

Purchase Intention and Buying Behaviour of Green Skincare Products: A Study on Bangladeshi Consumers

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Abstract

In response to global environmental concerns, skincare businesses are increasingly emphasizing the sustainability features of their products. Green skincare products are gradually attracting customer interest universally. While the conventional skincare product market has garnered significant attention in both academia and industry, the green product segment has not received adequate focus either internationally or locally. This research examines the determinants affecting the green skincare product purchase intentions and behaviours of Bangladeshi consumers. Based on previous literature, factors such as perceived behavioural control, subjective norms, availability of green skincare products, environmental concern, and attitude toward green skincare products are considered to identify their impacts on the intention to purchase green skincare products. Furthermore, the impact of purchase intention on actual behaviour has been examined. Responses from 202 respondents, aged 18 to 47 years, were collected using a structured questionnaire, and the partial least squares approach of structural equation modelling was employed for subsequent analysis. The results showed that the availability of and attitude towards green skincare products significantly influence the purchasing intention of these items. However, other variables are found to be insignificant. These insights emphasize the necessity for customized tactics aimed at fostering a positive attitude towards green skincare products and enhancing product availability to encourage sustainable consumption among Bangladeshi consumers. Being one of the pioneering works on green skincare product adoption in Bangladesh, the findings of this study are expected to help industry practitioners understand the unique nature of Bangladeshi consumers and design their strategies accordingly. Though there are limitations related to limited sample size, cross-sectional research design, and cultural and socioeconomic differences in this study, future research can be conducted in this context by incorporating cultural values, trust, consumer location, and gender dynamics.

Keywords: green skincare products, purchase intention, environmental concern, theory of planned behaviour

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Introduction

Environmental sustainability has become a crucial global concern in recent years, greatly impacting consumer choices in various industries (United Nations, 2023). The worldwide phenomenon of green consumerism, propelled by ethical production methods, resource scarcity problems and heightened climate change consciousness, is especially pertinent to the skincare sector. In the skincare sector, part of the larger consumer products business, there has been a significant transition towards environmentally friendly and sustainable procedures. This surge in interest in environmentally conscious products is driven by an amplified awareness of the ecological impact of consumer choices (Šálková et al., 2023). Consumers are becoming more selective about their purchases and more conscious of their environmental impact (Braungart & McDonough, 2013; Wing, 2021; Šálková et al., 2023). They are looking for natural and organic alternatives to conventional products (Bhattacharya & Rahman, 2020; Hsu et al., 2019). Natural ingredient-based, sustainably packaged green skincare products represent a promising market niche. By the year 2027, the global revenue from green cosmetics sales is projected to reach 54.5 billion U.S. dollars (Ali et al., 2022).

Bangladesh, a South Asian country with a rich cultural heritage and the sixth-largest cosmetics purchaser in the Muslim world (Farhin, 2017), mirrors this global trend towards environmentally mindful consumption. This trend is evident here as the middle class expands, disposable incomes rise, and environmental concerns become more widespread (Siddique et al., 2020). In recent years, the green skincare market in Bangladesh has witnessed significant growth. As of 2023, the market for natural and organic skincare products is valued at approximately USD 50 million, with projections indicating a steady growth rate of 8-10% annually. This growth is fueled by increasing consumer awareness of environmental issues and the rising demand for healthier, safer alternatives to chemical-laden cosmetics (Bangladesh Cosmetics Association, 2023). Several domestic and international brands have introduced eco-friendly skincare lines to meet the growing demand for sustainable solutions. However, despite the growing interest, many Bangladeshi consumers still face challenges in fully understanding the environmental benefits of green products due to limited awareness and knowledge gaps (Rahman & Begum, 2021).

The purchase of green cosmetics by customers is consistent, but it is progressively increasing (Limbu et al., 2022). Despite this, there is still a scarcity of research on the attitudes of consumers toward green cosmetics and their green behaviour (Suphasomboon & Vassanadumrongdee, 2022). Because of the unique environmental and socioeconomic conditions that differ from those of developed

countries, it is essential to study this phenomenon in the context of developing countries like Bangladesh. Consumer behaviour in Bangladesh reflects a blend of traditional beauty standards with a growing desire for products that align with global sustainability trends. The younger people, more environmentally conscious consumers, particularly those from urban areas, are more likely to adopt green skincare habits, with social media playing a key role in shaping their purchasing intentions (Sultana et al., 2022). Based on these premises, the research questions of this study are:

RQ 1: What are the determinants of green skincare product purchase intention in Bangladesh?

RQ 2: Does the green skincare product purchase intention influence the actual purchase of products among Bangladeshi consumers?

To answer the research questions, this research aims to delve into the intricacies of Bangladeshi consumers' purchase intentions and behaviours concerning green skincare products. For businesses aiming to cater to this evolving market, understanding the factors that influence consumer decision-making is crucial to contributing to the broader sustainability agenda. By unravelling the complex dynamics of consumer behaviour, the study aims to equip industry stakeholders, policymakers, and researchers with valuable insights to drive positive changes in consumer behaviour and foster a more sustainable skincare industry in Bangladesh.

Literature Review

Recent trends indicate a rising demand for green skincare products, driven by increased environmental awareness and changing consumer preferences towards sustainable consumption (Global Sustainability Report, 2023; Nielsen, 2022). The shift is particularly evident among younger demographics who are more inclined to prioritize eco-friendly products over traditional options (PwC Consumer Insights, 2023). These consumers often seek products that align with their ethical values, such as cruelty-free and biodegradable formulations, showcasing an evolving demand for sustainable choices in the skincare industry. This trend has been observed globally, with consumers actively seeking products that minimize environmental harm while promoting personal well-being (UNEP, 2022). Market reports indicate that the global green cosmetics market is expected to grow at a CAGR of 7.5% from 2023 to 2030, highlighting a shift towards eco-friendly and sustainable products

(Allied Market Research, 2023). In Bangladesh, while the awareness of environmental sustainability is growing, the market for green skincare products remains underdeveloped, with significant barriers to wider adoption such as affordability, accessibility, and cultural factors (Siddique & Hossain, 2018; Zahan, Khan, & Alam, 2024).

Several studies on green skincare product adoption have been conducted in different contexts. The Theory of Planned Behaviour (TPB), introduced by Ajzen in 1991, is popularly used in understanding consumer behaviour. TPB provides a framework for understanding the relationship between consumer attitudes, subjective norms, perceived behavioural control, and their intentions to engage in specific actions. TPB has been widely applied in understanding the green purchase behaviour of consumers in different sectors (Afroz et al., 2015; Liobikienė et al., 2016).

In-studying Malaysian consumers, (Al Mamun et al., 2020) found that environmental concern, attitude, subjective norm, perceived behavioural control, and availability significantly influenced the intention to purchase green skincare products. Their study indicated that purchasing intention positively impacted the actual purchase of these products. Similarly, Biswas et al. (2019) emphasized the growing environmental concerns among Bangladeshi consumers and the need to investigate how these concerns influence their purchase intentions.

Chinomona et al. (2016) highlighted that consumers' understanding of green products significantly impacts their purchase decisions. Lin et al. (2019) stressed the importance of consumers perceiving green products as effective as conventional alternatives. Vlosky et al. (2018) proposed that consumers often associate the use of eco-friendly products with social and personal benefits. Singh and Pandey (2020) highlighted the significant impact of cultural factors on consumer behaviour, emphasizing the need to consider cultural values and norms in Bangladesh when examining green skincare purchase intentions. Economic factors such as affordability and perceived value for money also play a crucial role in consumers' purchasing decisions. Brounen et al. (2018) argued that consumers are more likely to choose environmentally friendly products if they perceive them as financially feasible. Additionally, Rana et al. (2021) noted that the limited availability and accessibility of green products can hinder their adoption.

Studies like Ruslim et al. (2022) in Jakarta and Boon et al. (2020) in Malaysia demonstrated the importance of environmental concern, attitude, and perceived behavioural control in predicting green product purchases. However, they did not fully address the unique context of Bangladesh, where cultural values, affordability, and accessibility play significant roles. Siddique and

Hossain (2018) highlighted the impact of promotional campaigns and reference groups on consumer awareness of eco-friendly products in Bangladesh, suggesting the need for targeted marketing strategies. Das et al. (2022) emphasized the importance of individual motivations, such as self-image and anti-aging concerns, in predicting skincare product purchases. In studying the green cosmetics market in Bangladesh using innovation resistance theory, (Zahan et al., 2024) concluded that traditional barriers and usage barriers significantly affect customers' attitudes towards green cosmetics while use intention significantly influences recommendation intention to other customers.

While previous studies have explored various aspects of green product adoption, there is a lack of research focused specifically on the purchase intention and buying behaviour of green skincare products in Bangladesh. Additionally, most studies have not fully examined the unique cultural, economic, and social factors that influence Bangladeshi consumers' preferences for green skincare items. This study aims to fill the existing research gap by providing valuable insights into the determinants of green skincare purchase behaviour of Bangladeshi consumers. This research addresses the theoretical gap by analysing Bangladeshi consumer behaviour based on the theory of planned action. The insights are expected to contribute to enhancing targeted marketing strategies, optimize product development, and inform policy measures to promote sustainable consumption patterns in Bangladesh.

Conceptual Model and Hypothesis Development

The Theory of Planned Behaviour (TPB) examines how individual cognitive characteristics are activated by circumstances, influencing their intentions and subsequent behaviours (Ajzen, 2002). Initially, attitudes towards behaviour, subjective norms, and perceived behavioural control shape behavioural intentions (Wu & Chen, 2014). TPB, a widely applied cognitive-social framework, has been instrumental across various social and behavioural studies (Cheung et al., 2015; Chen & Hung, 2016; Yadav & Pathak, 2017), notably in green consumption research and the development of interventions promoting eco-friendly products (Afroz et al., 2015).

TPB has also explored green consumption patterns in low-income households (Al Mamun et al., 2018; Kwon & Ahn, 2020). Research indicates that attitude and perceived behavioural control are pivotal in predicting green consumption behaviour (Ghazali et al., 2017), highlighting the need to foster greater social acceptance of green products in these demographics (Afroz et al., 2015).

According to the Theory of Planned Behaviour (TPB), the intention is what connects attitude, subjective norms, perceived behavioural control, and actual behaviour. This study extends TPB by including environmental concerns and accessibility of green skincare products. Additionally, it examines the interaction between five variables and actual purchases through the lens of the desire for ecological skincare products. The conceptual framework of this study is illustrated in Figure 1.

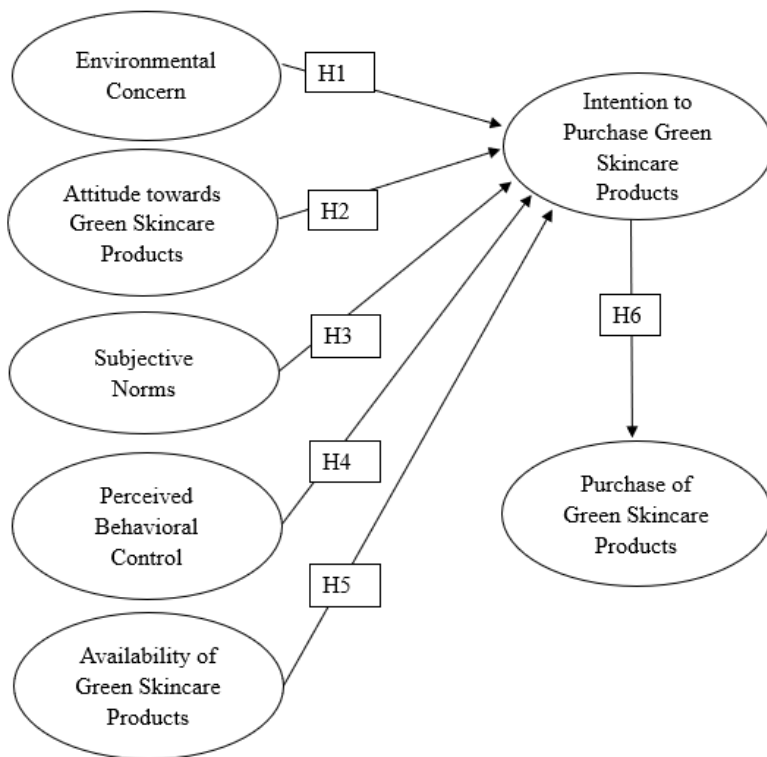


Figure 1: conceptual model.

Environmental Concern

In recent decades, public awareness and interest in environmental issues have surged (Delafrouz et al., 2014). Lee (2008) characterizes environmental concern as the emotional involvement in issues related to the environment. The emotional connection is a significant predictor of purchasing choices for green skincare products (Al Mamun et al., 2020). Individuals who emphasise

environmental awareness frequently select green goods to demonstrate their environmental commitment. Prior studies consistently indicate a substantial correlation between environmental concern and the intention to acquire environmentally friendly goods, including organic food (Maichum et al., 2016; Paul et al., 2016; Saleki et al., 2019). Based on the literature, the following hypothesis is proposed:

H1. Environmental concern has a significant positive impact on the intention of Bangladeshi consumers to purchase green skincare products.

Attitude towards Green Skincare Products

Attitude towards Green Skincare Products: Ajzen (1991) defines attitude as "the extent to which an individual holds a positive or negative evaluation of a particular behaviour." This indicates that attitude represents an individual's positive or negative evaluation of a behaviour. It encompasses preferences and dislikes that influence purchasing intentions (Al Mamun et al., 2020). Singhal and Malik (2021) assert that attitude reliably predicts the propensity to purchase environment-friendly products. Purchasing eco-friendly skincare products signifies support for sustainable beauty and environmental conservation. Previous research consistently shows that attitude strongly influences the inclination to buy eco-friendly skincare products (Hsu et al., 2017; Chin et al., 2018; Boon et al., 2020). Therefore, the following theory is proposed:

H2. Attitude towards green skincare products has a significant positive impact on the intention of Bangladeshi consumers to purchase green skincare products.

Subjective Norms

Subjective norms are influential viewpoints that shape decision-making (Al Mamun et al., 2020). They reflect social pressure to engage in or avoid activities (Chin et al., 2018). When consumers believe influential individuals endorse green skincare products, they are more likely to intend to purchase them (Boon et al., 2020). The positive influence of subjective norms on the intention to purchase green products is confirmed by Hsu et al. (2017), Chin et al. (2018), and Yadav and Pathak (2017). Hence, the following is hypothesized:

H3. Subjective norms have a significant positive impact on the intention of Bangladeshi consumers to purchase green skincare products.

Perceived Behavioural Control

Ghazali et al. (2017) define perceived behavioural control as the belief that individuals have the necessary resources, abilities, and opportunities to engage in specific actions. It refers to how individuals perceive their capacity to decide and act about behaviours (Al Mamun et al., 2018). Higher perceived behavioural control, resulting from better resources and opportunities, increases the likelihood of using green skincare products (Sun & Wang, 2019). Previous research shows that perceived behavioural control significantly influences purchase intentions (Paul et al., 2016; Chaudhary & Bisai, 2018). The following is suggested in the light of the aforementioned discussion:

H4. Perceived Behavioural Control has a significant positive impact on the intention of Bangladeshi consumers to purchase green skincare products.

Availability of Green Skincare Products

Kaufmann et al. (2012) describe availability as the difficulty or accessibility of procuring or consuming a particular product. Before purchasing green skincare products, individuals usually conduct preliminary searches. The accessibility of eco-friendly skincare products is crucial for ensuring consumer convenience in acquisition. Consumers exhibit greater confidence in using ecologically sustainable items like green skincare products, primarily due to their widespread availability (Al Mamun et al., 2020). Previous research works indicate that availability positively influences purchasing intentions (Yadav et al., 2017; Yean et al., 2019; Al Mamun et al., 2020). Hence, the following is hypothesized:

H5. Availability of green skincare products has a significant positive impact on the intention of Bangladeshi consumers to purchase green skincare products.

Intention and Purchase of Green Skincare Products

Personal objectives are shaped by influential individuals nearby. Attitudes, social norms, and perceived control strongly influence specific behaviours (Afroz et al., 2015). However, societal norms and personal agency typically do not encourage innovative actions like adopting eco-friendly products and services. The degree of consumer environmental consciousness influences their propensity to acquire environmentally favourable products. (Al Mamun et al., 2018; Cheung et al., 2015). Yang (2017) found a strong link between purchasing intentions and the acquisition of green skincare products. Additionally, Chin et al. (2018) confirmed that consumers' intentions to buy

green skincare products are strongly influenced by their desire to protect the environment. The following is suggested, taking the TPB into account:

H6. Intention to purchase green skincare products has a significant positive impact on the purchase of green skincare products among Bangladeshi consumers.

Research Methodology

This study employs a quantitative exploratory research design to systematically identify the factors influencing the purchasing intentions and behaviours of Bangladeshi consumers regarding green skincare products. Data collection was primarily conducted through a standardized questionnaire featuring closed-ended questions, complemented by secondary sources such as websites, journals, and Google.

The survey questionnaire was designed on a 5-point Likert scale and the measurement items (Appendix 1) for environmental concern (EC) and availability of green skincare products (AV) were adopted from (Al Mamun et al., 2020; Singh et al., 2019); Attitude (AT) from (Ruslim, T. S. et.al., 2022), Subjective Norms (SN) from (Promotosh, and Sajedul, 2011), Perceived Behavioural Control- (PBC) from (Ghazali et al., 2017), Purchase intention (INT) and actual purchase (PUR) from (Al Mamun et al., 2018).

To collect data, the questionnaire survey was conducted online to ensure broad participation, targeting adult consumers aged 18 to 47 from various regions across Bangladesh. A random sampling method was used to ensure a representative sample. The research aimed to capture a diverse group of consumers by considering different socioeconomic backgrounds, including varying levels of education and income, including both men and women. The questionnaire was emailed to 328 respondents from both urban and rural areas. The respondents were selected from the customer list of different cosmetics retailers on a voluntary basis. Out of these, 223 questionnaires were submitted, and 202 questionnaires were considered fit for final analysis based on completeness. So, the response rate is about 61.58%. According to Fowler Jr. et al. (2002), a predetermined response rate should not be used when analysing data with SMART-PLS, and Allinson et al. (2000) suggested that a usable response rate of 20% to 30% is appropriate for social science research. Therefore, the study's response rate of 61.58% is considered adequate.

In addition, Sekaran and Bougie (2010) state that in any multivariate analysis, including multiple regression, the sample size should be at least ten times larger than the number of variables being studied. As such, the minimum

sample size for this study is more than 70, which is the normal standard (7 x 10). Furthermore, Hair et al. (2011) suggested that the minimum sample size required for PLS-SEM should be equivalent to or larger than 10 times the structural route represented by a particular collection of latent variables in the structural model. Sultana (2020) posited that the statistical analysis necessitates a minimum sample size of 150. Under these circumstances, the sample size of 202 is adequate for the current investigation.

Asserting and validating the assumed relationships among the components, this research employed Partial least square structural equation modelling (PLS-SEM) analysis. PLS-SEM is the analysis to employ if one desires to ascertain the interrelationships among the variables under investigation (Hair et al., 2010). PLS-SEM is also essential since it models the relevant multivariate analysis (Reisinger & Mavondo, 2007). When examining the presence or absence of a relationship, PLS provides relevant information and considers the psychometric properties. The experiment's data analysis was conducted utilizing Smart PLS version 4. The measurement model was subjected to factor loading, reliability, convergent validity, and discriminant validity before the structural modelling and hypotheses testing.

Findings

Demographic Characteristics

The summary of respondent profiles and general characteristics in the present study is presented in Table 1. Six key demographic variables were investigated, namely age, gender, age, education, marital status, monthly income, and living area. Of the total 202 respondents, 31.2% were female, while 68.8% were male. Most participants fell within the 18-27 age group, constituting 59% of the total respondents. In terms of education level, 47% have completed their bachelor's degree and 44% master's degree where both contributed the most to this research. 59% of respondents are single/unmarried whereas 41% are married. 94% of the total respondents live in urban areas which is much needed for this research. And 10.4% of respondents' monthly income is higher than 100000 BDT whereas 54.5% of respondents' income is below BDT30000.

Table 1: demographic characteristics

	N	%		N	%
Gender			Marital Status		
Male	139	68.8	Married	83	41.0
Female	63	31.2	Single	119	59.0
Total	202	100.0	Total	202	100.0
Age Group			Living Areas		
18-27 years	119	59.0	Urban	190	94.0
28-37 years	80	39.6	Rural	12	6.0
38-47 years	3	1.4	Total	202	100.0
Total	202	100.0			
Educational Level			Monthly Income		
Secondary school certificate	2	1.0	< BDT 30,000	110	54.5
Higher secondary school certificate	10	5.0	BDT 30,001 - 60,000	51	25.2
Bachelor's degree	95	47.0	BDT 60,001 - 80,000	11	5.4
Master's degree	89	44.0	BDT 80,001 - 100,000	9	5.5
Doctoral degree	6	3.0	> BDT 100,000	21	10.4
Total	202	100.0	Total	202	100.0

Measurement Model Assessment

Table 2 demonstrates that the factor loadings for attitudes and behaviours related to green skincare items range from 0.739 to 0.925, indicating strong correlations and a dependable measurement model (Hair et al., 2017). Loadings above 0.8 show a significant association between purchase intention and attitudes, availability, and environmental concern. Although perceived control behaviour loadings are lower, they remain above the 0.7 threshold indicating reliability.

Table 2: factor loading

Items	Factor Loading	Items	Factor Loading
AT-1	0.777	PBC-1	0.739
AT-2	0.796	PBC-2	0.698
AT-3	0.840	PBC-3	0.757
AT-4	0.811	PBC-4	0.669
AT-5	0.846	PBC-5	0.715
AV-2	0.700	PUR-1	0.846
AV-3	0.832	PUR-2	0.879
AV-4	0.887	PUR-3	0.880
AV-5	0.853	PUR-4	0.874
EC-1	0.859	PUR-5	0.833
EC-2	0.850	SN-1	0.816
EC-3	0.885	SN-2	0.852
INT-1	0.898	SN-3	0.653
INT-2	0.900	SN-4	0.747
INT-3	0.896	SN-5	0.559
INT-4	0.925		
INT-5	0.889		

As shown in Table 3, reliability and convergent validity were established by examining Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE), with all variables showing high reliability. CR values ranged from 0.780 to 0.956, surpassing the 0.70 threshold, and CA values ranged from 0.776 to 0.942, exceeding the 0.6 threshold, indicating high dependability, as tabulated in Table 4. AVE values were all above 0.50, further supporting convergent validity as per Hair et al. (2019) and Henseler et al. (2015).

Table 3: reliability and convergent validity

Variables	No. Items	CA	DG ρ	CR	AVE
AT	5	0.873	0.877	0.908	0.663
AV	5	0.837	0.835	0.891	0.674
EC	3	0.831	0.835	0.899	0.748
INT	5	0.942	0.944	0.956	0.813
PBC	5	0.767	0.780	0.840	0.513
PUR	5	0.914	0.914	0.936	0.744
SN	5	0.776	0.794	0.850	0.537

In Table 4, discriminant validity was assessed using the Fornell-Larcker criterion (Fornell & Larcker, 1981), where the square root of AVE for each variable was greater than its correlations with other variables, confirming their independence. The heterotrait-monotrait ratio (HTMT) further supported discriminant validity, with most values aligning with the 0.90 threshold. These findings validate the reliability and convergent validity of the measurement scales used in the study, ensuring the consistency and dependability of the instruments assessing these constructs.

Table 4: discriminant validity

	AT	AV	EC	INT	PBC	PUR	SN
Fornell–Larcker Criterion							
AT	0.814						
AV	0.576	0.821					
EC	0.796	0.440	0.865				
INT	0.728	0.625	0.580	0.902			
PBC	0.716	0.605	0.588	0.630	0.716		
PUR	0.651	0.585	0.665	0.615	0.630	0.863	
SN	0.630	0.504	0.535	0.582	0.605	0.569	0.733
Heterotrait-Monotrait Ratio (HTMT)							

	AT	AV	EC	INT	PBC	PUR	SN
AT	-						
AV	0.659	-					
EC	0.935	0.505	-				
INT	0.796	0.698	0.654	-			
PBC	0.842	0.727	0.702	0.707	-		
PUR	0.727	0.643	0.760	0.657	0.732	-	
SN	0.761	0.609	0.663	0.673	0.777	0.678	-

Path Analysis

The study employs bootstrapping to determine the magnitude of path coefficients, with Table 5 showcasing the variables along with their β values, standard deviations (SD), t-values, and p-values. A p-value of less than 0.05 indicates statistical significance. Hypothesis H2 (AT $\rightarrow$ INT) is accepted, demonstrating a significant relationship ($\beta=0.442$, SD=0.107, $t=4.113$, $p=0.000$). Similarly, hypothesis H5 (AV $\rightarrow$ INT) is also accepted ($\beta=0.258$, SD=0.076, $t=3.407$, $p=0.001$). On the other hand, hypotheses H1 (EC $\rightarrow$ INT), H3 (SN $\rightarrow$ INT), H4 (PBC $\rightarrow$ INT), and H6 (INT $\rightarrow$ PUR) are rejected, as their respective p-values indicate no significant relationships: H1 ($\beta=0.000$, SD=0.073, $t=0.001$, $p=0.999$), H3 ($\beta=0.123$, SD=0.065, $t=1.905$, $p=0.057$), H4 ($\beta=0.082$, SD=0.077, $t=1.069$, $p=0.285$), and H6 ($\beta=0.137$, SD=0.083, $t=1.648$, $p=0.099$).

Table 5: path coefficients

Hypothesis	Relationship	Coefficient β	SD	T statistics	P values	Decision
H1	EC $\rightarrow$ INT	0.000	0.073	0.001	0.999	Reject
H2	AT $\rightarrow$ INT	0.442	0.107	4.113	0.000	Accept
H3	SN $\rightarrow$ INT	0.124	0.065	1.905	0.057	Reject
H4	PBC $\rightarrow$ INT	0.082	0.077	1.069	0.285	Reject
H5	AV $\rightarrow$ INT	0.258	0.076	3.407	0.001	Accept
H6	INT $\rightarrow$ PUR	0.137	0.083	1.648	0.099	Reject

Discussion

This study sought to elucidate the factors motivating Bangladeshi consumers to acquire green skincare products. The results reveal several insights into consumer behaviour in this context. While environmental concern typically boosts the intent to buy green products in other countries (Maichum et al., 2016; Paul et al., 2016), this was not the case in Bangladesh. This discrepancy suggests that other factors, such as price sensitivity, distrust in green claims, and product performance perceptions, might dilute the impact of environmental concern on purchase intentions in Bangladesh. However, the study found a significant positive relationship between consumer attitudes and the intention to buy green skincare products, supporting the second hypothesis H2a. This aligns with previous studies from different regions (Hsu et al., 2017; Chin et al., 2018; Boon et al., 2020), demonstrating that a positive disposition towards environmentally sustainable products can influence purchasing intentions. Consumers that possess favourable attitudes towards green products tend to be more inclined to see eco-friendly skincare as enticing, hence impacting their purchasing decisions.

The study also explored the influence of subjective norms on purchase intentions and found no significant effect. This finding contradicts some previous research (Chin et al., 2018 and Yadav & Pathak, 2017) but aligns with studies conducted in similar contexts (Al Mamun et al., 2018). It suggests that social pressure or endorsements from peers and social media do not significantly sway Bangladeshi consumers toward purchasing green skincare products. Rather, personal beliefs and individual motivations play a more crucial role in these purchase decisions.

Results showed that perceived behavioural control did not significantly impact purchase intentions, contrary to some previous findings (Kim & Chung, 2011; Paul et al., 2016; Chaudhary & Bisai, 2018). However, the availability of green skincare products positively influenced purchase intentions, which aligns with the findings of earlier research (Yadav et al., 2017; Yean et al., 2019; Al Mamun et al., 2020), indicating that consumers are more likely to buy these products if they are readily accessible. Purchase intention has depicted an insignificant impact on actual purchase behaviour which deviates from the conclusion of previous studies (Al Mamun et al., 2018; Cheung et al., 2015; Yang, 2017) and suggests that factors like premium pricing, product knowledge, and authenticity might hinder consumers from following through on their intentions to buy green skincare products.

Conclusions

This research aimed to explore the purchase intention and behaviours of Bangladeshi consumers toward these green skincare products. Attitude towards and availability of green skincare products significantly influence the purchase intention of green skincare products in the Bangladesh market. However, the intention could not be converted into an actual purchase. To leverage the potential of the green cosmetics market and bridge the intention-action gap, subsequent actions from the related stakeholders are needed. Increasing product knowledge and transparency through awareness-building programs can address premium pricing concerns and build consumer trust through verified sustainability claims. Promoting trial and experience through samples and demonstrations can overcome purchase hesitation. Strengthening positive product perceptions through targeted marketing and expanding product distribution through local retailers and online platforms can further boost accessibility. Encouraging peer-to-peer influence and social networks to promote green skincare adoption can foster a community-driven approach to sustainable consumption.

The findings of this study have both theoretical and practical implications. Theoretically, it challenges Western-centric perspectives by emphasizing the unique roles of attitude towards and availability of green skincare products in Bangladesh. This underscores the need for culturally adapted frameworks to study consumer purchase intention and behaviour. Practically, marketers can use these insights to modify their strategies for green skincare products, leveraging social media, addressing pricing and availability concerns, and highlighting environmental benefits. Policymakers can develop programs promoting eco-friendly skincare production and distribution, offering incentives for sustainable practices, and implementing educational initiatives to inform consumers about green products. These combined efforts can contribute to a greener consumption pattern and a more sustainable future for the cosmetics industry in Bangladesh.

However, the sample size of this study may not be representative of the entire Bangladeshi population, suggesting the need for larger and more diverse samples in future research. The cross-sectional design limits the ability to examine causal relationships and temporal variations in consumer behaviour, highlighting the necessity for longitudinal studies. The focus on specific variables may overlook broader factors such as governmental policies and media influence, warranting expanded future research. Additionally, the cultural and socioeconomic differences between Bangladesh and other markets limit the generalizability of the findings, emphasizing the need for comparative studies in

other developing regions. To address these limitations and further the understanding of green skincare adoption, future research can explore several directions. The impact of cultural values and trust on purchase intentions can be studied while consumer location and gender dynamics may provide a more nuanced picture of consumer behaviour. Monitoring temporal and regional variations in consumer behaviour and examining actual purchase patterns can validate findings and bridge the intention-behaviour gap. It is anticipated that these research directions will contribute to a comprehensive understanding of the adoption of green skincare products in Bangladesh and formulate strategies for promoting a sustainable future.

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Appendix 1:

Table 1: survey items used in this study.

Items	Questions	Sources
EC1	I use green skincare products as part of my effort to promote environmental wellness.	Al Mamun et al., 2020; Singh et al., 2019
EC2	I look for natural ingredients in purchasing green skincare products.	
EC3	I am properly conscious of the environment and am also knowledgeable about green skincare products.	
AT1	Regarding green skincare products, I have a favourable attitude.	Ruslim,T.S. et.al., 2022; Al Mamun et al., 2020; Al Mamun et al., 2018
AT2	Even after being more expensive, I like utilizing green skincare products over conventional ones.	
AT3	I prefer buying eco-friendly skincare products because they are more favourable.	
AT4	In my opinion, buying eco-friendly skincare products is a positive behaviour.	
AT5	Purchasing green skincare products is a wise decision.	
SN1	I prefer to buy green skincare products when my family members suggest them.	Al Mamun et al., 2020; Promotosh, and Sajedul, 2011
SN2	I prefer to buy green skincare products when my friends recommend them.	
SN3	I learned to distinguish green skincare products from conventional ones from my parents.	

SN4	I learned to distinguish green skincare products from conventional ones from my friends.	
SN5	Social media can influence my decision to purchase eco-friendly skincare products.	
PBC1	I have the affordability to purchase green skincare products.	
PBC2	Going green would be entirely within my control.	
PBC3	I am willing to purchase eco-friendly skincare goods.	Al Mamun et al., 2018 and Ghazali et al., 2017
PBC4	I can locate local suppliers of eco-friendly skincare items around my area.	
PBC5	I have time to search for environment-friendly skincare products.	
AV1	I can easily buy green skincare products	
AV2	I use eco-friendly skincare goods as they offer more options readily.	
AV3	Purchasing green skincare items online is more convenient for me than going to stores.	Al Mamun et al., 2020; Singh et al., 2019
AV4	Since green skincare products are readily available online, I prefer to purchase them there.	
AV5	As there have been a variety of payment options, I like to purchase my green skincare items online.	
INT1	In the future, I intend to buy green skincare products.	
INT2	In the future, I'll probably start using green skincare products.	
INT3	I like to buy green skincare products, compared to conventional ones.	Al Mamun et al., 2018 and Ghazali et al., 2017
INT4	As green skincare products contribute positively to the environment, I intend to buy them.	
INT5	I would like to practice environment-friendly consumption.	

PUR1	I purchase eco-friendly skincare products frequently.	Al Mamun et al., 2020; Al Mamun et al., 2018
PUR2	I've already shifted to using green skincare products.	
PUR3	I often purchase green skincare products, compared to conventional ones.	
PUR4	I purchase green skincare products as they contribute positively to the environment.	
PUR5	I practice environment-friendly consumption most of the time.	

Note: EC: Environmental concern; AT: Attitude towards green skincare products; SN: Subjective norm; PBC: Perceived behavioural control; AV: Availability of green skincare products; INT: Intention to purchase green skincare products; PUR: Purchase of green skincare products.