Facial Masks from a Lifestyle Perspective: A Case Study of Female Consumers in Taiwan

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ABSTRACT

Lifestyle factors affect female consumers' satisfaction with facial mask usage. As modern life accelerates and stress levels rise, women's demand for high quality and convenient skincare products grows. Facial masks, as a key component of daily skincare routines, are subject to variations in satisfaction levels depending on individual characteristics and lifestyle patterns. This research employed purposive sampling and conducted a questionnaire survey targeting Taiwanese women with prior experience using facial masks.

The results indicate that certain demographic variables such as marital status, age, and educational level significantly affect satisfaction with facial masks. Specifically, unmarried women and those with a university education reported higher satisfaction with the efficacy of facial masks. Self-image, brand orientation, and trend consciousness were analyzed regarding lifestyle dimensions. Except for trend consciousness, the other two lifestyle dimensions showed a significant positive correlation with satisfaction regarding product design and functional performance. Respondents strongly emphasized self-image and demonstrated the highest level of satisfaction with the product's appearance and effectiveness.

Keywords: facial masks, lifestyle, satisfaction, female consumers

INTRODUCTION

Skincare is highly valued among cosmetic industries. It is an old tradition Taiwan aesthetic ideal that brighting skin covers all flaws. This has led Taiwanese women to pay more attention to their skin condition, especially facial care. This differs from Western women who emphasize personal style and are keen on ostentatious consumption of cosmetics and perfumes. Consumers in Taiwan like to purchase skincare products that help the quality of their skin, such as facial masks, serums, and moisturizers. Moreover, the increasing awareness of image management and physical appearance among modern men has led to their emergence as a growing consumer group in the skincare market. According to various market reports, modern male consumers are showing more significant concern for skin cleansing, hydration, and repair, indicating a trend toward gender neutral skincare behavior and the growing normalization of skincare routines for all. Because of the diverse array of skin care products, facial masks have become more popular due to simplicity, efficiency, and immediacy. These features have contributed to facial masks capturing a substantial market share and securing a competitive edge.

According to Grand View Research (2024), the global market for sheet masks is estimated at USD 363.7 million in 2024, with a projected compound annual growth rate (CAGR) of 8.9% from 2025 to 2030. Sheet masks, night

masks, and functional masks are particularly suitable for meeting these needs, providing multiple benefits such as moisturizing, whitening, and soothing in a short period. These benefits make facial masks popular among women of all ages. The growth of digital social platforms has made it easier for people to share information about facial masks and shape others' buying decisions. Influencers often post unboxing videos or before and after photos to grab attention, sparking word of mouth marketing as followers leave comments or tag themselves using the products. Different lifestyle groups pay distinct attention to the functions, prices, brands and packaging designs of facial mask products, highlighting the complexity of consumers.Driven by technological advancement and market diversification, Taiwan's facial mask industry has advantages in manufacturing and innovation, yet it faces intense competition from international brands. This study tries to Aim to Understand the relationship between consumers' lifestyle and satisfaction with facial mask use, which can help with market segmentation and product positioning.

Research Objectives

1. To explore the differences in facial mask satisfaction among female consumers based on demographic variables.

2. To analyze the relationship between female consumers' lifestyles and satisfaction with facial mask products.

3. To construct a model illustrating the influence of lifestyle on facial mask satisfaction among female consumers.

4. To propose marketing strategy recommendations to enhance customer satisfaction and market competitiveness of Taiwanese facial mask brands.

LITERATURE REVIEW

The Functions and Marketing of Facial Masks

Facial masks have become an indispensable part of Taiwanese girls' lives. They have many functions, including moisturizing, brightening, anti-aging, firming, and oil control. Originating from early facial poultices primarily used for deep cleansing, facial masks have evolved alongside technological advancements and growing consumer demands, leading to diverse formulations and product types that are essential tools in personalized skincare strategies. The core mechanism of facial masks is based on the dermatological concept of Occlusive Dressing Therapy (ODT). This technology allows the mask essence to penetrate the stratum corneum effectively and even reach the dermis. Variations in skin types and skincare habits have led to the development of various mask formats. Nilforoushzadeh et al. (2018) categorized facial masks into four types: sheet masks, peel off masks, rinse off masks, and hydrogel masks, each suited for different skin conditions and needs. For instance, clay and peel off masks are recommended for oily skin to aid in sebum control and pore cleansing. In contrast, cream based, or bio cellulose masks are better suited for dry or sensitive skin due to their moisturizing and skin friendly properties. Regarding safety and efficacy, Zhou et al. (2022) conducted an empirical study with 175 Chinese users to examine the impact of mask material and application time on exposure to preservatives such as phenoxyethanol and methylparaben. The study found that when application exceeded 20 minutes, the residual level of preservatives significantly increased, and there was a risk of skin irritation and allergic reaction.

Wang and Zhou (2020) developed a facial mask sheet using natural silk, which demonstrated excellent moisture retention, antibacterial properties, and superior adherence, thereby enhancing essence absorption efficiency. Mbituyimana et al. (2021) conducted a comprehensive review of bacterial cellulose applications in medical and cosmetic fields, noting its high-water absorption capacity, biodegradability, and skin compatibility traits that position it as a promising material for future mask development. Hao et al. (2025) further advanced this field by incorporating plant essential oils into electrospun nanofiber masks, producing high hydrophilicity masks through electrospinning technology. Their results showed a 47.82% increase in skin hydration and demonstrated antibacterial and anti-aging effects. This fusion of natural botanical ingredients with advanced manufacturing

techniques aligns with modern consumers' pursuit of natural, safe, high performance skincare solutions.

On the market side, the Asian region, particularly China, South Korea, and Japan dominates global facial mask consumption and innovation. According to Morganti et al. (2019) Asia accounts for 63% of global facial mask sales. This region's consumers consider facial masks part of their daily skincare routine. A stable and expanding market has been formed. As consumers increasingly favor environmentally friendly products, products with green formulas, biodegradable materials, and chemical free ingredients are gaining popularity.

Lifestyle

Lifestyle is mainly used to describe an individual's daily behavior patterns, value orientations, interest tendencies, etc. According to Mothersbaugh, Kleiser, and Hawkins (2023), lifestyle is shaped by both internal and external factors. Internal factors include perception, motivation, learning, personality traits, and emotions, while external factors encompass culture, values, social class, demographic variables, reference groups, and family structure. Lifestyle influences an individual's needs, attitudes, and purchase preferences and is ultimately reflected in consumption behavior. Blackwell, Miniard, and Engel (2001) also noted that a person's lifestyle reinforces or sustains their unique consumption patterns, thereby playing a critical role in consumer decision making.

In terms of measurement, Wind and Green (1974) identified five major approaches to assessing lifestyle: Types of products and services purchased and categorizing consumers by the kinds of goods and services they buy. Activities, interests, and opinions (AIO) – Examining consumers' daily activities, personal interests, and opinions. Values and personal beliefs – Assessing individuals' core values and belief systems. Demographic variables – Segmenting based on demographic factors (e.g., age, income, education). Media usage preferences – Analyzing the media channels and content consumers prefer. Among these, the AIO model proposed by Plummer (1974) remains the most widely used and extensively applied tool. The core of the AIO model lies in using data on respondents' activity participation, interest tendencies, and value expressions to segment consumer groups and predict behavioral patterns.

Satisfaction

Customer satisfaction is one of the most critical variables in consumer behavior research, closely linked to product perception, brand evaluation, repurchase intentions, and customer loyalty. Cardozo (1965) argued that a discrepancy between a consumer's perceived product performance and their expectations leads to an emotional response of either satisfaction or dissatisfaction. If a product or service falls short of expectations, dissatisfaction occurs; conversely, if it exceeds expectations, consumers will likely experience high satisfaction levels and may even develop brand loyalty. Ostrom and Iacobucci (1995) further emphasized that evaluating satisfaction or dissatisfaction is a relative judgment. Consumers form satisfaction assessments by weighing the benefits and quality of a product against the costs, time, and effort they invest. In other words, satisfaction is tied to the product and is closely associated with the consumer's overall experience throughout the transaction process. Hampel (1977) proposed that satisfaction arises when actual outcomes align with expectations. This view echoes the Disconfirmation of Expectations Model, which posits that satisfaction occurs when perceived performance meets or exceeds expectations, while dissatisfaction results from outcomes that fall below expectations.

From this perspective, customer satisfaction is a multi-dimensional, dynamic, and subjective psychological evaluation process. It involves cognitive assessments of product functionality and emotional, attitudinal, and belief-based factors. Thus, customer satisfaction has become central to marketing research and practice.

Despite its subjective nature and the difficulty of capturing it with a single objective standard, scholars have developed several empirical methods for measuring customer satisfaction:

- Simple Satisfaction Scale: A binary assessment in which respondents indicate "satisfied" or "dissatisfied."

- Mixed Scale: A continuum-based scale offering responses such as very satisfied, satisfied, neutral, dissatisfied, and very dissatisfied.

- Expectation Scale: This compares product performance with prior expectations; satisfaction occurs when performance exceeds expectations and dissatisfaction when it falls short. This model underlies most customer satisfaction frameworks.

- Attitude Scale: This scale focuses on consumers' perceptions, evaluations, and beliefs toward a product or brand in order to understand their overall attitudinal orientation.

- Affective Scale: This scale emphasizes the emotional responses experienced while purchasing or using a product such as pleasure, reassurance, or disappointment offering a complementary yet essential perspective.

This study evaluates consumers' experiences using facial mask products through a simple questionnaire survey.

METHODOLOGY

Research Hypotheses

Based on the research objectives and the relevant literature on consumer behavior, lifestyle segmentation, and customer satisfaction, this study develops a conceptual research framework, as illustrated in Figure 3-1. The proposed framework examines the relationships between lifestyle dimensions and consumer satisfaction with facial mask products. This study employed a questionnaire survey as the primary method of data collection. The questionnaire was structured into three main sections: demographic variables, lifestyle, and facial mask product satisfaction. Demographic variables were included to describe the sample characteristics and to serve as control variables in subsequent analyses. The second section focused on lifestyle, which was developed based on the AIO model (Activities, Interests, and Opinions). Drawing upon prior studies, lifestyle was operationalized into three major dimensions: brand orientation, trend involvement, and self-image. A total of 19 measurement items were used to capture these dimensions. Each item was measured using a six-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree), with higher scores indicating a stronger level of agreement. The third section assessed consumer satisfaction with facial mask products, focusing on two key dimensions: product design (appearance) and functional performance (perceived effectiveness). These two dimensions reflect both the aesthetic and utilitarian aspects of facial mask products, which are essential factors influencing consumers' post-purchase evaluations. Accordingly, lifestyle dimensions were specified as exogenous latent variables, while product design satisfaction and functional performance satisfaction were treated as endogenous latent variables in the SEM / PLS-SEM model. Based on the aforementioned theoretical framework and research objectives, this study proposes the following research hypotheses:

Research Hypotheses

- **H1:** Brand orientation has a significant positive impact on product appearance design.

- **H2:** Brand orientation has a significant positive impact on perceived product effectiveness.

- **H3:** Trend involvement has a significant positive impact on product appearance design.

- **H4:** Trend involvement has a significant positive impact on perceived product effectiveness.

- **H5:** Self-image has a significant positive impact on product appearance design.

- **H6:** Self-image has a significant positive impact on perceived product effectiveness.

These hypotheses were empirically tested using partial least squares structural equation modeling (PLS-SEM) to examine both the measurement model and the structural relationships among latent constructs.

Figure 3-1. The proposed framework
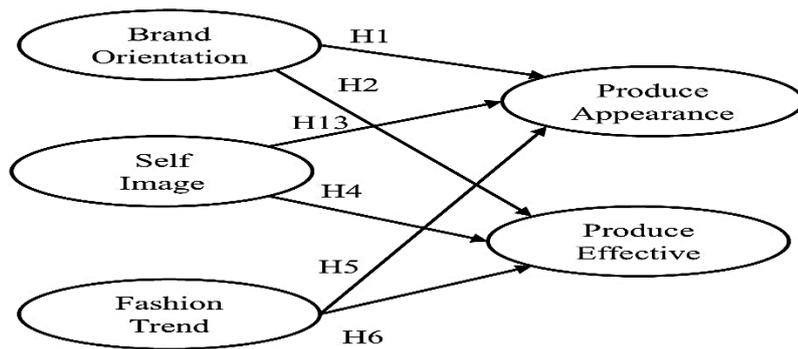
Questionnaire Distribution and Analysis

This study focused on female consumers' experiences and satisfaction with facial mask products. Two hundred valid responses were collected, with an effective response rate of 100%. The questionnaire consisted of three major sections: demographic variables, lifestyle, and satisfaction with facial mask products. The purpose was to explore the differences and relationships among these variables.

Descriptive Statistical Analysis was employed to understand the basic structure and distribution of the sample, including measures such as mean, standard deviation, and percentage. This section also presents the respondents' marital status, age, educational level, occupation, and monthly income to provide a descriptive sample profile. Factor Analysis involved the Kaiser Meyer Olkin (KMO) test for sampling adequacy and Bartlett's test of sphericity to confirm the data's suitability for factor extraction. Reliability Analysis was used to assess the internal consistency of the overall scale and its subdimensions, primarily using Cronbach's alpha coefficients as indicators. Correlation analysis was used to examine the relationships between lifestyle and satisfaction variables. This study examines the association and differences between female consumers' lifestyles and their satisfaction with facial mask products.

RESULTS AND DISCUSSION

Demographic Profile and Psychometric Validation of the Lifestyle Scale

After collecting the survey responses, the analysis of demographic variables related to satisfaction with facial mask products revealed the following distributions: it resents the demographic characteristics of the 200 female respondents who participated in the study. The majority were unmarried (56.0%), with the largest age group being 41 years and above (46.5%), followed by those aged 25 and under (42.5%). Regarding education, most participants held a college or university degree (59.5%). Regarding occupation, students comprised the largest group (39.0%), followed by those in the service industry (24.5%). Monthly income was concentrated in the NTD 10,000 or below category (41.0%), while 28.5% was earned between NTD 30,001 and 50,000. These demographic insights provide a foundational

The item analysis and extreme group comparison results indicated that all 19 items reached a statistically significant level ($p < .05$), with critical ratio (CR) values ranging from 4.997 to 16.504. In the item total correlation test, all 19 items also reached significance ($p < .05$), with item total correlation coefficients ranging from .442 to .755, indicating a moderate level of correlation. Therefore, all 19 items were retained for further analysis. An exploration factor analysis (EFA) was conducted on the lifestyle scale. The aim was to simplify the original questionnaire structure by reducing a complex set of items to fewer facets. Before the factor analysis, two tests were performed to assess data suitability: the Kaiser Meyer Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. The KMO value was .875, indicating excellent sampling adequacy and the presence of sufficient shared variance among items for factor extraction. Bartlett's Test of Sphericity yielded a result of $\chi^2 = 1047.666$, with 66 degrees of freedom and a p value of .000, reaching statistical

significance. These results confirmed that the dataset was appropriate for factor analysis.

Following EFA, three distinct factors were extracted from the lifestyle questionnaire. Each factor was named based on the thematic characteristics of the items it encompassed.

Analysis of Differences in Satisfaction

To investigate whether different demographic variables lead to significant differences in satisfaction with facial mask products, this study conducted independent sample t tests and one way ANOVA on variables including marital status, age, educational level, occupation, and monthly income. Satisfaction was measured across two dimensions: product appearance and product effectiveness. The detailed results are as follows:

(1) Marital Status and Satisfaction with Facial Masks

An independent sample test was conducted to compare satisfaction levels across marital status. For the appearance dimension, the significance value was p = .078, more excellent than .05, indicating no statistically significant difference between married and unmarried women in their evaluations of product appearance. However, for the effectiveness dimension, the significance value was p = .006, which is statistically significant. This result suggests that unmarried women reported significantly higher satisfaction with product effectiveness than married women (Unmarried > Married).

(2) Age and Satisfaction with Facial Masks

A one-way ANOVA was conducted to examine the differences in satisfaction among different age groups. For the appearance dimension, the significance value was p = .107, which is not statistically significant, indicating that other age groups did not significantly differ in their evaluations of product appearance. For the effectiveness dimension, the significance value was p = .033, which reached statistical significance; however, post hoc analysis using Scheffé's test revealed no specific group differences, suggesting no conclusive intergroup variation overall.

(3) Educational Level and Satisfaction with Facial Masks

A one-way ANOVA was also conducted to compare satisfaction across different education levels. The appearance dimensions (p = .001) and the effectiveness dimension (p = .000) showed statistically significant differences. Post hoc Scheffé analysis indicated that respondents with high school education or below and college level education reported significantly higher satisfaction with appearance and effectiveness than those with graduate level education or above. Additionally, satisfaction with product effectiveness among college educated respondents was considerably higher than that of the high school group, suggesting that lower and mid-level education groups reported higher satisfaction with facial mask products.

(4) Occupation and Satisfaction with Facial Masks

One way ANOVA results for different occupational categories showed no significant differences in either dimension: appearance (p = .964) and effectiveness (p = .612), both above the .05 threshold.

(5) Monthly Income and Satisfaction with Facial Masks

Analysis based on monthly income groups revealed that for the appearance dimension, the significance value was p = .196, indicating no significant differences. For the effectiveness dimension, p = .042, which reached statistical significance; however, post hoc comparisons did not reveal any specific group differences.

In summary, these results indicate that certain demographic variables, particularly marital status and educational level, significantly impact specific dimensions of satisfaction with facial mask products.

According to the results of the structural equation modeling (SEM) conducted in this study, self-image showed significant positive effects on both dimensions of satisfaction. The standardized path coefficients were 0.463 (*t*

= 5.208) for product appearance and 0.427 (t = 5.541) for product effectiveness, indicating that consumers who place greater importance on personal image tend to value the appearance and performance of facial mask products more highly.

Similarly, brand orientation also significantly affected both dimensions. The standardized coefficients were 0.323 (t = 4.499) for appearance and 0.291 (t = 4.035) for effectiveness. These findings suggest that consumers who care about brand image are more likely to prioritize the product's visual appeal and functional benefits.

In contrast, trend involvement did not significantly impact either dimension. The path coefficient for appearance was β = 0.027 (t = 0.438), and for effectiveness, β = 0.071 (t = 1.256), which did not reach statistical significance. This indicates that consumer involvement with current trends does not noticeably influence perceptions of product appearance or effectiveness. Overall, the model explained 51.4% of the variance in appearance dimension and 48.4% of the variance in the effectiveness dimension, suggesting a good level of predictive power and model fit.
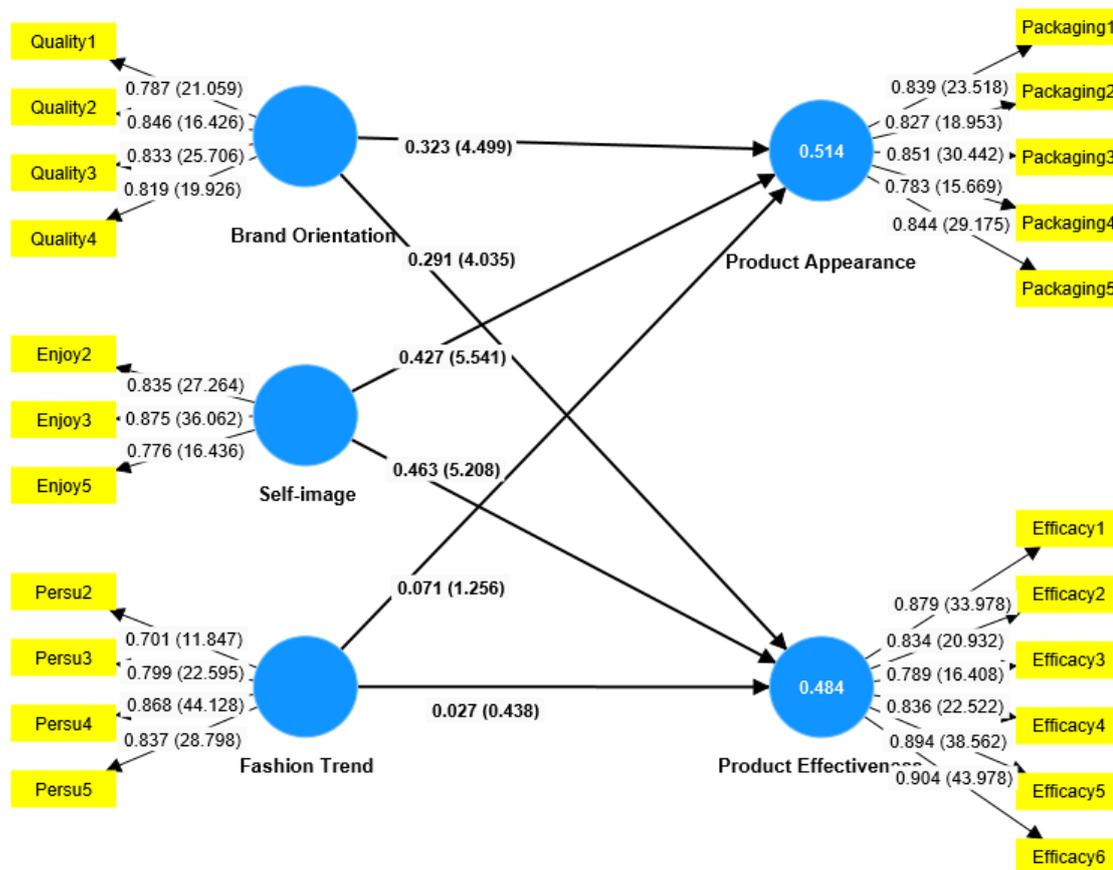
Hypothesis Testing Results

- H1: Brand orientation has a significant positive impact on product appearance design. (Supported)

- H2: Brand orientation has a significant positive impact on the evaluation of product effectiveness. (Supported)

- H3: Trend involvement has a significant positive impact on product appearance design. (Not supported)

- H4: Trend involvement has a significant positive impact on the evaluation of product effectiveness. (Not supported)

- H5: Self image has a significant positive impact on product appearance design. (Supported)

- H6: Self image has a significant positive impact on the evaluation of product effectiveness. (Supported)

CONCLUSION AND RECOMMENDATIONS

Research Conclusions

This study examined the influence of female consumers' lifestyles on their satisfaction with facial mask products. Through questionnaire surveys and statistical analyses, it explored the relationships among demographic variables, lifestyle dimensions (brand orientation, trend involvement, self-image), and facial mask satisfaction. Based on the findings, the following key conclusions are drawn:

Demographic Variables and Satisfaction

- Marital status: Unmarried women reported significantly higher satisfaction with facial masks' effectiveness than married women.

- Age: While overall differences were not statistically significant, the effectiveness dimension varied across age groups.

- Educational level: Respondents with a college (or technical university) education reported significantly higher satisfaction with the appearance and effectiveness of facial masks than those with graduate level education.

- Occupation and monthly income: No significant differences were found in satisfaction across different occupational types or income levels.

- Lifestyle and Satisfaction with Facial Masks

- The self-image dimension had the most decisive influence on appearance and effectiveness satisfaction, indicating that more image conscious consumers tend to be more sensitive to product performance and presentation.

- Brand orientation also plays a vital role in shaping satisfaction, showing consumers care about brand image and trust

- On the other hand, following trends does not matter as much people tend to focus more on practicality and whether the product fits their personal identity, rather than just going with what is fashionable.

Model Predictive Power and Fit

The structural equation modeling (SEM) results indicated that among the three lifestyle factors, self-image and brand orientation were the most influential predictors of satisfaction. The model explained 51.4% of the variance in satisfaction related to product appearance and 48.4% in product effectiveness, demonstrating a good model fit and predictive capability.

Managerial Implications

Based on the findings of this study, the following marketing and product design recommendations are proposed for companies and brands: To enhance consumer satisfaction with facial mask products, brands should improve product appearance and reinforce brand image. Given the strong positive effects of brand orientation and self-image on satisfaction, companies are encouraged to refine the quality and consistency of their packaging design while incorporating brand ambassadors and storytelling elements to strengthen brand value and fulfill consumers' psychological needs. Marketing strategies could focus on reaching unmarried individuals and those with lower levels of education since these groups have shown higher satisfaction with facial mask products. Tailored campaigns aimed at their specific needs and preferences could be incredibly effective. Since trend consciousness does not significantly influence satisfaction, brands should reduce over reliance on trend driven elements and instead emphasize the core benefits of their products, such as ingredient quality, safety, and efficacy.

Product research and development investments, along with clear communication of functional benefits, are essential to building competitive advantage. Finally, lifestyle based segmentation strategies using AIO (Activities, Interests, and Opinions) variables can be employed to match product offerings to consumer preferences better for instance, soothing masks may appeal to consumers focused on self-care. In contrast, functional masks may suit those seeking professional skincare performance.

Research Limitations and Future Research Directions

This study has several limitations worth noting. The sample included only female consumers with prior experience using facial masks and, therefore, may not fully represent the broader population, particularly male consumers or those who have never used facial masks. Secondly, the lifestyle aspect is based on the AIO model (Activities, Interests, and Opinions), but future research could strengthen this approach by incorporating personality traits to gain deeper insights into consumer behavior. Third, the cross sectional nature of this study limits its ability to draw causal inferences. Longitudinal research is recommended to examine how changes in lifestyle factors influence brand loyalty and repurchase behavior over time. Lastly, future studies may consider exploring the interaction between lifestyle and social media usage patterns or comparing lifestyle driven satisfaction across various skincare product categories, such as serums or moisturizers. These avenues would address current limitations and broaden the applicability and depth of lifestyle-based consumer research.

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