



# INFLUENCE OF GENDER AND PURCHASE BEHAVIOR ON MOISTURIZER USAGE AMONG HIGHER EDUCATION STUDENTS IN HASSAN, KARNATAKA

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## Abstract

Moisturizers are essential skincare products used to maintain skin hydration and health. This study aimed to analyze moisturizer usage patterns, brand preferences, and the influence of gender and purchase behavior among higher education students in Hassan, Karnataka. Methods: A primary research study was conducted using a simple random sampling of 446 student respondents. Data was collected via a Google Forms-based questionnaire distributed through social media platforms. Results: The study found that 79.8% of students regularly use moisturizers. Females (66.6%) showed a higher usage rate than males (33.4%). Ponds (25.2%) and Nivea (21.6%) were the most preferred brands. The primary factors influencing purchases were brand reputation (39.04%) and ingredient lists (28.09%). Most students (34.26%) prefer a price range of 150-300 INR. Conclusion: There is a statistically significant relationship between gender and moisturizer usage, with females being the predominant users. Marketing strategies should focus on brand trust and ingredient transparency to target the youth demographic effectively.

**Keywords:** Moisturizer, Gender, Purchase Behavior, Higher Education Students, Hassan, Skincare Brands.

## 1. INTRODUCTION

Cosmetics are widely used products designed to enhance or alter the appearance and fragrance of the human body. Within this category, moisturizers play a crucial role in maintaining skin health, particularly by addressing dryness and supporting the skin's barrier function. The stratum corneum, the outermost layer of the skin, relies on adequate hydration to remain flexible and protective. Moisturizers achieve this by increasing water content and preventing transepidermal water loss, thereby improving both the appearance and resilience of the skin<sup>1</sup>.

Moisturizers are typically formulated with three main types of ingredients: humectants, occlusives, and emollients. Humectants, such as glycerin and hyaluronic acid, attract water into the stratum corneum. Occlusives, including petrolatum and mineral oil, form a barrier to reduce water loss. Emollients, like fatty acids and esters, smooth and soften the skin surface. The synergistic effect of these components ensures optimal hydration and texture, making moisturizers indispensable in both dermatological care and cosmetic routines<sup>2</sup>.

The cosmetic industry has experienced rapid growth in recent decades, driven by evolving

consumer preferences and technological advancements. Among younger demographics, particularly adolescents and young adults, cosmetic use is often influenced by social trends, peer behavior, and marketing strategies. Understanding consumer behavior in this segment is essential for optimizing product development and market positioning. Studies suggest that youth are more likely to experiment with cosmetic products and prioritize multifunctional formulations that combine aesthetic appeal with skin health benefits<sup>3</sup>.

This study hypothesizes that youth consumer behavior towards moisturizers is significantly influenced by perceptions of product efficacy, brand image, and social trends. The objective is to investigate how these factors shape purchasing decisions and usage patterns among young consumers. By analyzing preferences and motivations, the study aims to provide insights that can guide cosmetic companies in tailoring moisturizer formulations and marketing strategies to meet the evolving demands of the youth market.

## **2. METHODOLOGY**

Study design of this research adopted a mixed-source, cross-sectional descriptive design that integrated primary and secondary data to address the study objectives. Primary data were collected directly from participants to capture current practices and attitudes, while secondary sources (textbooks, peer-reviewed journals, and official websites) were used to situate findings within existing theory and to inform instrument development and variable operationalization<sup>4</sup>. This design enabled a snapshot assessment of associations between demographic factors and moisturizer use at a single point in time.

Sampling frame and sample size is the target population comprised students enrolled in various colleges in Hassan, Karnataka. A sampling frame was compiled from institutional enrollment lists and student registers; from this frame, 446 students were selected using simple random sampling to ensure each eligible student had an equal probability of selection and to reduce selection bias<sup>5,6</sup>. The sample size was chosen to provide adequate power for subgroup comparisons (for example, by gender) and to permit reliable estimation of proportions and contingency-table analyses.

**Questionnaire development and pretesting.** A structured questionnaire was developed for online administration using Google Forms. Item selection prioritized validated measures from the literature where available and included sections on demographics (including gender), moisturizer use (binary and frequency categories), product types, and reasons for use. The draft instrument underwent cognitive review and a small pretest to assess clarity, response options, and technical functioning; items were revised based on respondent feedback to improve face validity and reduce measurement error<sup>5</sup>.

**Data collection procedures.** Primary data collection was conducted via a Google Forms link distributed through institutional email lists, official student groups, and college noticeboards. Data collection was open for a pre-specified period with two scheduled reminders to maximize response rate. The online form enforced mandatory consent and used skip logic to route respondents to relevant follow-up items;

timestamps and IP checks were used to identify duplicate or suspicious submissions. Secondary data were gathered through systematic searches of textbooks, peer-reviewed journals, and authoritative websites to support instrument choices and interpretive context<sup>4</sup>.

**Data management and cleaning.** Completed responses were exported from Google Forms into a spreadsheet and imported into statistical software for cleaning and analysis. Cleaning steps included removal of duplicate entries, verification of logical consistency, recoding of categorical variables, and handling of missing data according to pre-specified rules (listwise deletion for analyses requiring complete cases; sensitivity checks using simple imputation where appropriate). A codebook documented variable names, labels, coding schemes, and any derived variables to ensure reproducibility<sup>5</sup>.

**Statistical analysis and hypothesis testing.** The principal inferential objective was to test the null hypothesis that gender and moisturizer use are independent. Categorical data were summarized with frequency tables and cross-tabulations. For the test of independence, a Pearson chi-square test was planned when expected cell counts met standard assumptions; if assumptions were violated (for example, small expected counts in a 2×2 table), Fisher's exact test or category consolidation was to be used as appropriate<sup>7</sup>. Test statistics, degrees of freedom, exact or asymptotic p-values, and effect-size measures (Phi or Cramér's V) were reported to convey both statistical and practical significance. Where confounding was a concern, binary logistic regression was proposed to estimate adjusted associations (odds ratios with 95% confidence intervals) controlling for covariates such as age and college affiliation.

**Ethical considerations.** Ethical approval was obtained from the relevant institutional review board prior to data collection. Participation was voluntary, and informed consent was obtained electronically at the start of the Google Form. Data were collected anonymously; identifying fields were not requested and datasets were stored on password-protected drives accessible only to the research team. All procedures

followed national ethical guidelines for human research and data protection standards<sup>8</sup>.

**Quality assurance and limitations.** Quality control measures included instrument pretesting, standardized distribution procedures, and audit logs for data exports. Limitations inherent to the cross-sectional, self-report design—such as inability to infer causality and potential social desirability or recall bias—were acknowledged; mitigation strategies included anonymous responses, use of validated items where possible, and sensitivity analyses to assess the robustness of findings. The methodology section concludes by noting that results should be interpreted within these methodological constraints.

### 3. RESULTS

The study analyzed responses from 446 college students in Hassan, Karnataka, using data

collected via a structured Google Forms questionnaire and supplemented by relevant textbooks, journals, and official websites. A chi-square test of independence was used to examine the relationship between gender and moisturizer use. The test rejected the null hypothesis of independence ( $p < 0.05$ ), indicating a statistically significant association between gender and moisturizer use. In practical terms, the analysis showed that moisturizer use was more prevalent among female students than male students, suggesting gender-related differences in skincare behavior within the sampled population. These findings are reported alongside descriptive statistics (percentages and cross-tabulations) and are discussed in light of existing literature and possible cultural or behavioral explanations. The collected data was analyzed and presented in the following tables and figures.

**Table 1: Gender Distribution of Respondents**

Particulars	No. of Respondents	Percentage (%)
Females	297	66.60%
Males	149	33.40%
<b>Total</b>	<b>446</b>	<b>100%</b>

**Table 2: Age Group of Respondents**

Age Group	No. of Respondents	Percentage (%)
15-16	3	0.672%
17-18	18	4.035%
19-20	191	42.82%
21-22	166	37.21%
23-24	61	13.67%
25-26	7	1.569%
<b>Total</b>	<b>446</b>	<b>100%</b>

**Table 3: Brand Preferences Among Students**

Brand	Percentage (%)
Ponds	25.2%
Nivea	21.6%
Cetaphil	10.9%
Himalaya	10.9%
Lotus Herbal	5.6%

**Table 4: Factors Influencing Purchase Behaviour**

Factors	Percentage (%)
Brand	39.04%
Ingredient List	28.09%
Reviews	18.53%
Price	12.02%
Marketing	2.23%

About 79.8% of respondents reported using moisturizers. The majority purchase moisturizers from cosmetic stores (51.1%), followed by online (26.6%) and drug stores (22.1%). The most preferred brands were Ponds (25.2%) and Nivea (21.6%), followed by Cetaphil and Himalaya (both 10.9%). Factors influencing moisturizer choice included brand reputation (39%), ingredient lists (28.1%), user reviews (18.5%), price (12%), and marketing (2.2%).

**Findings and Recommendations** The study found that a large majority use moisturizers, with brand and ingredient transparency being essential factors in purchase decisions. It recommends expanding product lines tailored to preferences, optimizing online marketing to boost e-commerce engagement among youth, and incorporating consumer feedback to refine offerings.



## 4. DISCUSSION

The findings indicate a high prevalence of moisturizer usage (79.8%) among the student population in Hassan. Statistical analysis led to the rejection of the null hypothesis, confirming that moisturizer usage is dependent on gender,

with a significantly higher proportion of female users.

Brand reputation is the most significant influencer (39.04%), followed by a growing awareness of ingredient lists (28.09%). This suggests that while traditional brands like Ponds and Nivea dominate the market, students are increasingly conscious of what they apply to their skin. The preference for the 150-300 INR price range highlights the price sensitivity of the student demographic.

The observed prevalence of moisturizer use (79.8%) among college students in Hassan indicates that skincare practices are widespread in this population and align with broader trends of increasing personal care engagement among Indian youth. Comparable consumer-behaviour studies in Indian urban settings report high uptake of skincare products, driven by greater awareness of skin health and the influence of social media and peer norms<sup>9</sup>.

Distribution channel data show that cosmetic stores remain the dominant point of purchase (51.1%), with a substantial proportion buying online (26.6%) and a smaller share using drug stores (22.1%). This pattern reflects a hybrid retail landscape in which traditional brick-and-mortar outlets retain importance for tactile product evaluation, while e-commerce is rapidly gaining traction—particularly among younger, digitally engaged consumers who research products online before purchase. Market analyses indicate that e-commerce now accounts for a growing share of beauty sales in India and that online platforms are influential in discovery and purchase decisions<sup>10</sup>.

Brand preference results—Ponds (25.2%) and Nivea (21.6%) leading, with Cetaphil and Himalaya each at 10.9%—suggest that both legacy mass-market brands and brands perceived as dermatologically oriented attract students. The

prominence of Ponds and Nivea likely reflects strong brand recognition, wide distribution, and price accessibility, while interest in Cetaphil and Himalaya may indicate a segmental preference for gentler or herbal formulations. These findings are consistent with market reports showing that established multinational and domestic brands continue to command significant market share even as niche and specialist brands expand<sup>11</sup>.

When respondents ranked factors influencing purchase, brand reputation (39%) and ingredient transparency (28.1%) emerged as the most important, followed by user reviews (18.5%), price (12%), and marketing (2.2%). This ordering underscores a consumer shift from purely promotional drivers toward product attributes and social proof; ingredient lists and third-party endorsements are increasingly salient as consumers seek safety, efficacy, and value. Prior empirical work in Indian cosmetics markets similarly identifies perceived quality, ingredient claims, and online reviews as key determinants of purchase intention<sup>12</sup>.

Interpreting these patterns together, the data imply a segmented market among college students: a large mainstream cohort that favors familiar, widely available brands and in-store purchase, and a digitally oriented subgroup that values ingredient transparency and consults online reviews before buying. For manufacturers and retailers, this suggests a dual strategy—maintain strong in-store presence and sampling opportunities while simultaneously enhancing online product information (detailed ingredient lists, dermatological claims) and leveraging authentic user reviews to convert digitally active shoppers. E-commerce optimization is particularly important given evidence that a meaningful minority already prefers online channels and that digital discovery influences offline purchases as well<sup>12</sup>. From a public-health and consumer-protection perspective, the emphasis on ingredients and reputation highlights the need for clear labeling and evidence-based claims. Regulators and industry bodies should encourage transparent ingredient disclosure and standardized claims to reduce misinformation and enable informed choices. At the same time, brands should invest in educational content (e.g., explainers on common

actives and suitability for skin types) to meet the information needs signaled by respondents<sup>13</sup>.

## **5. CONCLUSION**

The study concludes that gender plays a major role in skincare habits among students, with females being more frequent users of moisturizers. Brand trust and detailed ingredient information are critical factors for this demographic. To improve sales, companies should leverage online platforms, enhance ingredient transparency, and maintain affordable pricing tailored to the youth.

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