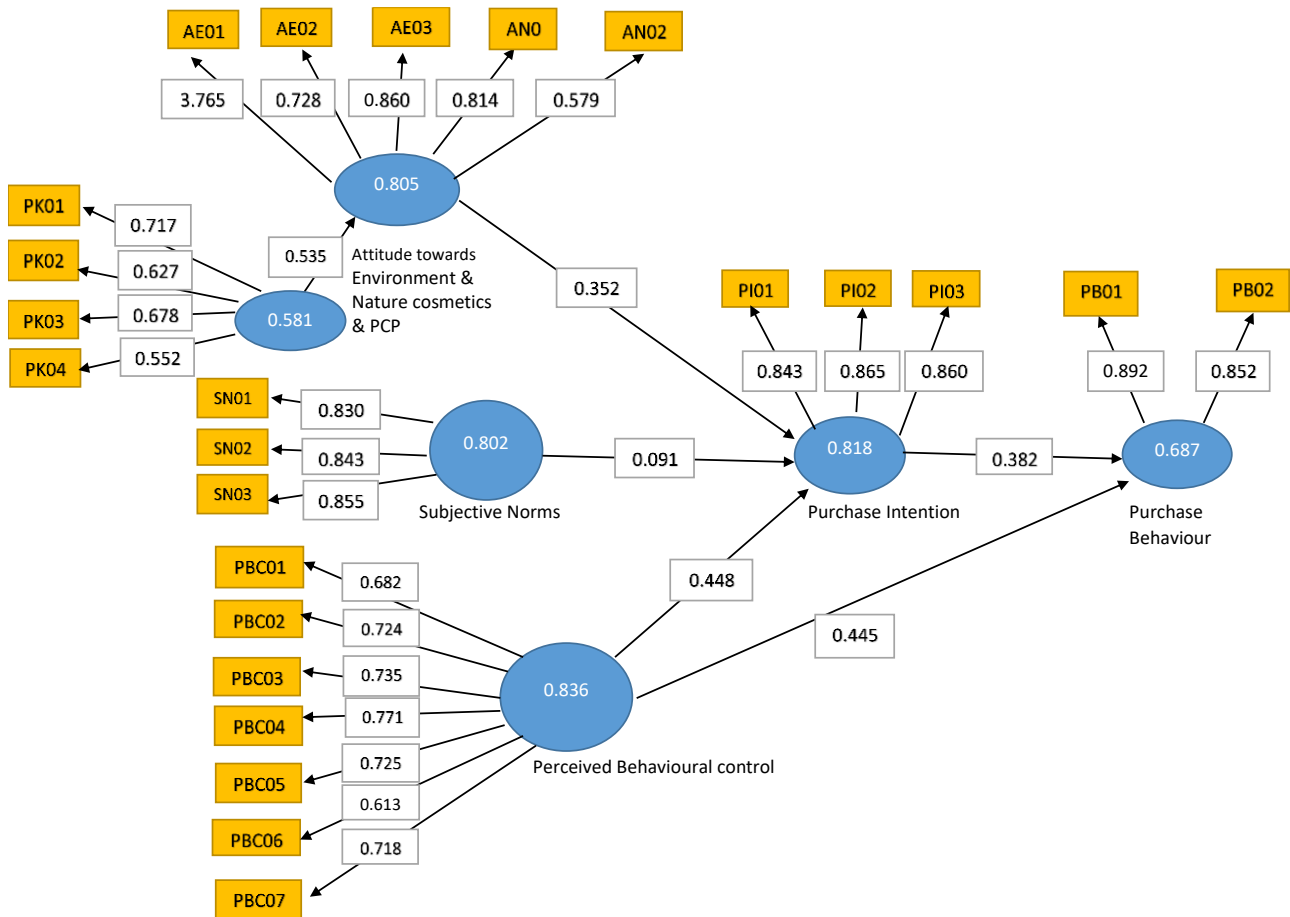


Figure 2. Structural model constructed using SmartPLS.

Table 5. Comparison of results between men and women.

Objective	Results	
	Men	Women
RO4	Attitude towards Environment, Attitude towards Natural Cosmetics, Product Knowledge, and Perceived Behavioral Control had a significant relationship with Purchase Intention. Subjective Norms did not positively influence Purchase Intention. Product Knowledge positively influenced Attitude towards Environment and Attitude towards Natural Cosmetics. Perceived Behavioral Control and Purchase Intention positively influenced Purchase Behavior. Purchase Intention positively influenced Purchase Behavior.	Attitude towards Environment, Attitude towards Natural Cosmetics, Product Knowledge, and Perceived Behavioral Control had a significant relationship with Purchase Intention. Subjective Norms did not positively influence Purchase Intention. Product Knowledge positively influenced Attitude towards Environment and Attitude towards Natural Cosmetics. Perceived Behavioral Control and Purchase Intention positively influenced Purchase Behavior. Purchase Intention positively influenced Purchase Behavior.

5. Discussions

The results indicate that there were no major differences in the attitude of male and female consumers towards purchase intentions regarding natural cosmetics. The findings of this research show that there was a positive influence of Attitude towards the Environment and Natural Cosmetics on the Purchase Intention and, consequently, the Purchase Behavior of both men and women. Attitude towards purchase intention tends to bring out the purchase behavior according to the attitude itself. Therefore, this behavior must be encouraged further. Moreover, it was revealed that there was also a positive influence of Perceived Behavioral Control on natural cosmetics purchase behavior. According to the theory of planned behavior, perceived behavioral control affects both behavioral intention and natural cosmetics purchase behavior.

It can also be concluded that Perceived Behavioral Control had an impact on Purchase Intention directly as well as indirectly. Product Knowledge had an indirect impact on Purchase Intention through Attitude towards Environment and Natural Cosmetics, and it had an indirect impact on Purchase Behavior through Purchase Intention. It was found that Perceived Behavioral Control had a significant impact on Purchase Intention and Purchase Behavior. Subjective Norms was the only factor that did not have a significantly positive impact on the Purchase Intention and Purchase Behavior of both male and female consumers.

However, in earlier research [38–40], subjective norms played an influential role in natural cosmetics purchase behavior. However, in this research, Product Knowledge about natural cosmetics had a direct and indirect influence on Attitude towards Natural Cosmetics, which, in turn, indicates that knowledge about natural cosmetics has already shaped the attitude of consumers towards favorable purchases. Perceived Behavioral Control also directly influenced Purchase Intention and Purchase Behavior, thereby indicating that the previously experienced ease of using natural cosmetics influences behavior. Hence, it is likely that acquired knowledge and experience in using natural cosmetics and the influence of friends, relatives, and peer groups may not play an influential role in consumers' purchase behavior.

The results show that there was not much difference in male and female consumers' purchase intention and purchase behavior towards natural cosmetics. Both male and female consumers had a positive attitude towards cosmetics made of natural ingredients. The survey found that both male and female consumers like purchasing natural cosmetics.

Research comparing men and women in Spain in terms of using natural cosmetics is scant. However, similar research on the purchase of organic foods that studied demographic characteristics revealed that men are willing to pay a higher price for organic foods than women, even though women exhibit a more favorable attitude than men towards the purchase of organic foods [42].

In a study in Northern Ireland, it was found that price and availability were the barriers to purchasing organic foods [43].

Similarly, the major barrier to purchasing organic food products among Swedish consumers was price [44].

In our research on natural cosmetics, the respondents (samples) were 56.5% women and 45.4% men. The majority of the respondents belonged to the working age group of 22 years of age and above, 79.4% had already started using natural cosmetics, and 67.9% were willing to pay between USD 6 and USD 25. From these observations, we can safely assume that price is not a barrier to purchasing natural cosmetics for both women and men, and that their attitude towards natural cosmetics is not very different; the same applies to other explaining factors that do not result in significant differences between their purchase intentions and purchase behavior.

6. Conclusions

Observations of women consumers: Attitude towards Environment had a significant impact on Purchase Intention and Purchase Behavior towards natural cosmetics. Women

are driven by ecological concerns, and they are more inclined to purchase natural products if they know that doing so will benefit the environment. Product Knowledge had a significant indirect impact on Purchase Intention through Attitude towards Environment and Natural Cosmetics. Knowledge about natural cosmetics will create a favorable attitude towards the purchase intention that leads to purchase behavior for women consumers. Female consumers are not influenced by their significant other/family/friends.

Observations of men consumers: Attitude towards Environment had a significant impact on Purchase Intention and Purchase Behavior towards natural cosmetics. Men are driven by ecological concerns, and they are more inclined to purchase natural products if they know that doing so will benefit the environment. Product Knowledge had a significant indirect impact on Purchase Intention through Attitude towards Environment and Natural Cosmetics. Knowledge about natural cosmetics will create a favorable attitude towards the purchase intention that leads to purchase behavior for male consumers. Male consumers are not influenced by their significant other/family/friends. It was observed that men and women did not differ in the variables influencing Purchase Intention and Purchase Behavior towards natural cosmetics.

Natural cosmetics companies can review these results, place more emphasis on creating greater awareness about natural cosmetics and their benefits among consumers directly, and actively propagate environmental concerns among their male and female customers, which can lead to the strengthening of purchase intentions and hence positively influence purchase behavior.

7. Limitations

In this study, the respondents were from various regions in India. Future research could consider a larger sample that is a true representation of the population of cosmetics users in India.

Other variables such as education and income levels can be checked for their moderation effects on purchase behavior towards natural cosmetics.

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