

# The Impact of Personality Traits and Product Knowledge on Consumer Satisfaction: Evidence from Foundation Cosmetics

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DOI : <https://doi.org/10.51583/IJLTEMAS.2025.1411000105>

Received: 07 December 2025; Accepted: 14 December 2025; Published: 23 December 2025

## ABSTRACT

In contemporary society, there is increasing emphasis on personal appearance and image. Within the rapidly growing cosmetics market, foundation as a core product in base makeup has garnered heightened attention. This study investigates the key factors influencing consumer satisfaction with foundation products, focusing on product knowledge (measured by self-awareness of skincare needs) and personality traits (such as openness to new experiences, enjoyment of life, and preference for variety) a questionnaire survey among 200 consumers with prior foundation usage experience. The survey included three primary constructs: product knowledge, personality traits, and satisfaction with foundation use. Results from factor analysis and correlation analysis using SPSS indicated a significant positive correlation between product knowledge and foundation satisfaction.

Personality traits such as novelty-seeking also significantly affect product satisfaction. Another analysis revealed that respondents with high product knowledge and personality traits reported significantly higher product satisfaction. These findings suggest that product knowledge and personality traits affect consumer satisfaction with foundation products.

**Keywords:** Personality Traits, Product Knowledge, Foundation Cosmetics, Consumer Behavior

## INTRODUCTION

Nowadays, daily life has evolved into individual style and identity. People spend on products in order to enhance their appearance. During that, the foundation plays a pivotal role, not only serving as the base of makeup but also significantly influencing the appearance of skin quality. Taiwan's profoundly ingrained aesthetic notion that "fair skin conceals all imperfections" has long driven many women to pursue lighter complexions. Skin color is genetically determined, so the foundation is a quick and accessible tool to alter skin tone and conceal flaws. Contemporary consumers expect foundations to deliver basic coverage, natural blending, and a pleasant usage experience.

Consumers often choose different foundation products for different social occasions. Depending on the situation, they may need multiple products to achieve various looks. This behavior reflects the increasing importance of product knowledge, which plays a key role in shaping user satisfaction. At the same time, personality traits also significantly impact consumer choices and overall satisfaction. People's openness to new experiences influences how they evaluate and select foundation products. Consumers who enjoy trying new products may have different expectations than those who rely on rational customer assessment.

Despite the diversity and rapid innovation in foundation offerings, most domestic studies have focused on product attributes or marketing strategies. Relatively little attention has been paid to internal psychological factors influencing satisfaction, such as product knowledge and personality traits.

This study uses a questionnaire survey to explore the impact of product knowledge and personality traits on consumer evaluations.

Based on the above, this study

has four research motivations:

- (1) Analyze how personality traits affect cosmetic foundation selection behavior.
- (2) To explore the factors influencing personality traits' satisfaction with cosmetic powder foundation usage.
- (3) Explore how product knowledge affects user satisfaction with foundation cream products.
- (4) To explore how personality traits and choice behaviors affect foundation product satisfaction.

## **LITERATURE REVIEW**

### **Personality Traits**

Personality traits affect customers in product selection, purchasing decisions, and user satisfaction. Personality reflects individual differences in emotions, behavior, and information processing and offers an explanation for consumer behavior (Guthrie, Kim, & Jung, 2008). Among the various models, the Big Five personality traits openness, conscientiousness, extraversion, agreeableness, and neuroticism are the most frequently used framework for examining consumer behavior and satisfaction (Castillo, 2017). Different personality traits significantly influence product purchasing behavior. Open individuals tend to be more receptive to new products and exhibit exploratory tendencies; they enjoy comparing and evaluating different brands (Castillo, 2017). Those with high levels of extraversion place more emphasis on appearance and demonstrate a greater dependency on and frequency of using cosmetic products. Personality traits affect how consumers evaluate products and influence their choice of purchasing channels. Individuals high in neuroticism are more sensitive to perceived risks. They may place greater importance on ingredient labeling, skin compatibility, and potential allergic reactions factors that can significantly affect their satisfaction (Apaolaza-Ibáñez, Hartmann, Diehl, & Terlutter, 2011).

Conversely, highly agreeable consumers value peer recommendations and online word-of-mouth, often relying on social information when making decisions (Yugistira, Lubis, & Chan, 2021). As Guthrie et al. (2008) emphasized, personality traits shape consumers' evaluations of brand image and product appearance, influencing their purchase intentions. This study focuses on personality traits with product knowledge to explore their interrelationship.

### **Foundation Products**

The cosmetic foundation is the core element of makeup and plays an important role in the overall makeup look. It contributes to skin tone correction, concealment, and the impression one gives in social contexts. According to Ikeda et al. (2012), foundation products can create a sense of luminosity through their reflective properties beyond evening out the skin tone and covering blemishes. This visual radiance and brightness are believed to enhance facial attractiveness significantly. Their study using visuals and reflection revealed that lightweight foundations can improve perceived attractiveness.

Bielfeldt et al. (2013) found that foundations with light coverage improved the overall appeal of females. Even unaware of the makeup, it still formed more positive first impressions. This potential social impact of a no-makeup makeup look and cosmetic use can influence interpersonal perception. Lee et al. (2013) evaluated various foundations' spreadability, coverage, and adhesion and discovered. They prove that the electric vibrating puff application outperformed the manual application.

Beyond aesthetic enhancement, foundation products may also influence skin health and microbiome. Baek (2019), through interviews with the so-called "New Seniors" demographic, reported that although older women typically avoid heavy makeup, many use foundation to mask wrinkles and uneven skin tone, thereby enhancing feelings of youthfulness and self-confidence. Wu et al. (2023) cosmetics foundations serve as exaggerated signals in heterosexual interactions. It may lead to misperceptions of physical appearance by prospective partners. Their study also revealed a declining preference among men for heavily made-up women in long-term partner selection, suggesting that authenticity in foundation use remains an important aspect of user perception.

### **Customer Satisfaction**

Customer satisfaction is a key indicator of whether a company has successfully fulfilled customer needs and expectations (Anderson, Fornell, & Lehmann, 1994). At its core, it refers to the extent to which a customer's experience with a product or service matches or exceeds their prior expectations (Oliver, 1980). This construct is predictive that customer loyalty will increase repurchase intentions and brand advocacy behaviors (Szymanski & Henard, 2001).

The most representative theoretical framework for customer satisfaction is the Expectancy-Disconfirmation Theory. According to this model, customers form expectations before using a product or service. If the experience exceeds expectations, then positive disconfirmation occurs and expresses satisfaction. Suppose it falls short, leading to dissatisfaction (Oliver, 1980). Therefore, companies can manage customer expectations and performance to control satisfaction.

Customer Satisfaction Score (CSAT) involves a single-question survey: Are you satisfied with this service? It is measured on a point Likert scale. This approach is not only simple and has high response rates but also involves real-time satisfaction tracking. It is often employed in short-term marketing campaigns or post-purchase evaluations (Hayes, 2008). Reichheld (2003) developed the Net Promoter Score (NPS), measured by asking, How likely are you to recommend this product/service to a friend? Although it may not fully explain the details, NPS is highly effective in predicting customer loyalty and word-of-mouth (Reichheld, 2003 ; Lawrence et al.). Quantitative tools, such as focus groups and open-ended questionnaires, are also valuable for uncovering the emotional or motivational aspects (Griffin & Hauser, 1993).

## **RESEARCH METHODOLOGY**

This study investigates the impact of product knowledge and personality traits on consumer satisfaction with foundation products and proposes the following four research hypotheses:

Hypothesis 1 (H1): Consumers' personality traits positively correlate with their satisfaction with foundation products. Highly open people are more likely to accept new products and various makeup styles; these products could enhance their satisfaction (Castillo, 2017; Guthrie et al., 2008).

Hypothesis 2 (H2): Consumers' personality traits positively affect product knowledge. Individuals with high involvement in cosmetic products tend to exhibit exploratory personality traits and are more likely to proactively seek information and try new products (Yugistira, Lubis, & Chan, 2021).

Hypothesis 3 (H3): Consumers' product knowledge about foundation products positively affects user satisfaction. Adequate product knowledge enables consumers to evaluate product quality correctly and choose products that are suitable for them, thereby improving their user experience and satisfaction (DeVellis, 2016).

Hypothesis 4 (H4): Personality traits influence consumer satisfaction with foundation products through product knowledge. Consumers with product knowledge and an open personality are likelier to select products that meet their needs, leading to higher product satisfaction.

This study explores the factors influencing consumer satisfaction with foundation products. The research sample consists of consumers with prior experience using such products. Data were collected through a self-developed structured questionnaire to quantitatively assess three primary constructs: personality traits, product knowledge, and product satisfaction. Each construct was measured using a five-point Likert scale (Likert, 1932). Respondents rated each statement based on their level of agreement, from “strongly agree” to “strongly disagree,” on a scale from 5 to 1. For the satisfaction construct, the scale ranged from “very satisfied” to “very dissatisfied.”

The survey was administered between March 1 and March 8, 2023, using purposive sampling, and a total of 200 valid responses were collected, yielding a 100% response rate. Purposive sampling is suitable for exploratory research and allows for in-depth analysis of specific target populations (Etikan, Musa, & Alkassim, 2016). After data collection, item analysis, descriptive statistics, reliability analysis, and Pearson correlation analysis followed by structural equation modeling to examine the relationships among the variables.

## Data Analysis

### Demographic Profile of Respondents

This questionnaire survey received Two hundred valid responses were collected, yielding a 100% response rate. This section presents a statistical analysis of respondents' demographic variables, including gender, marital, age, educational, occupation, and monthly income.

There are 132 females (66.0%) and 68 males (34.0%). The result indicates that women remain dominant in foundation usage. Unmarried respondents slightly outnumbered those who were married, accounting for 106 individuals (53.0%) and 94 individuals (47.0%). Regarding marital status, unmarried respondents slightly outnumbered those who were married, accounting for 106 individuals (53.0%) and 94 individuals (47.0%), respectively. The age distribution revealed that the 41–50 age group was the largest segment, comprising 57 respondents (28.5%), followed by 21–30 years (26.0%), 31–40 years (17.5%), under 20 years (16.5%), and 51–60 years (11.5%). Middle-aged women aged 41–50 are key users of foundation products. This is because they are more concerned with concealing blemishes and achieving anti-aging effects.

As for educational background, the majority of respondents held a college or technical college degree (132 individuals, 66.0%), followed by high school or vocational school graduates (52 individuals, 26.0%), and postgraduate degree holders (16 individuals, 8.0%). This indicates that most foundation consumers have a moderate to high level of education, which may correspond to better product selection skills and more excellent knowledge of cosmetic usage.

In the occupational category, the largest group was students (65 individuals, 32.5%), followed by service industry workers (47 individuals, 23.5%), agricultural, industrial, and commercial employees (36 individuals, 18.0%), freelancers (33 individuals, 16.5%), and military, civil servants, and educators (19 individuals, 9.5%). The high proportion of students and service workers may be attributed to their frequent social interactions and elevated appearance-related demands.

Finally, in terms of monthly income, the highest percentage of respondents fell into the "NT\$50,001 and above" bracket (58 individuals, 29.0%), followed by "NT\$30,001–50,000" (54 individuals, 27.0%), "NT\$10,001–30,000" (53 individuals, 26.5%), and "NT\$10,000 or below" (35 individuals, 17.5%). Higher-income consumers represent a significant portion of the foundation product market. These people may be more inclined to purchase mid- to high-priced or functionally specialized foundation products.

### Item Analysis

An item analysis was collected in this study, which assesses the discriminative validity of each item within the overall scale. Two key indicators were examined: (1) Item-Total Correlation and (2) Critical Ratio (CR value). For the personality traits construct, the item-total correlation coefficients ranged from .509 to .568, and all CR values reached statistical significance ( $p < .001$ ), indicating that the items demonstrated good discriminative power and were suitable for subsequent factor analysis and reliability testing. All items in the product knowledge construct showed correlation coefficients above .50, with CR values also reaching high significance levels ( $p < .001$ ), confirming strong internal consistency and item discrimination. As for the satisfaction construct, item-

total correlations were generally above .85, indicating a high degree of alignment between individual items and the overall construct. These findings demonstrate excellent internal consistency and discriminative validity; therefore, all items were retained for further analysis. Please refer to the following table 1.

Table 1: Item Analysis

Construct	Item Description	Corr.	CR	Status
Product Knowledge	I have a good understanding of my skin condition	0.643	10.447	Retained
Product Knowledge	I select foundation based on my skin type	0.642	10.070	Retained
Product Knowledge	I have a certain level of understanding of foundation products	0.632	10.206	Retained
Product Knowledge	I change my foundation according to the weather	0.620	9.141	Retained
Product Knowledge	I own multiple types of foundations at the same time	0.545	8.648	Retained
Personality Traits	I enjoy shopping	0.548	8.918	Retained
Personality Traits	I am a person who likes new experiences	0.509	7.302	Retained
Personality Traits	I am a person who truly enjoys life	0.568	9.774	Retained
Personality Traits	I am a person who enjoys a variety	0.529	9.789	Retained
Product Satisfaction	The foundation I use regularly is convenient to apply	0.891	6.673	Retained
Product Satisfaction	The ingredients of the foundation I use are of good quality	0.905	6.778	Retained
Product Satisfaction	The foundation I use adheres well to my skin	0.916	7.872	Retained
Product	My overall experience after using the	0.918	7.774	Retained

Satisfaction	foundation has been positive			
Product Satisfaction	The foundation I use does not cause allergic reactions easily	0.911	6.132	Retained
Product Satisfaction	The foundation shade I use matches my skin tone	0.916	6.382	Retained
Product Satisfaction	The foundation I use does not have a strong alcohol scent	0.855	6.231	Retained

The reliability and validity analysis showed that all three constructs personality, product knowledge, and satisfaction demonstrated good internal consistency and measurement quality. Cronbach's alpha values were all above 0.70, indicating acceptable to excellent reliability. Composite reliability ( $\rho_a$  and  $\rho_c$ ) also exceeded 0.7, confirming stable and consistent measurements. In addition, the average variance extracted (AVE) for each construct was above 0.50, suggesting that the items within each construct effectively explained more than half of the variance, thus supporting convergent validity. Please refer to the following table 2.

Table 2: Construct reliability and validity

	Cronbach's alpha	Composite reliability ( $\rho_a$ )	Composite reliability ( $\rho_c$ )	(AVE)
Personality	0.719	0.773	0.804	0.512
Produce	0.820	0.833	0.880	0.647
satisfy	0.966	0.967	0.972	0.832

Discriminant validity used the Fornell-Larcker criterion, which requires each construct's square root of the Average Variance Extracted (AVE) to be more significant than its correlations with other constructs. As shown in the table, the square roots of the AVEs are 0.715 for personality, 0.805 for product knowledge, and 0.912 for satisfaction all of which are higher than the corresponding inter-construct correlations. Specifically, the correlation between personality and product knowledge was 0.433, between personality and satisfaction was 0.468, and between product knowledge and satisfaction was 0.645. These results confirm that each construct is empirically distinct, supporting adequate discriminant validity. Please refer to the following table 3.

Table 3: Discriminant validity- Fornell Larcker criterion

	Personality	Produce	satisfy
Personality	0.715		
Produce	0.433	0.805	

satisfy	0.468	0.645	0.912
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The structural model analysis revealed that all hypothesized paths were statistically significant. Personality traits had a significant direct effect on satisfaction ( $\beta = 0.468, t = 7.739, p < 0.001$ ), as well as on product knowledge ( $\beta = 0.433, t = 7.974, p < 0.001$ ). Product knowledge, in turn, significantly positively affected satisfaction ( $\beta = 0.544, t = 8.268, p < 0.001$ ). Furthermore, the indirect effect of personality traits on satisfaction through product knowledge was also significant ( $\beta = 0.236, t = 5.973, p < 0.001$ ). These results indicate that product knowledge partially mediates the relationship between personality traits and satisfaction with foundation products. Please refer to the following table 4.

Table 4: Total Effect: Path Coefficient Results

	Original sample (O)	Sample mean (M)	STDEV	O/STDEV	P value
Personality -> satisfy	0.468	0.475	0.06	7.739	0.0000
Personality -> Produce	0.433	0.443	0.054	7.974	0.0000
Produce -> satisfy	0.544	0.541	0.066	8.268	0.0000
Personality -> Produce -> satisfy	0.236	0.239	0.039	5.973	0.0000

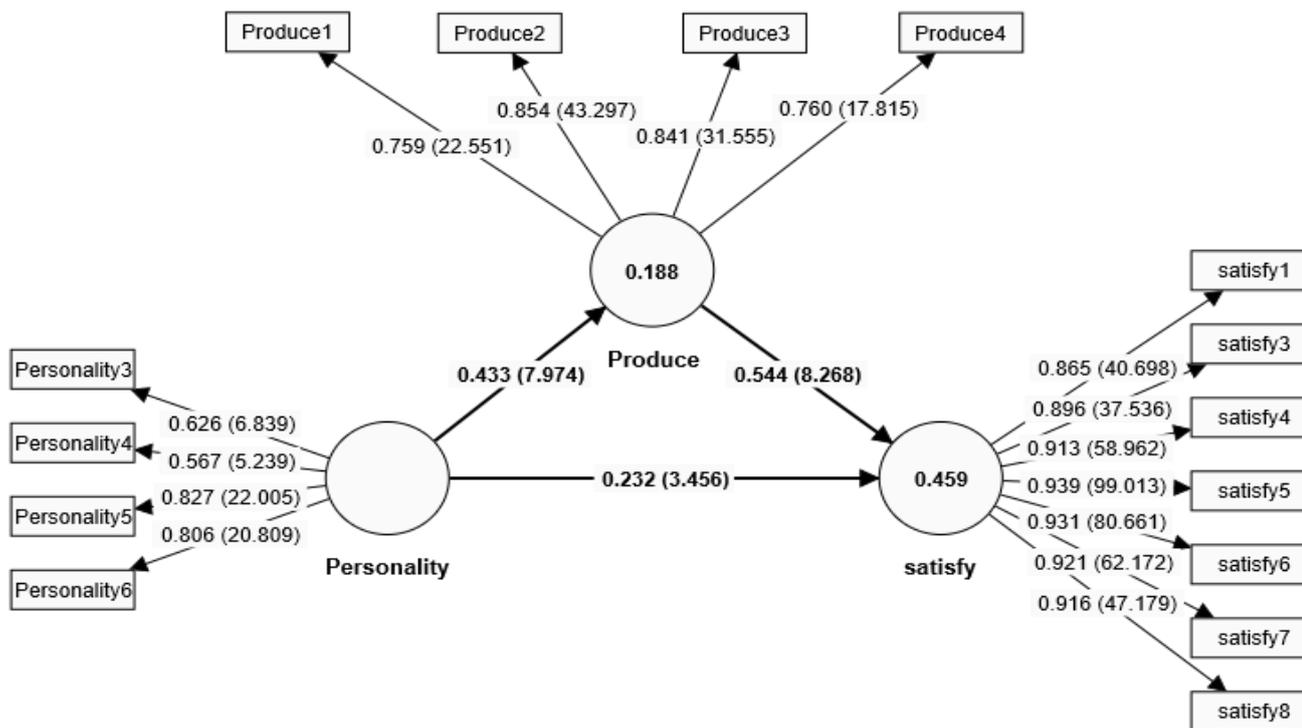
Hypothesis 1 (H1): Consumers' product knowledge of foundation products is positively associated with their satisfaction with using the products. Supported

Hypothesis 2 (H2): Consumers' personality traits positively correlate with their satisfaction with foundation products. Supported

Hypothesis 3 (H3): Consumers' personality traits are positively associated with their level of product knowledge about foundation products. Supported

Hypothesis 4 (H4): There is a significant interaction effect between product knowledge and personality traits on consumers' satisfaction with foundation products. Supported

The PLS-SEM analysis reveals that personality traits, directly and indirectly, affect consumer satisfaction with foundation products. Specifically, personality significantly impacts product knowledge ( $\beta = 0.433, t = 7.974$ ), and product knowledge, in turn, significantly influences satisfaction ( $\beta = 0.544, t = 8.268$ ). Additionally, personality directly affects satisfaction ( $\beta = 0.232, t = 3.456$ ), indicating a partial mediation effect through product knowledge. All measurement items show significant outer loadings (all  $> 0.5, p < 0.001$ ), confirming the reliability and validity of the constructs. These results suggest that consumers with open and engaged personalities tend to acquire more knowledge about foundation products, directly and indirectly enhancing their satisfaction. Please refer to the following figure 1.



## RESULTS

## DISCUSSION

This study shows that people who enjoy new experiences and care about their appearance are often more satisfied with the foundation products they use. These individuals tend to be more engaged with brands they pay attention to product details, follow trends, and usually have higher expectations when it comes to how a product looks, feels, and performs. Because of this, they are more likely to form emotional connections with certain brands and judge products not just by their function but also by how they align with personal taste and identity.

The findings also show that both product knowledge and personality traits play an important role in how satisfied someone feels after using a foundation. In fact, product knowledge acts as a bridge between personality and satisfaction. In other words, people with certain personality traits are more likely to gain product knowledge, and that knowledge helps them choose the right product which makes them more satisfied in the end. Helping consumers gain more product knowledge, especially those already engaged and curious can be a key strategy for improving satisfaction and building strong brand relationships.

Companies must help customers find the right products that fit their personal needs. This reduces the chances of buying the wrong product and becoming dissatisfied. Only when customers are satisfied are they more likely to return and continue buying the brand's goods.

People who enjoy trying new things and pay attention to themselves usually know more about cosmetics. They compare brands and look for the best fit. If they know what they want, they are more satisfied with their choices. Customers with both product knowledge are aware of product quality. They care about how a product performs and how a brand presents itself. Because of this, their satisfaction is often much higher than that of others.

## LIMITATIONS

This study looked at the links between product knowledge, personality traits, and satisfaction. However, there are some limitations. First, the sampling method may limit how well the results apply to other groups. Future studies should use random sampling from wider areas and more diverse people to improve generalizability. Second, the data came from self-reports. This can lead to social desirability bias and self-reporting bias. It matters, especially when asking about personality and product preferences. People may give answers they think are acceptable, not what they really feel or do. Third, the study used a cross-sectional design. This shows only one moment in time. It cannot explain cause and effect or how satisfaction changes over time. In short, while the study provides a good starting point, future research should improve on sampling, measurement tools, and research design. This would make the findings clearer and more useful.

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