

# Mediating Role of Cultural Influence Between Green Value Consciousness and Purchase Intention Towards Herbal Skin Care Products

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## Abstract

**Purpose:** This study examines the mediating role of cultural influences between green value consciousness and purchase intention towards herbal skin care products.

**Research Methodology:** Descriptive and hypothesis testing research design is used through a survey method using a designed questionnaire; primary data was collected from 300 consumers of herbal skin care products residing in Delhi/NCR. The study used regression estimates to measure the impacts and measurement model for Confirmatory factor analysis (CFA), followed by testing research hypotheses based on the results of the structural model.

**Findings:** It reported that there is a positive significant relationship between green value consciousness and purchase intention, between green value consciousness and the role of Cultural influence, and between the role of Cultural influence and purchase intention. Based on the results, it is revealed that Cultural influence partially mediates between green value consciousness and purchase intention.

**Practical implications** - The brand managers should use the green value of products and Cultural influence for massive awareness, promotion, and branding to make a brand of herbal skin care products.

**Originality/value** – This study contributes to the facts and theoretical discussion on the cultural influence on green value consciousness and buying intention.

**Keywords** – Green value consciousness, Purchase intention, Cultural influence, Mediation, Herbal Skincare, National Capital Region (NCR)

## 1. Introduction

Indian customers are becoming increasingly aware of the benefits of sustainable practices and environmentally friendly behaviour, partly due to the features of an expanding young population and their education level. These key indicators have created new opportunities for green behavioural research in India on par with global green consumerism (Jain & Kaur, 2004; Datta, 2011; Paul et al., 2016; Yadav & Pathak, 2016; and Prakash and Pathak, 2017). Although consumer awareness of the environment is expanding, and they act in ways that support the environment, the demand for environmentally friendly products is lower than anticipated (Lai & Cheng, 2016).

Consumption levels that are not globally sustainable lead to major environmental sustainability issues like global warming, water, air, land pollution, and waste production. These issues compel society to change its accustomed consumption and purchase habits to achieve environmental sustainability. A green product is one that is environmentally conscious and is built to have as little of an impact as possible on the environment during its entire life cycle, even after it has served its original purpose. The emphasis on minimizing waste and maximizing resource efficiency distinguishes green products. They are made using non-toxic materials and with the environment in mind.

Today's green value consciousness places a greater emphasis on drawing attention and luring customers. Instead of just concentrating on promoting their products, green value consciousness has adopted a new form that places more emphasis on the user. Every brand strives to stay competitive by utilizing the highest levels of innovation, connectivity to the public, and developing a strong brand identity.

According to India Brand Equity Foundation (2020), "The market for medical plants in India stood at Rs. 4.2 billion (US\$ 56.6 million) in 2019 and is expected to increase at a CAGR 38.5% to Rs. 14 billion (US\$ 188.6 million) by 2026. The total world herbal trade is currently assessed at US\$ 120 billion. India's share in the global export of herbs and herbal products is low due to unsophisticated agricultural and quality control procedures, lack of processing, research & development, standardisation in products and regulatory framework in trade of medicinal plants". According to Precedence Research (n.d.), "The global herbal beauty products market size was estimated at US\$ 83.52 billion in 2021 and is expected to hit US\$ 130.2 billion by 2030, foreseen to register a growth at a CAGR of 5.06% during the forecast period 2022 to 2030".

Environmental awareness has notably risen in recent years all around the world. According to recent studies, people prioritize environmental issues over healthcare and unemployment as top societal concerns (Paetz et al., 2012). One of the most practical and efficient ways to stop environmental destruction is by buying green products (Mont & Plepys, 2008; Ritter, Borchardt, Vaccaro, Pereira, & Almeida, 2015). This study analyses the mediating role of cultural influences on the relationship between green value consciousness and purchases intention towards herbal skin care products.

## 2. Literature Review

### 2.1 *Green value consciousness and purchase intention*

According to Kotler and Keller (2011), "consumer buying behaviour is the study of how people, groups, and organisations buy and use goods, services, thoughts, or experiences to satisfy their needs and wants."

Investigating the factors that influence customers' green purchasing behaviour has grown in popularity as a study subject because of the significance of the growing size of green consumption. Researchers have devoted more time to studying customers' intentions to make green purchases because this is the most significant predicting indicator for green purchasing behaviour (Chan, 2001; Wang et al., 2016).

It is notable that environmental awareness has a significant impact on encouraging the intention to make green purchases (Tanner & Kast, 2003; Wang, Liu, & Qi, 2014).

It has been discovered that the aim of making green purchases is fundamentally tied to the harmony between nature and humanity (Chan, 2001; Wang et al., 2016).

The term "green purchasing behaviour" refers especially to buying goods that are beneficial to and kind to the environment but also recyclable and reusable (Mostafa, 2007).

Products that are produced, used, and disposed of according to the principles of sustainable development are referred to as "green products" (Maichum, Parichatnon, & Peng, 2016).

Green products can also include items created to preserve natural resources and minimize the production of waste, hazardous substances, or pollution (Ottman, Stafford, & Hartman, 2006).

The theory of reasoned action and the theory of planned behaviour, two traditional theories on consumer behaviour, define intention as a conscious plan of action that precisely calls for motivation and behaviour to attain a certain goal (Ajzen, 1985, 1991; Patch, Tapsell, & Williams, 2005).

Numerous researchers have found that customers' green purchasing behaviour may be accurately described by their intention to make green purchases (Chan, 2001; Maichum et al., 2016; Soyeze, 2012). In particular, green purchasing intention is the drive a customer has to make conscious decisions or plans to engage in green purchasing behaviour (Chan, 2001; Lee et al., 2015).

The percentage of consumers who have, at one point or another, purchased a green product has risen to more than 50%, according to a global poll done by Manget, Roche, and Münnich in 2009. In recent years, markets have shifted greatly due to environmentally conscious consumers (Sonnenberg, Erasmus, & Schreuder, 2014). In response to this shift in consumer priorities, both producers and retailers have begun to sell green products in an effort to boost their competitiveness (Soyez, 2012).

Based on the above literature evidence, it is important to propose the first hypothesis of this study-

**H1:** A positive significant relationship exists between green value consciousness and purchase intention towards herbal skin care products.

### 2.2 *Green value consciousness and cultural influences*

According to Ogiemwonyi, Harun, Alam, and Othman (2020), empirical evidence demonstrates the considerable influence of green environmental awareness, green product value, and environmental attitude on green culture.

The degree to which human beings relate to technology and the environment and hold certain values, conventions, and attitudes can be used to analyse green culture from a sociological perspective (Altman, 1980; Ermolaeva, 2010; Yang et al., 2017). Numerous studies have demonstrated the significance of green culture in behavioural theories anchored in psychology, which are strongly influenced by cultural values. This relationship has been researched and included in numerous levels of social study (Kluckhohn & Strodtbeck, 1961; Chan & Lau, 2000; Ermolaeva, 2010; Lee, 2017; Yang et al., 2017; Sreen et al., 2018; Gurbuz & Ozkan, 2019).

Based on the above discussion, the second hypothesis is proposed:

**H2:** There is a positive significant relationship between green value consciousness and cultural influences with herbal skin care products.

### 2.3 *Cultural influence and purchase intention*

Sheng, Xie, Gong, and Pan (2019) reported a positive and significant influence of Chinese cultural values on green purchasing intention.

Studies have shown that cultural beliefs influence consumer behaviour when purchasing environmentally friendly products (Cordano et al., 2011; Deng et al., 2006; Riley, Kohlbacher, & Hofmeister, 2012). Additionally, research has revealed that consumers' lifestyles are firmly ingrained in their cultural values (Lee et al., 2015; Nordlund & Garvill, 2002;

Stern et al., 1993). Lifestyle can therefore explain the intricate patterns of consumer behaviour. Changing to green shopping habits unavoidably necessitates a consumer's transition to an environmentally conscious way of living (Georg, 1999; Sanne, 2002).

Individual consumers' environmentally conscious purchase behaviour is significantly influenced by cultural beliefs (Cordano et al., 2011; Soyez, 2012). According to Nguyen et al. (2017), customers' intentions to buy environmentally friendly items are significantly influenced by their long-term outlook and collectivist cultural norms. A human-nature perspective and collectivist beliefs have also been shown by Wang et al. (2016) to play a role in determining consumers' intentions to make environmentally responsible purchases.

According to earlier research, examining consumers' values and lifestyles can help us better understand why they choose to buy environmentally friendly items (Brunso et al., 2004; Harcar & Kaynak, 2008).

Based on the support of research, the third hypothesis of this study is proposed:

**H3: A positive significant relationship exists between cultural influences and purchase intention towards herbal skin care products.**

#### ***2.4 Mediating role of cultural influences***

Environmental psychologists have discovered that environmental awareness influences the link between values and intention (Fraj-Andrés & Martínez-Salinas, 2007; Tarrant et al., 1997).

According to Hasnain, Raza, and Qureshi (2020), ecolabels and environmental attitudes significantly influence consumers' intentions to make green purchases.

The integrated approach was supported by Zaremohzzabieh, Ismail, Ahrari, and Samah (2021), who also illustrated the function of consumer attitudes as mediators in the growth of green purchase intent.

According to Lavuri, Jusuf, and Gunardi (2021), subjectivity norms (S.N.s) were not significantly correlated with plans to make green purchases (GPI). The GPI was significantly impacted by variables like media exposure (M.E.), environmental concern (E.C.), environmental knowledge (E.K.), environmental attitude (E.A.), and perceived behavioural control (PBC).

According to Majeed, Aslam, Murtaza, Attila, and Molnár (2022), using green marketing strategies considerably and favourably impacts consumers' intent to make eco-friendly purchases. We found that green brand perception and consumer environmental sentiments significantly affected the path coefficient between green marketing strategies and green purchase intentions.

Based on the above discussion, it reported that mediating role of cultural influence is a gap in the literature, thereby the fourth hypothesis of this study is proposed.

**H4: Cultural influence is mediating between green value consciousness and purchase intention.**

### **3. Research Methodology**

#### **3.1 Proposed alternate hypothesis**

H1: There is a positive significant relationship between green value consciousness and purchase intention

H2: Green value consciousness and cultural influences have a positive significant relationship.

H3: Cultural influences and purchase intention have a positive significant relationship.

H4: Cultural influence is mediating between green value consciousness and purchase intention.

#### ***3.2 Research design and methods***

The present study used a quantitative research method with descriptive and hypothesis testing research design. Primary data collection is with 300 users of herbal skin care products who live in Delhi/NCR using a well-developed questionnaire using convenient sampling methods. This data collection is done one time only, being a cross-sectional study. Data analysis is done with the help of statistical software SPSS 21 and Amos 21.

### **4. Instruments used for study variables:**

**4.1 Green value consciousness:** This measure has six items. This instrument is taken from the study of Haws, Winterich, and Naylor (2014). Green Consumer Values are assessed based on whether a consumer prefers using herbal skin care products because they have a low potential for harm to the environment, buys mostly out of concern for the environment, uses the planet's resources sparingly, considers buying herbal skin care products to be an environmentally responsible behaviour, and is willing to put up with any inconvenience in order to buy environmentally friendly products.

**4.2 Purchase intention:** Purchase intention was measured based on the studies by Pavlou (2003). It has six items. Purchase Intention includes plans to buy more herbal skin care products in the coming six months and beyond, recommend herbal skin care products to others, actively look for herbal skin care products in the store, buy an item when it finds something like that, and intend to keep a long-term relationship with herbal skin care products.

**4.3 Cultural influence:** This is also having six items and developed from the study of Homer and Kahle (1988). Cultural influences on the use of herbal skin care products are assessed in terms of personal cultural guidance, cultural traditions,

a sense of cultural connection during purchases, respect for the desire of the majority or subculture to use herbal skin care products, group support, and group harmony.

## 5. Data analysis and interpretations

### 5.1 Sample description

It is important to introduce sample composition to understand respondents better, and the results are presented in Table 1. The sample is described in terms of gender, age, education, occupation, annual income, and marital status.

**Table 1.** Sample Description

<b>Gender</b>	Frequency	Percent	Cumulative Percent
Female	123	41.0	41.0
Male	177	59.0	100.0
Total	300	100.0	
<b>Age</b>	Frequency	Percent	Cumulative Percent
21-30 years	50	16.7	16.7
31 – 40 years	98	32.7	49.3
41 – 50 years	89	29.7	79.0
51 years – 60 years	33	11.0	90.0
61 years and above	30	10.0	100.0
Total	300	100.0	
<b>Education</b>	Frequency	Percent	Cumulative Percent
Higher Secondary	48	16.0	16.0
Graduation	163	54.3	70.3
Post Graduation	89	29.7	100.0
Total	300	100.0	
<b>Occupation</b>	Frequency	Percent	Cumulative Percent
Service	119	39.7	39.7
Business	34	11.3	51.0
Homemaker	50	16.7	67.7
Self Employed	53	17.7	85.3
Retired	44	14.7	100.0
Total	300	100.0	
<b>Annual Income</b>	Frequency	Percent	Cumulative Percent
Less than Rs.5, 00,000	53	17.7	17.7
Rs.5, 00,001 – 10, 00, 000	89	29.7	47.3
Rs.10, 00,001 – 15, 00,000	73	24.3	71.7
Rs.15, 00,001 – 20, 00, 000	49	16.3	88.0
Rs.20, 00,000 and above	36	12.0	100.0
Total	300	100.0	
<b>Marital Status</b>	Frequency	Percent	Cumulative Percent
Unmarried	100	33.3	33.3
Married	122	40.7	74.0
Divorcee/ Single/Separated	78	26.0	100.0
Total	300	100.0	

From Table 1, it is reported that the sample is composed of 51% male and 49% female, the highest number of respondents are in the age group of 41-50, followed by 31-40, then below 30, while the least number of respondents in the age of above 61, majority of respondents are graduate followed by post-graduate then up to a higher secondary, highest number of respondents are in service followed by self-employed then homemakers, the highest number of respondents have income in the range of 5-10 Lakh followed by 10-15 Lakh then below 5 Lakh, and highest number of respondents are married followed by unmarried then Divorcee/ Single/Separated.

**5.2 Reliability, Descriptive statistics, and correlation coefficients of main variables**

A reliability test is conducted for internal consistency, statistics are reported in terms of mean and standard deviation, and the Pearson correlation coefficient for correlation and results are reported in Table 2.

**Table 2.** Reliability, Descriptive statistics, and correlation coefficients of main variables

Variables	Reliability		Correlations			Descriptive statistics		
	No. of items	Cronbach's Alpha	r	GVC	CI	PI	Mean	S.D.
GVC	6	0.781	r	1	.594**	.729**	3.348	0.902
CI	6	0.798	r		1	.662**	3.782	0.791
PI	6	0.877	r			1	3.671	0.862

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 [r= Pearson Correlation and N= 300]  
 Note: [Green Value Consciousness- GVC, Cultural Influence -CI & Purchase Intention- P.I.]

Table 2 shows that variables Green Value Consciousness and Cultural Influence have six items each. In comparison, Purchase Intention has only three items, and Cronbach’s alpha value ranges from .781 to .877, which is above the recommended value (more than .07) for highly reliable instruments (Cronbach, 1951). Each variables have a significant positive relationship with other variables, and the correlation coefficient varies from .594 to .729.

The highest mean is reported for cultural influence, followed by purchase intention, then green value consciousness.

**5.3 Measurement model**

The confirmatory factor analysis utilized for validity is the measurement model. As a result, it enables assessment of the indicators' factor loading on the independent construct. A model's fit can be estimated using the chi-square (2) value. A low and insignificant 2 is logically a positive indicator of model fit, according to (Hair, Black Babin, Anderson, & Tatham, 2006). As chi-square is particularly sensitive to data greater than 200, the two statistics are evaluated to determine the normed-2 or the ratio of 2 to the degree of freedom (df). It was claimed that a sensible good predictor of model fit is a value of 3 or less (Kline,1998). Another indicator of good model fit is the goodness-of-fit index (GFI). It is categorized as an absolute index, which substitutes the proposed model for the absence of any model (Hu & Bentler, 1995). GFI readings near 1.00 indicate an excellent match. CFI is a comparative indicator that evaluates the proposed model against a reference model. A CFI score of more than 0.9 indicates a better fit (Bentler, 1990). The root mean square error of approximation (RMSEA), the values between 0.08 and 0.10 predict a mediocre fit, values up to.08 predict a reasonable fit, and less than.06 show a perfect fit as it examines the difference between the observed and projected covariance matrices per degree of freedom. The study's model fit was evaluated following the abovementioned recommendations using various indices, including normed-2 (2/df), GFI, CFI, and RMSEA. To meet the condition of an indicator's suitability for a latent construct, the estimate must be statistically significant, at least at p .05. based on this circumstance.

**Table 3.** Summary of Measurement Model of study variables

Variables	P	$\chi^2$	df	$\chi^2/df$	GFI	CFI	TLI	RMSEA	RMR
Green Value Consciousness	.001	21.575	6	3.596	.978	.986	.965	.093	.028
Cultural Influence	.009	18.662	7	2.666	.980	.987	.972	.075	.027
Purchase Intention	.082	12.655	7	1.802	.986	.989	.976	.052	.014

[ Note – “GFI: Goodness of fit index, CFI: Comparative fit index, TLI: Tucker Lewis Index, RMSEA: Root Mean Square Error of Approximation, RMR: Root mean square residual”]

Green Value consciousness – this is a unidimensional construct with six items. The hypothesized model did not fit the data well according to the results of the CFA. Covariance is used between items of high modification, and a revised model is developed. The fit indices are as follows  $\chi^2=21.575$ ,  $\chi^2/df=3.596$ , GFI = .978, CFI = .986, TLI=.965,  $p < .05$  and RMSEA = .093, RMR=.028. The fit indices of the revised model show a reasonable and acceptable fit (table 3).

Cultural influence – this is a unidimensional construct with six items. The hypothesized model did not fit the data well according to the results of the CFA. Covariance is used between items of high modification, and a revised model is developed. The fit indices are as follows  $\chi^2=18.662$ ,  $\chi^2/df=2.666$ , GFI = .980, CFI = .987, TLI=.972,  $p < .05$  and RMSEA = .075, RMR=.027. The fit indices of the revised model show a reasonable and acceptable fit (table 3).

Purchase Intentions – this is a unidimensional construct with six items. The hypothesized model did not fit the data well according to the results of the CFA. Covariance is used between items of high modification, and a revised model is

developed. The fit indices are as follows  $\chi^2=12.655$ ,  $\chi^2/df= 1.802$ , GFI = .986, CFI = .989, TLI=.977,  $p >.05$  and RMSEA = .052, RMR=.014. The fit indices of the revised model show a reasonable and acceptable fit (table 3).

#### 5.4 Mediation analysis

The term "mediation effect" describes a situation that involves three or more variables and in which there is a basic relationship between all three. In this, an independent and dependent variable has a direct relationship. Additionally, there are indirect effects between a mediator and a dependent variable and between a mediator and an independent variable. The mediational effect is the degree to which the direct effect is altered by considering the mediating variable role of cultural influence.

Table 4 presents the regression results between green value awareness and purchase intentions. It is calculated to comprehend the impact of one or more criterion variables on the predictor (dependent variable) (independent variable). The examination of the role of cultural influence as a mediator between the input variable (green value consciousness) and the outcome variable is shown in the table below (purchase intentions).

**Table 4.** Regression Estimates Between green value consciousness and purchase intentions

Variable	Direction	Variable	Estimate	S.E.	C.R.	P
Purchase intentions	<---	Green value consciousness	0.951	0.068	13.888	***

The value of p and critical ratio in Table 4 shows that there is a significant impact of green value consciousness on purchase intention in direct relation. This confirms the acceptance of **hypothesis H1**, which states that there is a positive significant relationship between green value consciousness and purchase intention.

**Table 5.** Regression estimates among study variables in the presence of a Mediator

Variable	Direction	Variable	Estimate	S.E.	C.R.	P
Cultural influence	<---	Green value consciousness	0.655	0.068	9.655	***
Purchase intentions	<---	Green value consciousness	0.706	0.075	9.45	***
Purchase intentions	<---	Cultural influence	0.37	0.073	5.044	***

From Table 5, based on the value of p and critical ratio, it is reported that there is a significant impact of input variables (green value consciousness) on the outcome variable (purchase intention) with a mediator (cultural influence). It means all pair of relationships are significant in indirect effect. In the case of green value consciousness, it was reported that the value of the regression estimate had been lowered from .951 to 0.706, and the value of p is significant with a mediator,  $p=0.000$ . It shows and approves the partial *mediation* of cultural influence between green value consciousness and purchase intention. Therefore, the alternate **hypothesis H4** is accepted.

In the case of green value consciousness, the value regression estimate has been .706 ( $p<.01$ ). It shows that the green value consciousness is having positive significant ( $P<.01$ ) relation with cultural influence. Therefore, the alternate hypothesis **H2** is accepted.

In the case of cultural influence, the value regression estimate has been .370 ( $p<.01$ ). It confirms the positive significant relationship of cultural influence with purchase intention. Therefore, the alternate hypothesis **H3** is accepted.

#### 5.5 Hypotheses testing results

The hypothesis testing results are presented in Table 6. Model fit indices of direct (relationship between green value consciousness and purchase intentions without a mediator) and with the mediator in Table 7.

**Table 6.** Summary of hypothesis testing results

Outcome Variable	Direction	Explanatory Variable	Mediation	Inferences
Cultural influence	<---	Green value consciousness	With mediation	H2: supported
Purchase intention	<---	Cultural influence	With mediation	H3: Supported
Purchase intention	<---	Green value consciousness	With mediation	H1: supported
Purchase intention	<---	Green value consciousness	Without mediation	H1: supported
Cultural influence as a mediator				H4: Supported

The summary of hypothesis testing for the current study is presented in Table 6, demonstrating that all four original hypotheses were accepted. This study has demonstrated that cultural impact partially mediates purchase intention and awareness of environmental values.

**Table 7.** Model Fit Indices Summary of Structural Model with and without a Mediator

Variables	P	$\chi^2$	df	$\chi^2/df$	GFI	CFI	TLI	RMSEA	RMR
Model (without Mediator)	.000	69.244	23	3.011	0.952	0.975	0.961	.082	.038
Model (With Mediator)	.000	219.644	84	2.615	0.903	0.955	0.944	.073	0.061

[“GFI: Goodness of fit index, CFI: Comparative fit index, TLI: Tucker Lewis Index, RMSEA: Root Mean Square Error of Approximation, RMR: Root Mean-Square residual”]

Table 7, based on the values of fit indices summary of the structural model, reveals the acceptance of the model in direct relation between green value consciousness and purchase intention (without mediator), and values are reported as  $p < .01$ ,  $\chi^2 = 69.244$ , normed chi-square  $\chi^2/df = 3.011$ , GFI=0.952, CFI=0.975, TLI=0.961, RMSEA= .082 and RMR=.038. All the indices are in the acceptable range, which shows the acceptability of the model.

In the indirect relation between green value consciousness and purchase intention (with a mediator) cultural influence, the value of  $p < .01$ ,  $\chi^2 = 219.644$ , normed chi-square  $\chi^2/df = 2.615$ , GFI=0.933, CFI=0.955, TLI=0.944, RMSEA= .073 and RMR=.061. All the indices are in the acceptable range, showing the model's acceptability with mediator cultural influence.

### 6. Discussion and conclusions

The three variables—green value consciousness, purchasing intention, and cultural influence—were significantly correlated. There are four main theories in this study.

First, a strong correlation exists between purchasing intention and awareness of green values. This study shows a strong, positive correlation between green value consciousness and purchase intention.

The second theory is that cultural influence and green value consciousness have a favourable, significant link. This study demonstrates a positive correlation between cultural influence and green value consciousness.

The third theory held that cultural influence and buying intention have a positive, significant link. According to this study, there is a strong, positive correlation between cultural influence and purchasing intention.

The fourth theory holds that cultural factor somewhat mediate consumer intention and green value consciousness. This study has proven that cultural influence fully mediates buying intention and awareness of green values. According to the measurement and structural model indices, some cultural effects mediate the relationship between purchase intention and purchase value consciousness.

This study's results indicate a partially mediating impact of cultural influence between green value consciousness and buy intention, confirming the existence of cultural influences as a significant component of brand communication that affects purchase intention.

### 7. Recommendations

It is advised that brand managers exploit the consumer's affinity for green products to their advantage when introducing green-value products. The greatest reach and perceptibility with immediate results is provided by green value consciousness. Creating brand awareness for the product through creative content that promotes green values and immediately appeals to consumers' emotions.

Additionally, as cultural variables impact consumers' purchase intents, it is advised to employ them in the advertising, awareness-building, and branding herbal skin care products.

The researchers are strongly encouraged to build on this study for more research on herbal skin care products since technological capabilities, reach, and perceptibility of green value consciousness are improving daily due to new breakthroughs.

### 8. Limitations and future scope

Every study comes with some restrictions. Due to time constraints, this study only looked at a single measurement of herbal skin care items to test the mediating relationship between green value consciousness and purchase intention. The number of variables in the current study was set at three. The Survey has been the only instrument used to collect data. Only 300 people were included in the sample. The likelihood of several external factors influencing green value consciousness and buying intention is high. This research was limited to the Delhi/NCR region.

The study's future potential can be increased through qualitative and quantitative research. The indicators of the new findings might be improved if this study were expanded to include a larger sample size from numerous locations around Delhi/NCR. For a wider perspective, future research can be expanded to include more brands and industries connected to other cosmetics goods. More independent variables may be included in the same model to explore the impact on the outcome variable. If other pertinent and timely variables were included in the study, the current research may be examined more thoroughly.

## Reference

1. Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. Action control. Berlin, Germany: Springer. [https://doi.org/10.1007/978-3-642-69746-3\\_2](https://doi.org/10.1007/978-3-642-69746-3_2).
2. Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
3. Altman J. (1980). *Culture and environment*. Cambridge: Cambridge University Press, 1980.
4. Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
5. Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, 107(2), 238.
6. Bentler, P. M., & Hu, L. T. (1995). Evaluating model fit. *Structural equation modeling: Concepts, issues, and applications*, 76-99.
7. Brunsø, K., Scholderer, J., & Grunert, K. G. (2004). Closing the gap between values and behaviour: A means-end theory of lifestyle. *Journal of Business Research*, 57, 665–670. [https://doi.org/10.1016/S0148-2963\(02\)00310-7](https://doi.org/10.1016/S0148-2963(02)00310-7).
8. Chan R. Y., Lau L. B. (2000). Antecedents of green purchases: a survey in China. *Journal of Consumer Marketing* 2000:17(4):338–357. <https://doi.org/10.1108/07363760010335358>.
9. Chan R. Y., Lau L. B. (2000). Antecedents of green purchases: a survey in China. *Journal of Consumer Marketing* 2000:17(4):338–357. <https://doi.org/10.1108/07363760010335358>
10. Atul B. Kathole, Jayashree Katti, Dharmesh Dhabliya, Vivek Deshpande, Anand Singh Rajawat, S. B. Goyal, Maria Simona Raboaca, Traian Candin Mihaltan, Chaman Verma and George Suci, “Energy-Aware UAV Based on Blockchain Model Using IoE Application in 6G Network-Driven Cyberwin” *Energies* 2022, 15(21), 8304; <https://doi.org/10.3390/en15218304>. <https://www.mdpi.com/1996-1073/15/21/8304>
11. Chan, R. Y. K. (2001). Determinants of Chinese consumers' green purchase behaviour. *Psychology and Marketing*, 18, 389–413. <https://doi.org/10.1002/mar.1013>.
12. Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.
13. Datta, S. K. (2011). Pro-environmental concern influencing green buying: A study on Indian consumers. *International Journal of Business and Management*, 6(6), 124.
14. Ermolaeva P. (2010). College Students' Green Culture: Reflecting on the Ideal Types of Environmental Awareness and Behaviour Practices. *Raziskave in Razprave* 2010:49.
15. Gurbuz I. B., Ozkan G. (2019). What's Going On at The Universities? How Much Has the Research Revealed University Students' Attitudes Towards the Environment? A Case Study of Bursa, Turkey. *Applied Ecology and Environmental Research* 2019:17(2):5109–5138. [https://doi.org/10.15666/aeer/1702\\_51095138](https://doi.org/10.15666/aeer/1702_51095138)
16. Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis: Fifth Edition*, Prentice-Hall International Inc, NJ.
17. K. N. Vhatkar and G. P. Bhole, “Optimal container resource allocation in cloud architecture : A new hybrid model,” *Journal of King Saud University - Computer and Information Sciences*, vol. 34, no. 5, pp. 1906–1918, 2022, doi: 10.1016/j.jksuci.2019.10.009.
18. Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006), *Multivariate Data Analysis: Sixth Edition*, Prentice-Hall International Inc, NJ.
19. Harcar, T., & Kaynak, E. (2008). Lifestyle orientation of rural U.S. and Canadian consumers. *Asia Pacific Journal of Marketing and Logistics*, 20, 433–454. <https://doi.org/10.1108/13555850810909740>.
20. Hasnain, A., Raza, S. H., & Qureshi, U. S. (2020). The impact of personal and cultural factors on green buying intentions with mediating roles of environmental attitude and ecolabels as well as gender as a moderator. *South Asian Journal of Management*, 14(1), 1–27.
21. Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through Green-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3), 336–354.
22. Homer, P. M., & Kahle, L. R. (1988). A structural equation test of the value-attitude-behavior hierarchy. *Journal of Personality and Social Psychology*, 54(4), 638.
23. Jain, S. K., & Kaur, G. (2004). Green Marketing: An Attitudinal and Behavioural Analysis of Indian Consumers. *Global Business Review*, 5(2), 187–205. <https://doi.org/10.1177/097215090400500203>.
24. Kluckhohn F. R., Strodtbeck F. L. (1961). *Variations in value orientations*. Evanston, III, Row, Peterson.
25. Kotler, P., & Keller, K. L. (2011). *Marketing Management*. (14th ed.) Prentice Hall.
26. Lai, C.K.M. & Cheng, E.W.L. (2016). Green purchase behaviour of undergraduate students in Hong Kong. *The Social Science Journal*, 53 (1), 67-76. <https://doi.org/10.1016/j.soscij.2015.11.003>.
27. K. N. Vhatkar and G. P. Bhole, “Particle swarm optimisation with grey wolf optimisation for optimal container resource allocation in cloud,” *IET Networks*, vol. 9, no. 4, pp. 189–199, 2020, doi: 10.1049/iet-net.2019.0157.
28. Lavuri, R., Jusuf, E., & Gunardi, A. (2021). Green Sustainability: Factors fostering and behavioural difference between millennials and Gen Z: Mediating role of green purchase intention. *Ekonomia i Środowisko*.



29. Lee Y. K. (2017). A comparative study of green purchase intention between Korean and Chinese consumers: The moderating role of collectivism. *Sustainability* 2017:24:9(10):1930. <https://doi.org/10.3390/su9101930>.
30. Lee, H. N., Kim, H. J., & Yang, K. (2015). Impacts of sustainable value and business stewardship on lifestyle practices in clothing consumption. *Fashion and Textiles*, 2, 1–18. <https://doi.org/10.1186/s40691-015-0043-8>.
31. Lee, N., Yun, J. C., Youn, C., & Lee, Y. (2012). Does green fashion retailing make consumers more eco-friendly? The influence of green fashion products and campaigns on green consciousness and Behaviour. *Clothing and Textiles Research Journal*, 30, 67–82. <https://doi.org/10.1177/0887302X12446065>.
32. Maichum, K., Parichatnon, S., & Peng, K. C. (2016). Application of the extended theory of planned Behaviour model to investigate purchase intention of green products among Thai consumers. *Sustainability*, 8, 1077. <https://doi.org/10.3390/su8101077>
33. K. N. Vhatkar and G. P. Bhole, “Improved rider optimization for optimal container resource allocation in cloud with security assurance,” *International Journal of Pervasive Computing and Communications*, vol. 16, no. 3, pp. 235–258, 2020, doi: 10.1108/IJPC-12-2019-0094.
34. Majeed, M. U., Aslam, S., Murtaza, S. A., Attila, S., & Molnár, E. (2022). Green Marketing Approaches and Their Impact on Green Purchase Intentions: Mediating Role of Green Brand Image and Consumer Beliefs towards the Environment. *Sustainability*, 14(18), 11703.
35. Manget, J., Roche, C., & Münnich, F. (2009). Capturing the green advantage for consumer companies. *Food*, 20, 762–762. Retrieved from <http://crnavigator.com/materialy/bazadok/169.pdf>
36. Mostafa, M. M. (2007). Gender differences in Egyptian consumers' green purchase behaviour: The effects of environmental knowledge, concern, and attitude. *International Journal of Consumer Studies*, 31, 220– 229. <https://doi.org/10.1111/j.1470-6431.2006.00523.x>
37. S. Nagaraj ,Atul B. Kathole ,Leena Arya,Neha Tyagi ,S. B. Goyal, Anand Singh Rajawat ,Maria Simona Raboaca ,Traian Candin Mihaltan ,Chaman Verma and George Suciú , “Improved Secure Encryption with Energy Optimization Using Random Permutation Pseudo Algorithm Based on Internet of Thing in Wireless Sensor Networks”, *Energies* 2023, 16(1), 8; <https://doi.org/10.3390/en16010008>. <https://www.mdpi.com/1996-1073/16/1/8>
38. Ogiemwonyi, O., Harun, A., Alam, M. & Othman, B. (2020). Do We Care about Going Green? Measuring the Effect of Green Environmental Awareness, Green Product Value and Environmental Attitude on Green Culture. An Insight from Nigeria. *Environmental and Climate Technologies*,24(1) 254-274. <https://doi.org/10.2478/rtuct-2020-0015>
39. Ottman, J., Stafford, E., & Hartman, C. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products. *Environment Science and Policy for Sustainable Development*,48(5),22–36. <https://doi.org/10.3200/ENVT.48.5.22-36>.
40. Patch, C. S., Tapsell, L. C., & Williams, P. G. (2005). Attitudes and intentions toward purchasing novel foods enriched with omega-3 fatty acids. *Journal of Nutrition Education and Behavior*, 37(5), 235–241. [https://doi.org/10.1016/S1499-4046\(06\)60277-7](https://doi.org/10.1016/S1499-4046(06)60277-7)
41. Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behaviour and reasoned action. *Journal of retailing and consumer services*, 29, 123-134.
42. Pavlou, P. A. (2003). Integrating trust and risk with the consumer acceptance of electronic commerce: technology Acceptance Model. *International Journal of Electronic Commerce*, 7(3), 69-103.
43. Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. *Journal of cleaner production*, 141, 385-393.
44. Sheng, G., Xie, F., Gong, S. & Pan, H. (2019). The role of cultural values in green purchasing intention: Empirical evidence from Chinese consumers. *International Journal of Consumer Studies*, 1–12. <https://doi.org/10.1111/ijcs.12513>.
45. Sonnenberg, N. C., Erasmus, A. C., & Schreuder, A. (2014). Consumers’ preferences for eco-friendly appliances in an emerging market context. *International Journal of Consumer Studies*, 38, 559–569. <https://doi.org/10.1111/ijcs.12120>
46. Soyez, K. (2012). How national cultural values affect pro-environmental consumer Behaviour. *International Marketing Review*, 29, 623–646. <https://doi.org/10.1108/02651331211277973>
47. Kumbhare, S. , B.Kathole, A. , Shinde, S., “Federated learning aided breast cancer detection with intelligent Heuristic-based deep learning framework”, *Biomedical Signal Processing and Control* Volume 86, Part A, September 2023, 105080 <https://doi.org/10.1016/j.bspc.2023.105080> <https://www.sciencedirect.com/science/article/pii/S174680942300513X>
48. Sreen N., Purbey S., Sadarangani P. (2018). Impact of culture, behaviour, and gender on green purchase intention. *Journal of Retailing and Consumer Services* 2018:1(41):177–189. <https://doi.org/10.1016/j.jretconser.2017.12.002>.
49. Tanner, C., & Kast, S. W. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology and Marketing*, 20, 883–902. <https://doi.org/10.1002/mar.10101>.
50. Wang, P., Liu, Q., & Qi, Y. (2014). Factors influencing sustainable consumption behaviors: A survey of the rural residents in China. *Journal of Cleaner Production*, 63, 152–165. <https://doi.org/10.1016/j.jclepro.2013.05.007>.

51. Wang, X., Tu, M., Yang, R., Guo, J., Yuan, Z., & Liu, W. (2016). Determinants of pro-environmental consumption intention in rural China: The role of traditional cultures, personal attitudes, and reference groups. *Asian Journal of Social Psychology*, 19, 215–224. <https://doi.org/10.1111/ajsp.12142>.
52. Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behaviour. *Journal of Cleaner Production*, 135, 732–739.
53. Yang Z., Sun J., Zhang Y., Wang Y. (2017). Green, green, it's green: A triad model of technology, culture, and innovation for corporate sustainability. *Sustainability* 2017:9(8):1369. <https://doi.org/10.3390/su9081369>.
54. Zaremohzzabieh, Z., Ismail, N., Ahrari, S., & Samah, A. A. (2021). The effects of consumer attitude on green purchase intention: A meta-analytic path analysis. *Journal of Business Research*, 132, 732-743.

#### **Webliography**

1. <https://www.precedenceresearch.com/herbal-beauty-products-market>.
2. <https://www.ibef.org/blogs/high-demand-for-medicinal-plants-in-india#:~:text=The%20market%20for%20medical%20plants,assessed%20at%20US%24%20120%20billion.>