

Consumer Personality Traits vs. their Preferences for the Characteristics of Wood Furniture Products

Shulan Yu,* Qun Zheng, Tianyue Chen, Hongli Zhang, and Xinran Chen

Individual personality traits are powerful determinants of behavior, and they can profoundly influence consumer decisions as a comprehensive understanding of consumer personality traits. Their role in decision-making can improve the predictability of consumer-related behavior. In this study, data on consumers' preferences and personality traits were collected through questionnaires using the Wood Furniture Product Characteristics Consumer Preference Scale and the Big Five Personality Inventory Simplified. Bivariate correlation analysis and stepwise multiple regression analysis were used to investigate the relationship between the Big Five personality traits (neuroticism, extraversion, openness, agreeableness, and conscientiousness) and wood furniture product characteristics consumer preferences. Correlation analysis indicated that neuroticism was correlated negatively with wood furniture product characteristic consumer preference scores. Extraversion, agreeableness, and conscientiousness were correlated positively with wood furniture product characteristic consumer preference scores. There was no correlation between openness and consumer preference. Regression analysis indicated that neuroticism, extraversion, agreeableness, and conscientiousness predicted wood furniture product trait consumer preferences. Overall, assessing personality traits can help provide insight into the psychological and behavioral characteristics of consumers when purchasing wood furniture products, allowing for a more comprehensive understanding of market demand and more effective marketing and product positioning strategies.

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Contact information: College of Furnishings and Industrial Design, Nanjing Forestry University, Nanjing 210037, China; *Corresponding author: yusl@njfu.edu.cn

INTRODUCTION

Global trade in wooden furniture has grown significantly in recent years. From 2015 to 2021, global furniture exports exceeded USD 63.04 billion (International Trade Centre 2019). The wood furniture market is forecast to grow by USD 4.93 billion between 2022 and 2026, accelerating at a compound annual growth rate (CAGR) of 2.73% during the forecast period (Research and Markets 2022). The increasing adoption of eco-friendly furniture is one of the major reasons driving the growth of the wood furniture market in the coming years (Zhu and Niu 2022). Asian countries are expected to become major producers of furniture and to continue to expand their market share (Oblak *et al.* 2020).

As one of the representative industries of China's light industry, the furniture industry is not only one of the representative industries of China's export economy but also

one of the main export areas of forest products in China. Among China's forest products exports, wood, pulp, wood furniture, and wood products are relatively dominant product categories, and wood furniture is one of the important representative categories (Barbu and Tudor 2022). Most of the revenue of the Chinese furniture industry is determined by the sales of wood furniture. Currently, wood furniture occupies a key position in the Chinese furniture industry and strongly represents the Chinese furniture industry (Forward The Economist 2018). Chinese solid wood furniture is also favored by many domestic and international consumers and has a wide appeal. Currently, China is the world's largest furniture producer (Xu *et al.* 2020), exporter, and consumer (Yan 2017), and holds an important position in the global furniture export trade. However, as the world's largest wood furniture trading country, China's share in the world market has started to show a decreasing trend year by year (Wan *et al.* 2022). Therefore, it is urgent to increase the competitive advantage of exports in the face of increasing international competition.

Wood is an important material in furniture production and is also one of the green materials used in furniture production worldwide. It is widely preferred by consumers for its durability (Hu *et al.* 2021), ease of use, safety, light weight (Hu *et al.* 2019), environmentally friendly properties, and pleasing appearance, as well as its ability to mitigate climate change by acting as a carbon sink (Ali *et al.* 2022). Wood furniture is also an important part of the wood chain that can contribute to the sustainable development of the wood industry (Xiong *et al.* 2017). Thus, it holds an important market share in the global furniture market.

Individual psychological and trait factors also play an important role in consumers' purchase decisions and consumer behavior and preferences. Preferences are the priorities given to different options by the consumer unit (household or individual) when faced with a decision situation (Turner and Edwards 1974). Consumers' personality and behavior patterns are described as their "personality traits". In such terms, the word "personality" refers to the combination of individual characteristics that determine how individuals interact with their surroundings, and "traits" refers to the theoretical constructs used to explain the continuous consistency in the behavior of individuals across situations (Gatewood *et al.* 2015). Therefore, "personality traits" are the most stable and important components of a person's life (Costa and McCrae 1992). McCrae and Costa (1987) proposed the "five personality traits" to explain the values and preferences of different personality traits (McCrae *et al.* 1987). The five personality traits theory is a widely accepted classification in modern psychology, which classifies human personality traits into five dimensions: Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness (Fig.1). The Five Personality Traits are described below.

- Neuroticism: Describes whether individuals are emotional, suspicious, or nervous, and have a higher likelihood of experiencing negative emotions. People with high neuroticism tend to be anxious, irritable, depressed, and pessimistic.
- Extraversion: Describes whether an individual is outgoing, energetic, social, and expressive. Individuals high in extraversion tend to be talkative, energetic, adventurous, and social.
- Openness: Describes whether the individual is imaginative, curious, creative, and cognitive. People with high openness tend to be receptive to new things, creative, and exploratory.

- Agreeableness: Describes whether an individual is kind, cooperative, trusting, and compassionate. People with a high degree of agreeableness tend to be friendly, generous, and affable.
- Conscientiousness: Describes whether an individual is organized, dedicated, organized, self-disciplined, and extraordinarily reliable. People with a high level of conscientiousness tend to be punctual, dedicated, and goal-oriented.

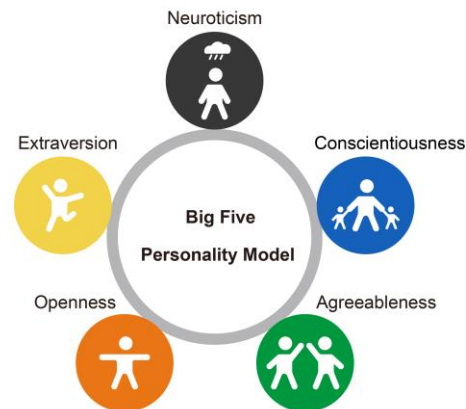


Fig. 1. Five personality trait model

There is a strong relationship between these trait factors and consumers' consumer behavior and purchase preferences. In previous studies, the five personality traits were associated with factors such as consumer behavior (Fraj and Martinez 2006; Sandy *et al.* 2013), purchase preferences (Baik *et al.* 2016), and consumer satisfaction. Yu *et al.* (2023) used hierarchical analysis (AHP) to explore the factors influencing online furniture purchasing behavior, noting that personal factors are important influences on consumers' furniture purchasing decisions. Gudarzi *et al.* (2022) used structural equation modeling to investigate the relationship between consumer preferences for wood furniture (home and office) and factors such as salesperson characteristics, safety and environment, corporate responsibility factors, internal factors, and product characteristics, and results showed that safety and environment characteristics, external factors, and salesperson characteristics were significantly related to consumer preferences, while product characteristics were not significantly. The results showed that safety environment characteristics, external factors, and salesperson characteristics were significantly related to consumer preferences, while product characteristics had no significant relationship with consumer preferences (Gudarzi *et al.* 2022). High environmental quality, *i.e.*, greenness, is an advantage of wood products and has an important influence on European consumer preferences for wood products (Roos and Nyrod 2008; Holopainen *et al.* 2014). Kaputa *et al.* (2018) found that customers' preferences when purchasing indoor and outdoor furniture depend on the characteristics of the furniture, the materials used, and the style of the furniture when studying the furniture market in the Slovak and Croatian regions. However, the main factors that influence customers' furniture choices have not been conclusively identified. Most researchers currently believe that personality traits are important and complex. Personality traits include both personality and temperament. Personality traits can directly or indirectly influence customers' purchase preferences. Many scholars have researched this subject, and there is a wealth of research results available. At the same time, psychology has proven to be a valuable market segmentation avenue for understanding consumer preferences. In

addition, many studies have demonstrated that personality traits have an influential and predictive effect. For the first time to our knowledge (Liu *et al.* 2019), quantitative demonstration has been achieved of the effectiveness and relative importance of personality in predicting users' online purchase preferences across product categories in e-commerce using a data-driven approach. Lin *et al.* (2019) explored the role of personality by measuring the acceptance of GM pork products by six personality traits (Agency, Agreeableness, Openness, Neuroticism, Extraversion, and Conscientiousness) for consumers in the United States (N = 945), China (N = 945), and Italy (N = 954). Ko *et al.* (2018) used Type I Quantitative Theory to analyze the influence of different personality traits on office chair attractiveness ratings, thus identifying design elements that better convey office chair attractiveness and improve the design through the preferences of different users. Bosnjak *et al.* (2007) developed a hierarchical personality model for explaining and predicting consumers' intentions to purchase products and services online. Ul Islam *et al.* (2017) found personality traits to be predictors of online consumer engagement, with extraversion being the strongest driver of consumer engagement in online brand communities, followed by openness to experience, neuroticism, and agreeableness; responsibility was negatively associated with engagement. Mulyanegara *et al.* (2009) found a relationship between consumer personality and brand personality, with consumers who exhibited a dutiful personality showing a preference for trustworthy brands and extroverts being motivated by social brands. O'Connor *et al.* (2022) investigated the relationship between the Big Five traits and narcissism and consumer preferences for different car features, with young, extroverted, and narcissistic consumers tending to value car style and performance, while highly pleasant, dutiful consumers tended to value safety and practicality. Golestanbagh *et al.* (2021) assessed the association of personality traits with eating habits and food preferences using Pearson correlation analysis and multiple stepwise regression analysis and showed that neuroticism and openness were associated with low scores, while responsibility was associated with high scores on eating habits, and different personality traits were also correlated with food preferences. Sert *et al.* (2023) used descriptive statistical analysis, Pearson correlation analysis, and multiple linear regression analysis to analyze the data, thus indicating that agreeableness, dutifulness, and neuroticism were significant predictors of low scores. This shows that personality traits can help us understand ourselves as well as predict behavioral tendencies in different contexts. However, there is little research on the relationship between personality traits and furniture purchasing decisions and behaviors.

Establishment of Product Characteristics Consumer Preferences

The literature review yielded the following factors of consumer preference for wood furniture product characteristics: brand, material, sense of design, quality, and price. The details are shown in Table 1.

Table 1. Product Characteristics Consumer Preference Factors When Buying Wood Furniture

Dimension	Factors
Product Characteristics Consumer Preferences	Brand
	Material
	Sense of Design
	Quality
	Price

The structure of this paper is as follows: First, the introductory background and research methodology of this paper are presented; also presented is the questionnaire which was used to collect data. Second, the results from descriptive statistical analysis, bivariate correlation analysis, and stepwise multiple regression analysis are presented. Finally, the paper summarizes the conclusions drawn from the study and provides suggestions for further research. The results of the study will improve the quality of service from production, design, manufacturing, after-sales service, and other aspects to enhance furniture consumer satisfaction.

EXPERIMENTAL

Research Methodology

In this study, two scales were employed as data-gathering devices. One was a Likert scale-based wood furniture product characteristic preference questionnaire. It involved assessing the qualities and preferences of participants for the consumer of wood furniture product characteristics. A 7-point scale was adopted to increase the assessment's accuracy and reliability (Colman *et al.* 1997). On a 7-point scale, participants were asked to score the appropriate topic (for example, "When I buy wood furniture, the brand is my first choice") (1 = extremely unimportant, 2 = unimportant, 3 = somewhat insignificant, 4 = not sure, 5 = relatively important, 6 = important, 7 = very important).

The other questionnaire is a revised version of the Neuroticism Extraversion Openness Five-Factor Inventory (NEO-FFI) (Costa and McCrae 1992). The NEO-FFI is a short version of the Big Five Personality Inventory, with 60 questions selected from the 240 questions on the NEO-PI-R to form a revised version of the NEO-FFI. The full scale consists of 5 subscales, namely extraversion, agreeableness, responsibility, neuroticism, and openness, with 12 items for each subscale. Participants were asked to answer 60 questions (in Mandarin) assessing their Big Five personality traits (Cronbach's alpha coefficient: neuroticism alpha = 0.85, extraversion alpha = 0.75, openness alpha = 0.92, agreeableness alpha = 0.70, and conscientiousness alpha = 0.73). In the questionnaire, a 5-point scale (5 = strongly agree, 4 = agree, 3 = unsure, 2 = disagree, 1 = non-disagree) was used to rate each of the 5 statements (*e.g.*, "I laugh easily," "I like having a lot of friends around me"). The NEO-FFI also contains 23 reverse-scored items that have been adopted as valid and reliable personality measures (McCrae *et al.* 2004) and are appropriate for Chinese (McCrae and Costa Jr 1997).

The NEO-FFI is a widely used personality measure that assesses an individual's personality traits on five dimensions: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Although the NEO-FFI provides relatively reliable results, it has some limitations (Costa and McCrae 1992). Firstly, it is solely an evaluative tool and cannot fully reveal an individual's complete range of traits and behaviours. Human personality is a multifaceted and intricate construct, and a complete and precise depiction of an individual's personality is difficult to achieve solely based on test results. Secondly, the precision of the NEO-FFI is contingent on the honesty of the respondents. If an individual misrepresents or deliberately provides misleading responses, then the evaluation outcomes might be compromised. In addition, personality traits are also influenced by other factors, such as environment and socio-culture, *etc.*, and the NEO-FFI is unable to fully take into account the impact of these factors on an individual's behavior (Credé *et al.* 2012). Overall, the NEO-FFI can be used as a reference tool to provide some qualitative assessment of an individual's personality traits.

Analysis Methods

Pearson correlation analysis requires continuous numerical variables, and in questionnaire investigations, Likert scale data are commonly used as continuous numerical variables. As a result, Pearson correlation analysis is the most often used statistical technique in scale analysis. Correlation denotes the interdependence of distinct data sets represented by variables. Pearson's correlation coefficient r has a value ranging from “-1” to “+1”, signifying a fully positive to a perfectly negative correlation, with larger absolute values suggesting a stronger connection between the two variables (Cohen *et al.* 2009).

Stepwise multiple regression analysis is a common statistical analysis technique that attempts to isolate the independent variables associated with the dependent variable from a large number of independent variables to construct a reliable regression equation that reflects the relationship between the two. All independent variables are assessed in stepwise regression analysis, and those that are meaningless or have little influence are deleted in order, while those that are relevant are maintained and incorporated in the regression equation. The correlations between variables can be described, predicted, or revealed using this technique (Johnsson 1992).

Data analysis was performed using SPSS version 26.0. Pearson correlations were used to examine the relationship between the five personality traits and consumer preferences for wood furniture product attributes, and multiple regressions were run with personality components as predictors of wood furniture consumer preferences. The procedure for combining these two techniques is shown in the flowchart (Fig. 2).

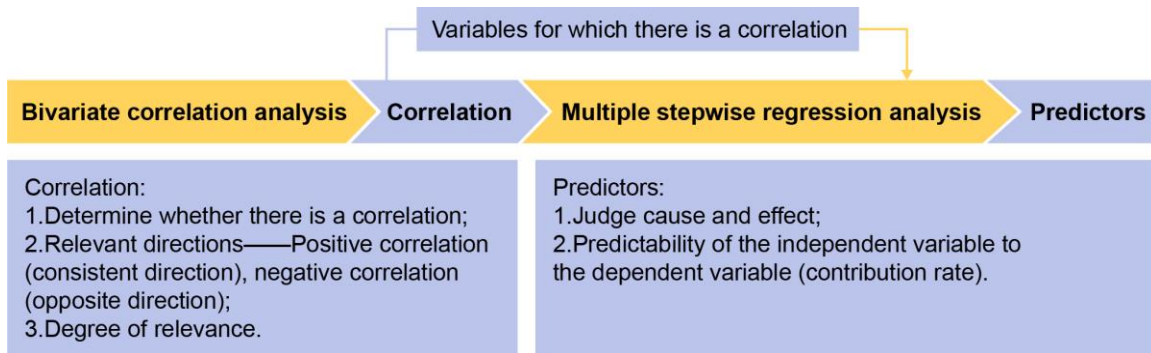


Fig. 2. Data analysis process diagram

RESULTS AND DISCUSSION

Reliability and Validity Testing of Data

Cronbach's alpha was used to test the reliability of the data, and the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy and Bartlett's sphericity test were used to check the content validity and structural validity of the questionnaire. The details are shown in Table 2.

Information of Subjects

The following are the demographic characteristics of the participants (Fig. 3). An online survey was carried out from 21/03/2023 to 30/03/2023 among 245 Participants, from various backgrounds, aged 23 to 52, with a split of 100 males (42.2%) and 137 females (57.8%). The questionnaires were disseminated and collected over WeChat and other social

media platforms. A total of 251 individuals clicked on the questionnaire link, whereas 245 responded to the online version, and 245 questionnaires were ultimately retrieved. Invalid questionnaires were removed, which involved those completed in less than 150 seconds (the average time for serious completion) and those with incorrectly answered standard questions (which were set with standard answers, choosing which incorrectly would deem the questionnaire invalid). A total of 237 questionnaires were ultimately deemed valid.

Table 2. Results of the Reliability, KMO, and Bartlett’s Tests

	Cronbach's Alpha	KMO Measure of Sampling Adequacy	Bartlett's Test of Sphericity	
Wood Furniture Product Characteristics Consumer Preference Scale	0.932	0.925	Approx. Chi-square	1967.204
			Df.	78
			Sig.	0.000
Big Five Personality Trait Inventory	0.935	0.964	Approx. Chi-square	11013.353
			Df.	1770
			Sig.	0.000

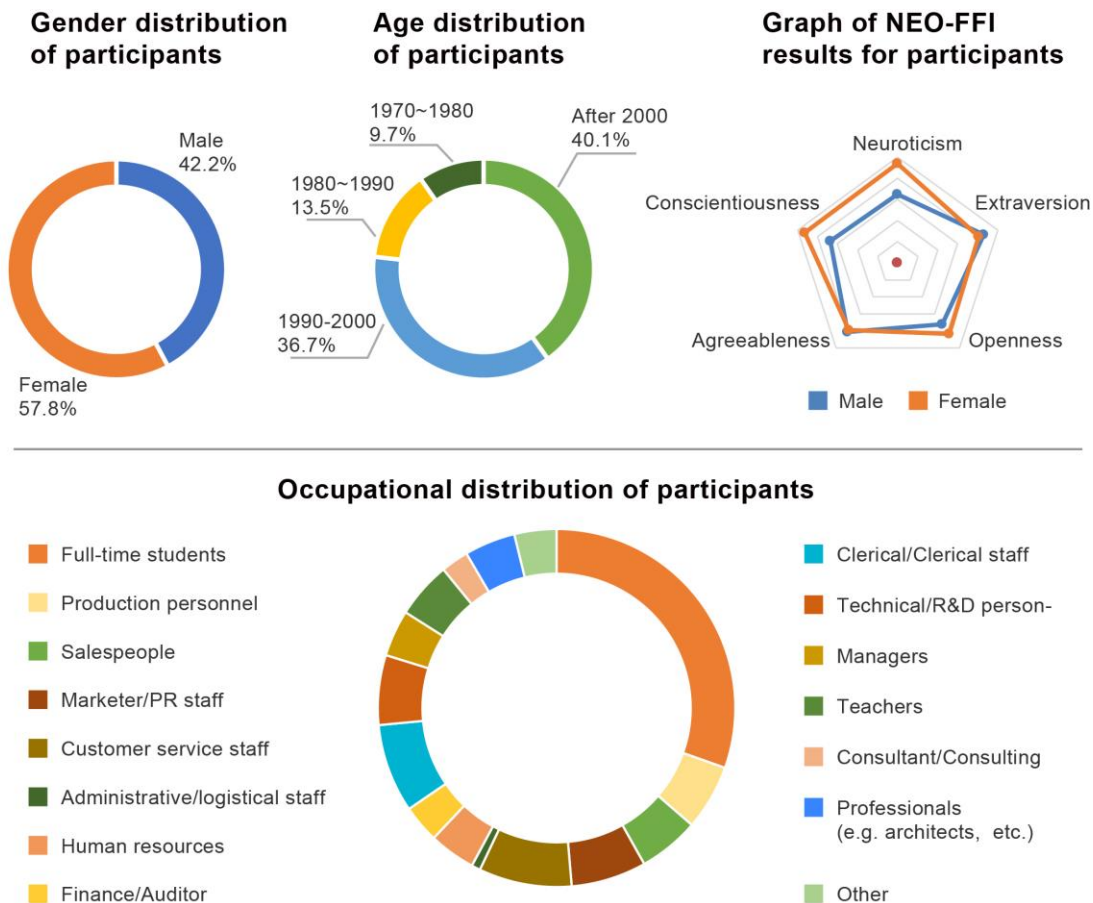


Fig. 3. Demographics of participants

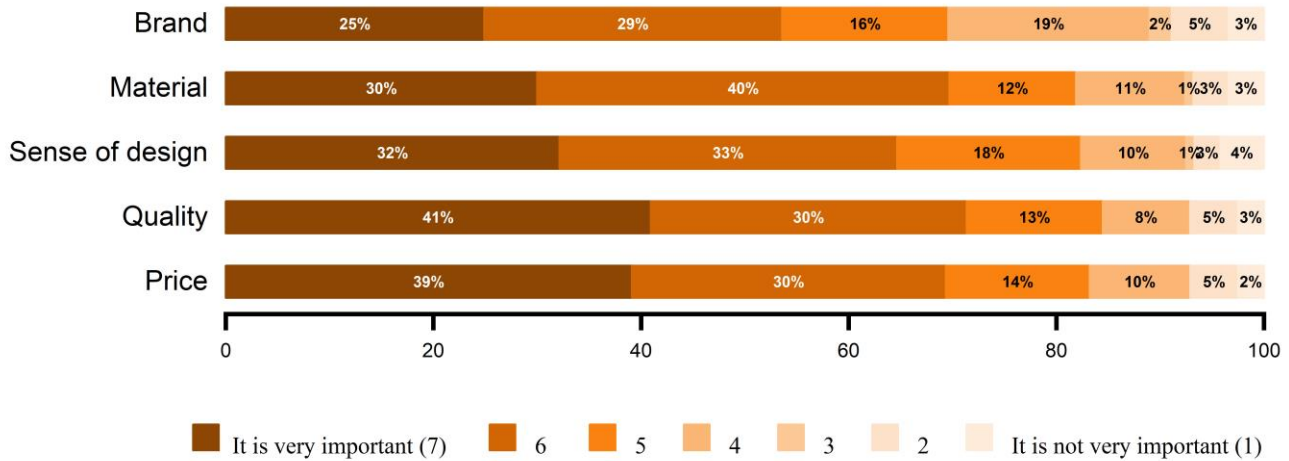


Fig. 4. Consumer preference for wood furniture consumer

Figure 4 depicts respondents’ perspectives regarding key consumer preference variables for wood furniture product attributes, such as brand, material, design sense, quality, and price. In this work, a score of 5 or above (7 for very important, 6 for important, and 5 for relatively important) reflects the importance of the factor in the consumer's decision to purchase wood furniture. Thus, the sum of the percentages of 5, 6 and 7 indicates the importance of the factor in the consumer’s purchasing decision. Quality (84%), price (83%), and design sense (83%) are the most significant product attribute consumer preference variables examined. Quality (41% very essential) and pricing (39% very important) are more significant to responders. Overall, the high percentages of favorable preferences for quality, price, and design sense show that when purchasing wood furniture, customers place a high value on these consumer preference criteria.

Table 3 shows the correlation between the five personality traits and consumer preferences for wood furniture product characteristics.

Table 3. Pearson's Correlation Coefficient between the Five Personality Traits and the Characteristic Consumer Preferences for Wood Furniture Products (n=237)

	Brand	Material	Sense of Design	Quality	Price
Neuroticism	-0.51**	-0.34**	-0.34**	-0.32**	-0.26**
Extraversion	0.67**	0.55**	0.54**	0.49**	0.47**
Openness	-0.09	0.05	0.11	0.09	0.08
Agreeableness	0.31**	0.47**	0.40**	0.51**	0.35**
Conscientiousness	0.69**	0.62**	0.60**	0.56**	0.49**

**p<0.01

A linear regression and stepwise multiple regression analysis considering different wood furniture product characteristic consumer preference factors separately, with preference factors as the dependent variable (outcome variable) and big five personality traits as the independent variable (predictor variable). The details are shown in Table 4 and 5.

Table 4. Linear Regression Analysis of the Contribution of Personality Characteristics to Consumers' Characteristic Preference Scores for Wooden Furniture Products (n=237)

	SE [95 % CI]	t	P	R ²
Model 1(Brand)				
Neuroticism	-0.506	-8.998	0.000	0.256
Extraversion	0.666	13.667	0.000	0.443
Openness	-0.090	-1.378	0.170	0.008
Agreeableness	0.311	5.009	0.000	0.096
Conscientiousness	0.694	14.766	0.000	0.481
Model 2(Material)				
Neuroticism	-0.341	-5.557	0.000	0.116
Extraversion	0.552	10.155	0.000	0.305
Openness	0.047	0.717	0.474	0.002
Agreeableness	0.467	8.100	0.000	0.218
Conscientiousness	0.624	12.241	0.000	0.389
Model 3(Sense of design)				
Neuroticism	-0.337	-5.487	0.000	0.114
Extraversion	0.537	9.760	0.000	0.288
Openness	0.112	1.735	0.084	0.013
Agreeableness	0.400	6.691	0.000	0.160
Conscientiousness	0.601	11.520	0.000	0.361
Model 4(Quality)				
Neuroticism	-0.322	-5.211	0.000	0.104
Extraversion	0.487	8.544	0.000	0.237
Openness	0.088	1.350	0.178	0.008
Agreeableness	0.506	9.004	0.000	0.275
Conscientiousness	0.558	10.321	0.000	0.312
Model 5(Price)				
Neuroticism	-0.258	-4.091	0.000	0.066
Extraversion	0.471	8.196	0.000	0.222
Openness	0.078	1,195	0.233	0.006
Agreeableness	0.353	5.778	0.000	0.124
Conscientiousness	0.493	8.680	0.000	0.243
*p<0.05;**p<0.01				

Test for Contradiction between Correlation and Regression Analysis

The problem with the positive and negative opposites of the standard regression coefficients of correlation is that correlation considers only the relationship between the two, and regression analysis includes many control variables that affect the relationship. The other variables in the multiple regression analysis, along with the independent variables, have a positive effect on the dependent variable. The linear fit of neuroticism and wood furniture consumer preference shows a significant negative correlation, as shown in Fig 5. Thus, neuroticism is an inverse predictor of product characteristic preference.

Table 5. Stepwise Multiple Regression Analysis of the Contribution of Personality Traits to Consumer Preference Scores for Wood Furniture Product Characteristics (n=237)

	SE [95 % CI]	t	P	R ²
Model 6(Brand)				
Extraversion	0.270	3.025	0.003	0.501
Conscientiousness	0.463	5.197	0.001	
Model 7(Material)				
Neuroticism	0.176	2.723	0.007	0.456
Agreeableness	0.284	5.153	0.000	
Conscientiousness	0.615	9.626	0.000	
Model 8(Sense of design)				
Agreeableness	0.166	2.943	0.004	0.400
Conscientiousness	0.534	9.507	0.000	
Model 9(Quality)				
Neuroticism	0.161	2.407	0.017	0.415
Agreeableness	0.363	6.345	0.000	
Conscientiousness	0.506	7.644	0.000	
Model 10(Price)				
Neuroticism	0.234	2.965	0.003	0.304
Extraversion	0.316	2.773	0.006	
Agreeableness	0.227	3.613	0.000	
Conscientiousness	0.274	2.510	0.013	

*p<0.05; **p<0.01

Note: The standard regression coefficient (SE) explains the causal relationship between two variables with correlation; the positive and negative explains the direction of the influence relationship, and the magnitude of the absolute value explains the contribution of the independent variable to the dependent variable. The magnitude of the absolute value indicates the degree of influence of the independent variable on the predictor variable; the closer to 1, the greater the degree of influence. Model quality test R²: indicates how well the multiple stepwise regression model predicts the data set and indicates how well the model fits and how well the predictor variables explain the outcome variables.

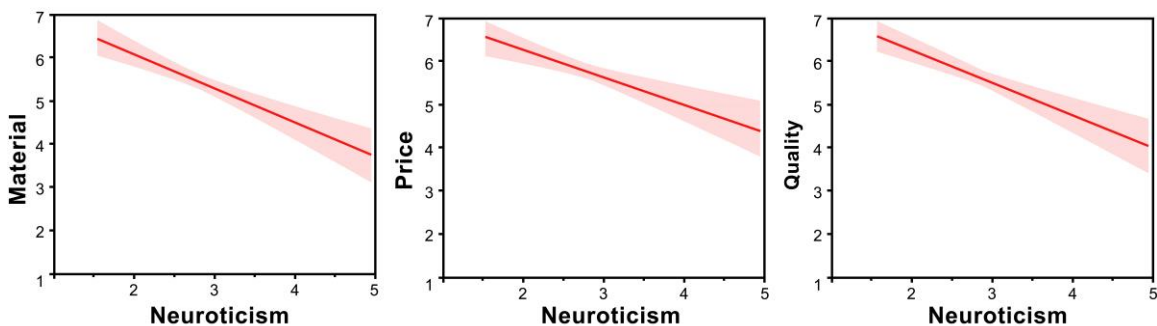


Fig. 5. Effect plots for all significant differences found between neural mass and material, quality, and price (red bars represent 95% confidence intervals)

Establishment of Predictive Model

Figure 6 shows the predictive model for personality trait and wood furniture product characteristic consumer preferences derived from stepwise multiple regression analysis. A multifactor model further elucidated the relationship between personality and wood furniture product characteristic consumer preferences. Specifically, brand preference was best explained by extraversion and conscientiousness, fully explaining 50.1% of the scores for product characteristic consumer preferences (model 6). Material preference was

best explained by neuroticism, agreeableness, and conscientiousness, fully explaining 45.6% of the scores for product characteristic consumer preferences (model 7). Design sense preference was best explained by agreeableness and conscientiousness, fully explaining 40.0% of the scores for product characteristic consumer preferences (model 8). Quality preference was best explained by the personality attributes neuroticism, agreeableness, and conscientiousness, fully explaining 41.5% of the scores for product characteristic consumer preference (model 9). Price preference was best explained by a combination of neuroticism, extraversion, agreeableness, and conscientiousness, fully explaining 30.4% of the scores for product characteristic consumer preferences (model 10).

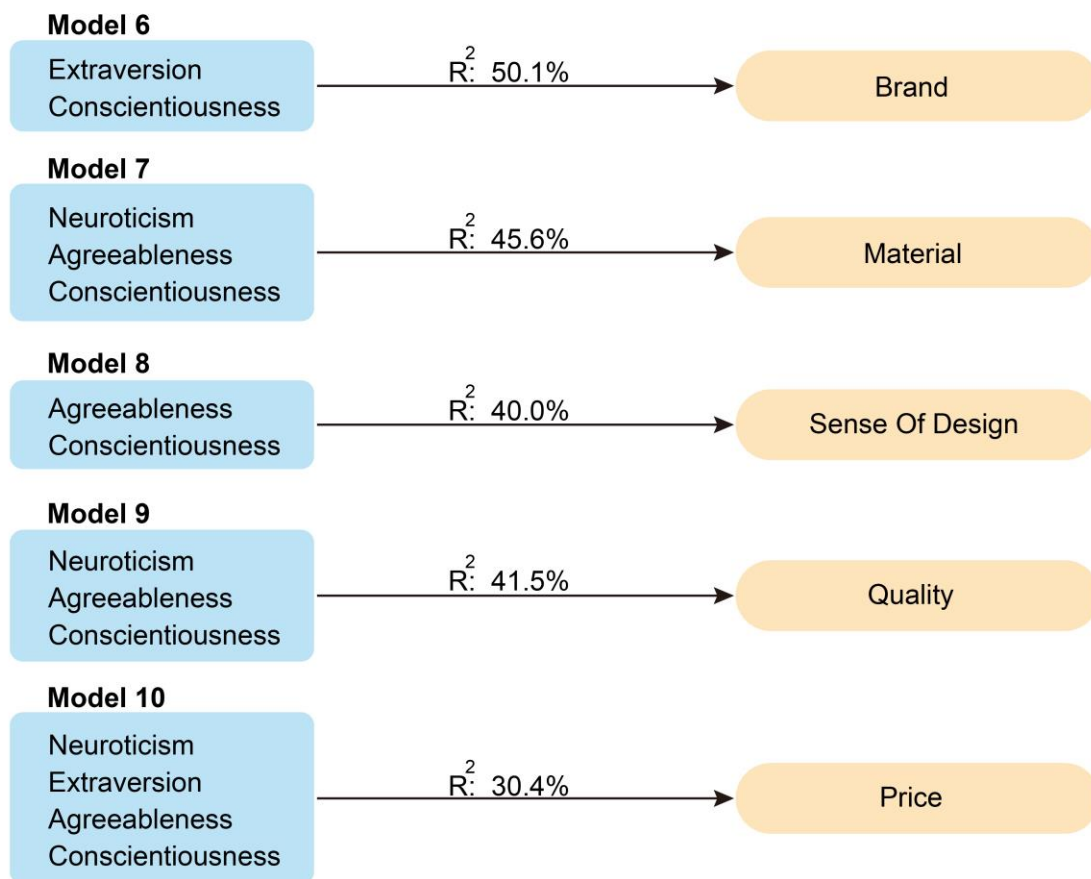


Fig. 6. A predictive model of personality traits and consumer preferences for wood furniture product characteristics

Discussion

The main purpose of this study was to investigate whether there is a significant relationship between consumers' preferences for wood furniture product attributes and their personality traits, as well as the role of personality traits in predicting consumer preferences for different wood furniture product attributes.

Correlation analysis showed that extraversion, agreeableness, and conscientiousness had significant positive correlations with wood furniture product characteristic consumer preference. In addition, there was a significant negative correlation between neuroticism and wood furniture product characteristic consumer preference. In contrast, there was no correlation between openness and the factors of wood furniture product characteristic

consumer preference. In the regression model of personality traits are predictors of consumer preference (Table 5). It is worth noting that among the five personality traits, stepwise (forward) multiple regression further elucidated the relationship between personality and consumption preferences for wood furniture product characteristics. Conscientiousness was found to have a predictive effect on each factor of wood furniture product characteristic consumer preference, *i.e.*, people with high conscientiousness tend to pay more attention to the brand, material, design sense, and cost effectiveness of wood furniture products. This is in accord with the results obtained from the single-factor models (Table 4) and the multi-factor models (Table 5), in a regression model of consumer preference for product characteristics using personality traits as predictors. While using the single-factor model (Table 4), it was observed that, by means of the coefficient of determination (R^2), the model based on five distinct personality traits portrayed a higher R^2 value with regards to extraversion and conscientiousness. This suggests that these two personality traits hold a greater ability to predict and explain the characteristics of wooden furniture consumer preferences. It can be observed that the multi-factor model offered a higher level of explanation for the consumer preferences of wood furniture product characteristics as compared to the single-factor model, and also provided better prediction capabilities. Combining the single-factor and multi-factor models, the traits of neuroticism, extraversion and conscientiousness are primarily associated with the brand factor. Traits of extraversion, agreeableness, and conscientiousness, on the other hand, are more relevant to the product characteristics of material, design sense and cost-effectiveness (quality and price). The only association of the neuroticism trait is with the brand factor, with a higher R^2 value, indicating a relatively stronger relationship with the brand.

Neuroticism, extraversion, agreeableness, and conscientiousness were all significantly correlated with brands. Among them, neuroticism, extraversion, and conscientiousness were most highly correlated with brands, while people with higher neuroticism were more likely to purchase goods and services that provide emotional security. Brands play an important role in consumer purchasing decisions by providing a sense of security and reducing consumer anxiety. Brand reputation and recognition can provide a level of security and trust to highly neurotic consumers, reducing their doubts and anxiety. Brands are strongly related to personality traits (neuroticism, extraversion, agreeableness, conscientiousness). High neuroticism consumers are often anxious, worried, and frustrated by uncertain events and tend to be cautious and suspicious. Brands can use these personality traits to target consumer behavior, for example, through holistic marketing programs that build trustworthiness and predictability, or by offering stable and low-risk products. High extraversion consumers are typically more open to excitement and uncertainty and tend to be social and competitive. Therefore, brands can engage these individuals by interacting with consumers on social media, providing an exciting buying experience, and having a better competitive advantage over other brands. The material, design and value for money of wooden furniture are significant factors in determining consumption decisions for consumers possessing high extroversion personality traits. High agreeableness consumers are typically more focused on harmony, respect, and cooperation, and tend to interact with brands that are kind and thoughtful. Therefore, brands can meet and nurture the consumer needs of these individuals by emphasizing care, providing quality service, praise, and encouragement, as well as offering personalized products. High conscientiousness consumers tend to pay more attention to a brand's reliability, integrity, and accountability, as well as its responsibility to consumers and society. Therefore, brands can commit to and demonstrate their reliability and responsibility by maintaining a high

level of credibility, focusing on consumer and social responsibility, and providing products and services of consistent quality. Therefore, brands should understand and focus on different dimensions of consumers' personality traits to personalize experiences and services for their consumer behavior and improve brand marketing effectiveness and customer loyalty. The correlation between responsibility and each of the product attribute factors preferred by consumers is the highest. Highly responsible consumers tend to pay more attention to the value for money, reliability, and durability of goods, and to the reputation and quality assurance of brands. They tend to be more responsible and reliable in their consumer decisions and are more likely to purchase high-quality, reputable, and cost-effective goods or services. Interestingly, openness was not correlated with product trait consumer preferences. Open personality traits are usually associated with imagination, exploratory nature, and creativity. However, from a consumer perspective, this does not mean that an open-minded personality automatically leads to a particular type of buying behavior or consumer preference.

After analyzing the correlations, similarities, and differences between consumers with different personality traits in their preferences for purchasing characteristics of wood furniture products, personality traits were found to be significantly associated with preferences for wood furniture product features. This indicates that consumers' personality traits influence their preferences for product attributes when purchasing wood furniture. This implies that consumers with different personality traits may have specific product preferences when purchasing wood furniture. Thus, personality traits are a significant predictor of consumer preferences for wood furniture product features.

Studying the relationship between the five personality traits and consumer preferences for wood furniture product characteristics helps to understand the psychology and behavior of consumers when purchasing wood furniture products so that marketing strategies and product positioning can be better developed. Today, furniture is no longer about satisfying basic functional needs; many consumers see their furniture as an extension of themselves; furniture is a status symbol, and wood furniture is seen as a lasting investment (Kaputa *et al.* 2018). Consumers have implicitly associated their personality traits with the personalities of wood furniture products. Therefore, this research can help companies and designers better understand consumers' needs and preferences, and better integrate consumers' personality traits and needs into the product design phase to create more appealing and desirable products. In addition, research on consumer personality traits can also help brands and vendors better understand the psychology and behavior of their target consumers to develop more targeted marketing strategies and promotions tailored to their personality traits and needs and improve marketing effectiveness and sales. By understanding and recognizing the needs and behaviors of different consumer groups, it is also possible to position different market segments based on different personality traits and needs, thereby increasing market share.

Based on the study of consumer personality traits, it is possible to further understand consumer behavior and preferences, to better focus on consumers, establish the fit between brand personality and consumer personality, strengthen the perception of brand image and the influence of good word-of-mouth, and comprehensively enhance brand reputation and consumer loyalty.

In summary, the study of the relationship between the five personality traits and consumer preferences for purchasing wood furniture product characteristics has a positive impact on branding, design, manufacturing, and marketing, and has a very important application value and significance.

CONCLUSIONS

In this work, bivariate correlation and stepwise multiple regression analysis were used to analyze the relationship between personality traits and consumer preferences for wood furniture product characteristics at the level of consumer personality traits (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness).

1. Among the factors influencing consumer preferences of the wood furniture product characteristics studied, respondents generally considered quality, price, and design sense to be the most important in their consumer preferences for wood furniture product characteristics.
2. With the exception of the openness personality trait, there were varying degrees of correlations between the other four personality traits (Neuroticism, Extraversion, Agreeableness, and Conscientiousness) and each factor of wood furniture product characteristic consumer preference. Neuroticism was negatively correlated with wood furniture product characteristic consumer preference scores. Extraversion, agreeableness, and conscientiousness were positively correlated with wood furniture product characteristic consumer preference scores. There was no correlation between openness and consumer preference.
3. Consumer preference scores for wood furniture product characteristics were found to be closely related to personality traits. Neuroticism, extraversion, agreeableness, and conscientiousness have significant effects on consumer preference. The higher the score of Neuroticism (more emotionally unstable), the lower the degree of preference for wood furniture consumer. The higher the scores of extraversion, agreeableness and conscientiousness, the higher the preference for wood furniture consumer.
4. Stepwise multiple regression analysis showed that personality traits had significant predictive power and contributed differently to predicting consumer preferences. Neuroticism, extraversion, agreeableness, and conscientiousness were significant predictors of wood furniture consumer preferences. Thus, personality traits predict and explain differences in consumer preferences for characteristics of wooden furniture products.
5. Consumers with different personality traits show different preferences in choosing wood furniture products. The results of the study can provide a reference for product planners, designers and marketers.

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