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The role of financial behavior in mediating the influence of socioeconomic characteristics and neurotic personality traits on financial satisfaction

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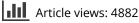
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BANKING & FINANCE | RESEARCH ARTICLE

The role of financial behavior in mediating the influence of socioeconomic characteristics and neurotic personality traits on financial satisfaction

Khaira Amalia Fachrudin¹*, Kashan Pirzada² and Muhammad Faidhil Iman¹

Abstract: Inherent socioeconomic characteristics and personality traits can directly affect an individual's financial satisfaction. There is limited research on the role of financial behavior as a mediating variable for the influence of these two factors on financial satisfaction. It is important to know whether individuals with certain characteristics and personality traits can increase their financial satisfaction by improving their financial behavior. This study included 600 Indonesian participants, with primary data obtained through a structured questionnaire. Data analyses were performed using partial least squares structural equation modeling (PLS-SEM). The results indicate that at 5% of alpha, financial behavior consisting of investment, debt, and spending behavior can mediate the effects of gender, age, education, income, and traits of neuroticism on financial satisfaction. Furthermore, the higher individual scores on neuroticism, the worse their investment, debt, and behaviors are, while their herding behavior and financial dissatisfaction increase. Moreover, these people are often financially impecunious. Financial behavior plays a mediating

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PUBLIC INTEREST STATEMENT

Gender, age, educational level, marital status, income, and neurotic personality can affect a person's financial satisfaction. Neuroticism is a type of personality that tends to have negative emotions, such as sadness, fear, and anger. This study examines whether good financial behavior can increase the financial satisfaction of a person with certain characteristics and personality. The results show that if a person with a high neuroticism score can effectively manage his investment and debt behavior, then his financial dissatisfaction will be reduced. Men with good investment behavior will be more satisfied financially, and a teenager who manages his debt well will feel more satisfied financially. People with a high level of education will be financially ssatisfied, but if they have poor spending behavior then this satisfaction will decrease. It is recommended that everyone strive to improve their financial behavior.

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role in the influence of socioeconomic characteristics and neurotic personality traits on financial satisfaction. If individuals with high neuroticism scores can effectively manage their financial behavior, financial dissatisfaction will decrease. They often require assistance when making decisions.

Subjects: Multidisciplinary Psychology; General Psychology; Economic Psychology; Finance; Business, Management and Accounting; Financial Accounting; Management Education; Human Resource Management

Keywords: Debt behavior; financial satisfaction; investment behavior; neuroticism personality traits; spending behavior

1. Introduction

Financial satisfaction is one aspect of domain satisfaction (Van Praag et al., 2003) pursued through effective financial management (Hira & Mugenda, 1998). Domain satisfaction can be achieved through being healthy, happy, and confident about one's financial condition. It is indicated by good financial health and contentment with one's financial situation (S. Joo & Garman, 1998). Satisfaction with resources and standard of living is strongly correlated with perceived economic well-being (Thomas et al., 2020) and overall well-being (Tahir et al., 2022). It is a crucial factor in determining the quality of life and has been investigated in several studies (Van Praag et al., 2003). Socioeconomic characteristics included sex, age, education level, marital status, and income. Age was positively related to financial satisfaction; (Copur, 2015; S. H. Joo & Grable, 2004); however, a significant relationship was not identified (Taft et al., 2013). Income was also positively related to financial satisfaction (Copur, 2015; Soto & Luhmann, 2013; Syrén et al., 2020). High income was associated with higher life satisfaction for individuals with higher neuroticism scores (Soto & Luhmann, 2013). However, Hira and Mugenda (1998) noted that socioeconomic factors and income were not significant predictors of financial satisfaction. Age and education level positively affected financial well-being (Baek & DeVaney, 2004; Świecka, 2018; Taft et al., 2013). Marital status affects financial well-being (Copur, 2015; Fergusson et al., 1981); however, no correlation was found (Taft et al., 2013). Financial behavior is defined as how humans behave in a financial setting (Baker & Nofsinger, 2011; Hanif et al., 2019). It includes investing, expenditure, saving, financial planning (Mutlu & Ozer, 2019), informed purchases, managing loans (Arniati et al., 2019) bill payment, budgeting (Akben-Selcuk, 2015), cash or credit management, retirement planning, and insurance (Farrell et al., 2016; Vosloo et al., 2014). Financial behavior in this study is limited to investment, debt, spending, and herding behaviors. Saving behaviors are beyond the scope of this study because people tend to focus more on investment behavior, as it is perceived as more important for improving overall financial well-being. Financial behavior is directly related to personality (Husaini & Saiful, 2020; Mutlu & Ozer, 2019). The five broad personality traits often used by psychologists, openness, conscientiousness, extraversion, agreeableness, and neuroticism, are related to individual financial behavior (Thomas et al., 2020). Personality traits affect financial satisfaction (Tharp et al., 2020). The personality trait most commonly associated with poor financial behavior is neuroticism. Neurotic individuals engage in compulsive buying (Oehler et al., 2018) and are often under financial strain. They accrue simple debt products such as overdrafts and avoid short-term investments (Brougham et al., 2011; Brown & Taylor, 2014; Hoch & Loewenstein, 1991, 1991; Ibrahim, 2021; Mayfield et al., 2008; Tauni et al., 2016).

Previous studies show that socioeconomic characteristics and neuroticism can affect financial behavior and financial satisfaction; however, it has not been determined whether financial behavior can mediate these effects so this study tries to test it. One should consider whether socioeconomic characteristics and neuroticism traits directly affect financial satisfaction or whether financial behavior would have a more significant mediating effect. Our study can provide empirical evidence of the role of financial behavior as an intervening variable. This is important because behavior can be managed and made better, while characteristics and personality tend to be inherent and difficult to change so although socio-economic characteristics and personality are less able to increase his financial satisfaction, he can still increase it if he is able to improve his behavior. Additionally, this study examines the influence of these factors on making financial wellbeing more comprehensive.

This research will provide benefits for decision-makers, for example, managers who will assign their employees, mentors, who will empower their mentees or individuals who want to improve their welfare. Attention to socio-economic characteristics, personality, and financial behavior is needed. The general structure of this paper starts from the introduction, literature review and hypotheses development, research methodology, results and discussion, and conclusion.

2. Literature review and hypotheses development

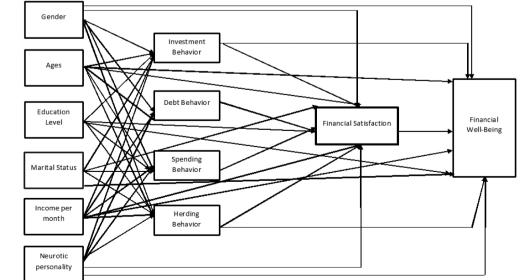
The Theory of Planned Behavior (TPB) builds upon The Theory of Reasoned Action. This theory states that three core components-attitude, subjective norms, and perceived behavioral control form an individual's behavioral intentions. Lai (2019) expanded TPB using the five-factor models and proposed that perceived behavioral control is influenced by personality. The TPB has also been used to investigate investment decisions using data from a sample of firms (East, 1993). The Transtheoretical Model (TTM) developed by Prochaska and DiClemente (1983) identifies the stages of behavior change. Behavior can be changed by intervention. The success of a change is determined by a balance between decisions and self-efficacy (self-confidence). People will change their behavior if they feel that it will be useful. Xiao (2008) applied this theory to financial behavior. Furthermore, Suryani et al. (2018) provides evidence of financial behavior consistent with the theoretical framework chosen from the transtheoretical model of change. Financial satisfaction refers to a person's subjective evaluation of their financial condition (Ali et al., 2015). Having a portfolio of assets, a satisfactory standard of living and the ability to repay loans and get out of debt are all indicators of financial satisfaction (Copur, 2015). Even though a person has debt, they may be content with their financial situation because financial satisfaction does not always imply financial health (Narges & Laily, 2011). The indicators (Copur, 2015) used to measure financial satisfaction are (1) satisfaction with the ability to pay back borrowed money, (2) overall quality of life, (3) the ability to get out of debt, (4) current level of assets, and (5) the amount of money in savings. Financial well-being is an element of the well-being elements (Kamakia et al., 2017). It is a concept used to describe an individual's or family's economic situation (Vosloo et al., 2014) and was initially perceived as satisfaction or happiness towards one's financial situation (Wilestari et al., 2021).

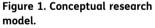
Financial well-being is the objective and subjective state of a person's financial situation compared with particular financial standards (Rony et al., 2021). This contributes to an individual's assessment of their current financial situation (Oquaye et al., 2020). It shows the extent to which someone comfortably meets all their existing commitments and needs and has financial resilience for future sustenance (Kempson et al., 2017). Furthermore, financial well-being reflects people's comfort, health, happiness, and financial freedom (Zimmerman, 1997; Joo, 2008). It indicates the ability to meet the needs of one's current and anticipated lifestyle (Brüggen et al., 2017; Kempson et al., 2017). Financial well-being can also indicate that someone is not financially distressed, is comfortable with their current situation, and is not anxious about routine and unexpected costs (Prawitz et al., 2006). Mokhtar et al. (2015) and Prawitz et al. (2006) provide comprehensive indicators of financial well-being but most notably for our purposes, we place more emphasis on the aspects of prosperous, comfortable, worry-free, sufficient, and unstressed.

Financial behavior can be defined as any human behavior relevant to money management (Xiao, 2008). It can play a pivotal role in influencing the welfare of individuals in a household, society, nation, or the world at large (Mudzingiri et al., 2018). Financial behavior encompasses saving, investing, debt accrual, spending, and herding. Investment behavior is defined as how investors assess, predict, analyze, and review decision-making procedures. This includes investment psychology, information collection, definition and understanding, and research and analysis (Lee et al., 2010). Investments generate yields and capital gains to improve

welfare (Fachrudin & Ihsan, 2021). Debt behavior is an indication of one's relationship with debt. Being in debt generates interest expenses, is increasingly related to financial distress, and may decrease well-being. Spending behavior is also associated with financial satisfaction. Dissatisfaction with one's financial situation can also result from excessive or unplanned spending (Hira & Mugenda, 1998). Herding behavior emerges when investors fail to act on relevant information but instead rely on the decisions of other investors. Individuals with high neuroticism tend to exhibit herding behavior (Komalasari & Asri, 2019). Financial behavior positively correlates with financial satisfaction (Astawa et al., 2021; Oguaye et al., 2020; Xiao et al., 2009). Oquaye et al. (2020) noted several indicators of financial behavior, such as comparing prices in different stores when buying products or services and paying bills on time. Other indicators include keeping written or electronic records of monthly expenses, staying within budget, paying off overdraft balances every month, exceeding ATM card withdrawal limit, and settling beyond the minimum loan payment. Healthy financial behaviors can include starting or maintaining an emergency fund, saving for long-term goals, retirement savings, buying bonds, stocks, mutual funds, long-term investments, adequate health insurance, keeping a reliable vehicle, homeownership, and life insurance.

Personality is the thoughts, emotions, motives, and behaviors of an individual that are relatively permanent (McCrae & John, 1992). The widely accepted theory of human personality includes five personality traits, namely openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (Goldberg, 1990). The focus of this research is neuroticism. Neuroticism is a trait of people who tend to have negative emotions such as anger, fear, anxiety, shame, sadness, quilt, emotional instability, and depression. People with high neuroticism tend to have fewer risky assets in their portfolio than less-neurotic individuals (Nyhus & Webley, 2001); tend to avoid short-term investments (Hoch & Loewenstein, 1991); choose simple debt products like overdrafts (Mayfield et al., 2008); behave like having debt (Oquaye et al., 2020), and make compulsive buying (Brougham et al., 2011 and Asad; Shahjehan, 2012). Neurotic people cannot analyse, think critically, have cognitive skills, and conceptual understanding so they always feel anxious about making risky decisions (Nauman Sadig & Ased Azad Khan, 2019). They undervalue the gain in favorable situations and overestimate the risk in unfavorable situations. Such people should seek advice from others in making investment decisions (Brown & Taylor, 2014). These studies link neuroticism with financial behavior separately, so it is necessary to simultaneously examine the effect of neuroticism on these four





financial behaviors, namely investment behavior, debt behavior, spending behavior, and herding behavior. The literature described above examines the relationship between socio-economic characteristics, neuroticism, financial behavior, financial satisfaction, and financial well-being separately. In addition, there is no role for any variable as a mediating variable. This motivated the conduct of this research. Figure 1 shows the relationship between socioeconomic characteristics and neurotic personality with financial behavior, financial satisfaction, and financial well-being. In this case, financial behavior consists of investment behavior, debt behavior, spending behavior, and herding behavior.

2.1. Hypotheses development

Socioeconomic characteristics influence financial behavior (Capuano & Ramsay, 2012). Individuals who exhibit positive financial behaviors, such as spending less than they earn, saving for an uncertain future, using credit wisely, and seeking financial advice, are less likely to experience financial difficulties (Giriati & Giriati, 2021). Age positively affects financial satisfaction (Copur, 2015) and well-being (Taft et al., 2013; Titus et al., 1989), while education and marital status have also been shown to influence financial well-being (Baek & DeVaney, 2004; S. H. Joo & Grable, 2004). Meanwhile, Menard (2013) found that educational attainment has an association with financial satisfaction. Income level also positively relates to financial satisfaction and well-being (Copur, 2015; Fergusson et al., 1981; Soto & Luhmann, 2013; Syrén et al., 2020). Mayfield et al. (2008) reported that men are more likely to make short and long-term investments, while individuals with more investment experience are more likely to make short-term investments. Personality indicates an individual's thoughts, emotions, motives, and behaviors (Peong et al., 2021). It is a fundamental psychological factor shaping human conduct. Current personality theory is based on the five-factor model (Pirzada et al., 2017) and assesses an individual's openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism.

Individuals with high neuroticism scores tended to suffer from financial difficulties and have a savings deficit (Brown & Taylor, 2014; Xu et al., 2015). They have more difficulty paying bills, delay the purchase of necessities, run out of money at the end of the month (Theresia et al., 2021), and accrue more debt (Ibrahim, 2021). Financial difficulties are the opposite of financial wellbeing. This means that individuals with high neuroticism scores are more likely to experience financial difficulties and therefore have low financial well-being. Financial stress and risk tolerance were related to financial satisfaction (S. H. Joo & Grable, 2004). Neuroticism has also been shown to significantly and negatively affect individual attitudes towards stock investments. People who feel anxious and inferior to others tend to believe that investing in stocks is detrimental and will ultimately lead to a loss of money (Lai, 2019). This study proposes a novel hypothesis that, if proven, will encourage individuals to change their financial behavior, we seek to examine the following hypotheses:

H1a: Socioeconomic characteristics and neuroticism directly affect financial behavior.

H1b: Socioeconomic characteristics and neuroticism directly affect financial satisfaction.

H1c: Socioeconomic characteristics and neuroticism directly affect financial well-being.

The literature suggests that financial behavior can affect financial satisfaction (Godwin & Carroll, 1986; Hira & Mugenda, 1998; Joo, 2008). To assess the causal relationships of factors that influence money management, Mugenda et al. (1990) concluded that "net worth, savings, monthly debt payments, and absence of financial difficulties were the main determinants of managers' satisfaction with financial status." Similarly, Joo (2008) determined that positive financial behaviors, such as paying off credit card debt in full each month and comparison-shopping, are positively related to financial satisfaction. Other factors that improve financial well-being include investments, budgets, financially savvy behavior (Oquaye et al., 2020), and good savings practices

(Mokhtar et al., 2015). However, saving and debt management have no substantial impact on financial well-being (Oquaye et al., 2020). Good financial behavior indicates organization, satisfaction, and financial prosperity. Several studies have shown that financial behavior affects financial satisfaction (Pirzada et al., 2016; S. H. Joo & Grable, 2004; Xiao et al., 2009) and well-being (Oquaye et al., 2020). Thus, we offer the following hypotheses:

H2a Financial behavior has significant direct effects on financial satisfaction.

H2b Financial behavior has significant direct effects on financial well-being.

If an individual's financial behavior improves, it can improve their financial satisfaction. According to the transtheoretical model, intervention can change behavior (Xiao, 2008). People will be more likely to change their behavior if they feel the change is worthwhile. Thus, we offer the following hypotheses:

H3: Socioeconomic characteristics and neurotic personalities have significant indirect effects on financial satisfaction through financial behavior.

Financial satisfaction can affect financial well-being. Walson and Fitzsimmons (1993) stated that resource satisfaction and living standards are essential for predicting perceived economic well-being. Thus, we offer the following hypotheses:

H4: Financial satisfaction has a significant effect on financial well-being.

The role of financial satisfaction in mediating the influence of socioeconomic characteristics, neurotic personality, and financial behavior on financial well-being has not been addressed before this study. Financial satisfaction is important and can be modified. Socioeconomic characteristics, personality, and good behavior do not necessarily lead to prosperity. Therefore, a sense of satisfaction is important for managing financial well-being, we seek to examine the following hypotheses:

H5a: Socioeconomic characteristics and neurotic personality have significant indirect effects on financial well-being through financial satisfaction.

H5b: Financial behavior has significant indirect effects on financial well-being through financial satisfaction.

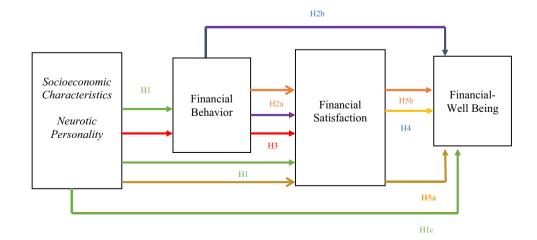


Figure 2. Empirical research model.

The following Figure 2 depicts the empirical research model that shows the relationships between socioeconomic characteristics, neurotic personality, financial satisfaction, and financial well-being in relation to the hypothesis.

3. Research methodology

This quantitative research investigates the role of financial behavior in mediating the effect of socioeconomic characteristics and neuroticism in favor of financial satisfaction. The study also investigates the role of financial satisfaction in mediating the influence of socioeconomic characteristics, neuroticism, and financial satisfaction on financial management in Indonesia.

There are six latent variables used in this study (i.e. investment behavior, debt behavior, spending behavior, herding behavior, financial satisfaction, and financial well-being). Sources from previous research are used to measure latent variables, namely the investment behavior variable (Alkaya & Ibrahim, 2015; Lee et al., 2010; Mutlu & Ozer, 2019); debt behavior variable (Alkaya & Ibrahim, 2015; Dew & Xiao, 2011; Oquaye et al., 2020); spending behavior (Dew & Xiao, 2011; Mutlu & Ozer, 2019; Oquaye et al., 2020); financial satisfaction (Ali et al., 2015; Çopur, 2015); and financial well-being (Hilgert et al., 2003; Mokhtar et al., 2015; Prawitz et al., 2006). Meanwhile, the measurement for the herding behavior variable is the researcher's own novelty which is based on (Komalasari & Asri, 2019) research. The indicators for the six variables are manifested in the form of statements in the questionnaire with a Five Point Likert Scale (1 = strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = strongly agree).

Before the questionnaire was distributed, validity and reliability tests were conducted on 30 people outside the research sample. Then the questionnaire was distributed to 600 participants from Big Cities in Indonesia who filled out the questionnaire completely. The determination of the minimum number of samples according to (Hair et al., 2016) is 10 times the number of indicators in the particular construct that has the largest number of indicators. In this case, it is 5 indicators x 10 = 50 samples. However, the larger the number of samples, the higher the statistical power so in this study 600 samples were used. While the questionnaires were being distributed, there were 11 questionnaires that were not filled out completely, so 11 more participants were sought to fill them out. Thus, the number of people who filled out the questionnaire was 611 respondents, but only 600 people filled out the complete questionnaire for this study.

Validity and reliability tests omitted several statements in the initial questionnaire. Table 1 shows the latent variables of the study that passed the validity and reliability tests. Data were analysed using least-squares partial structural equation modeling (SEM-PLS) and SmartPLS software. Table 1 shows the latent research variables, which passed the validity and reliability tests.

In addition to the six latent variables discussed previously, there are also other variables, namely the socio-economic characteristic and neurotic personality. Gender and marital status were measured using a nominal scale; ages, and educational level is measured by an ordinal scale; while income per month is measured by an interval scale. The neurotic personality variable is also on a ratio scale, the score is obtained from 60 questions commonly used by psychologists. Variables of investment behavior, debt behavior, spending behavior, financial satisfaction, and financial well-being use a Likert Scale of 1 to 5. Partial Structural Equation Modeling (SEM-PLS) with SmartPLS is applied because it can process data on these different measurements scales.

4. Results and discussion

There are two stages in this analysis: outer and inner models. Based on the outer model, one indicator was eliminated because the factor loading value was < 0.7, an investment indicator for well-being as stated in the statement "Invested in future well-being."

Variables	Measurements
Gender (X1)	1 = Female 2 = Male
Ages (X2)	$1 = < 20 \text{ years} \\ 2 = 20-29.9 \text{ years} \\ 3 = 30-39.9 \text{ years} \\ 4 = 40-49.9 \text{ years} \\ 5 = 50-59.9 \text{ years} \\ 6 = 60-69.9 \text{ years} \\ 7 = > 70 \text{ years} $
Education Level (X3)	1 = Senior High School 2 = Diploma 3 = Undergraduate Program 4 = Graduate Program 5 = Postgraduate Program
Marital Status (X4)	1 = Not Married 2 = Married 3 = Widow/Widower
Income per month (X5)	1 = < IDR 5,000,000 2 = IDR 5,000,000—IDR 9,999,999 3 = IDR 10,000,000—IDR 14,999,999 4 = IDR 15,000,000—IDR 19,999,999 5 = IDR 20,000,000—IDR 24,999,999 6 = IDR 25,000,000—IDR 30,000,000 7 = > IDR 30,000,000
Neuroticism Personality (X6)	This measurement uses instruments commonly used by professional psychologists to evaluate respondents' personalities. With the help of a psychologist and a 60-question survey, a neuroticism score will be generated for each respondent.
Variables	Indicators
Investment Behavior (Y1.1)	Investment in the future well-being Looks for information regarding investments before deciding to invest Considers the return on investment Considers the investment risks
Debt Behavior (Y1.2)	Pays debts on time (including credit card debt) Pays bills on time (for example, electricity, water, telephone, children's school fees)
Spending Behavior (Y1.3)	Prefers to buy things according to function rather tha for pleasure (for example, buying shoes because the need them rather than buying them because of the brand) Purchases made within financial capabilities.
Herding Behavior (Y1.4)	Buys goods, services, or investment products becaus of trends Buys goods, services, or investment products becaus friends buy them
Financial Satisfaction (Y2)	Satisfied with the amount saved now Satisfied with the current investment Not worried about liabilities because they think they can pay for them Satisfied with the current financial situation
Financial Well-being (Y3)	Feels prosperous with the current financial situation Feels comfortable with the current financial situation Not worried about monthly living expenses Monthly income is sufficient for monthly expenses. Do not stress about personal finances

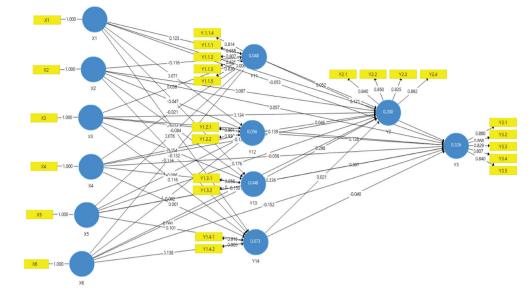


Figure 3. Path diagram based on loading factor value.

The validity test is carried out based on the average variance extracted (AVE), which produces a value > 0.5, indicating that the validity conditions have been met. A reliability test was conducted based on composite reliability (CR) and Cronbach's alpha (CA). The resulting CR value is > 0.7, and the CA value is > 0.7, which meets the reliability requirements. The path diagram is shown in Figure 3.

The inner model describes the relationship between the latent variables. It is divided into two stages: hypothesis testing and coefficient of determination. Appendix—Table A1 presents the results in the form of direct influence. The feasibility of this model can also be seen from the value of R square, which was 0.631. The test results also show that investment, debt, and spending behaviors can mediate the effect of several socioeconomic characteristics and neurotic personalities on financial satisfaction (Appendix—Tables A3, A4, A5, and A6). Financial satisfaction also plays a role in mediating the influence of individual characteristics, neuroticism, and financial behavior on financial well-being (Appendix—Table A7).

In the next section, we discuss the findings of the research and their relevance to previous theories and research.

4.1. The direct influence of socioeconomic characteristics and neurotic personality on financial behavior, financial satisfaction, and financial well-being

This study found that men make better investment choices than women (Appendix—Table A1, $X1 \rightarrow Y11$: Original sample value = 0.128 and P-Values = 0.003). The findings of this study are consistent with previous research by (Bajtelsmit & Bernasek, 1996) that states that a woman's ability to access and use available information differs from that of men. This finding is in line with (Dickason-Koekemoer et al., 2019) who found that male investors have higher financial well-being than female investors. Štefko et al. (2017) said that men are often hunters and family keepers. It may be that they consider multifacet variables due to their nature, and therefore exhibit better investment behaviors. Women tend to invest less money than men (Hira & Loibl, 2008) and invest in less risky products. This may be due to their lower-income, lower financial knowledge, and lower comfort with mathematics when compared to men (Hira & Loibl, 2008). Women are also more risk-averse in their investment decisions (Bernasek & Shwiff, 2001). However, the findings of this study do not agree with Lee et al. (2010) who state that there are no differences in investment behavior and decision factors based on gender, age,

marital status, education, and income. This research is also inconsistent with Herdjiono et al. (2020), which state that gender has no significant effect on financial behavior.

The study also found that young, single, and high-income respondents tend to exhibit good debt behavior and are more punctual in paying their bills (Appendix—Table A1, X2 \rightarrow Y12: Original sample value = -0.161 and P-Values = 0.010; X4 \rightarrow Y12: Original sample value = 0.160 and P-Values = 0.009; X5 \rightarrow Y12: Original sample value = 0.120 and P-Values = 0.002). Single people also tended to have high levels of financial satisfaction. This finding aligns with Baxter et al. (2007) and Teoh et al. (2013), who indicate that married couples with sufficient income can usually pay debts on time.

It was also found that lower levels of education correlate with good shopping behavior (Appendix—Table A1, X5 \rightarrow Y14: Original sample value = 0.101 and P-Values = 0.029). Female respondents, young, highly educated and high income tend to behave herding (Appendix—Table A1, X2 \rightarrow Y14: Original sample value = -0.133 and P-Values = 0.007; X3 \rightarrow Y14: Original sample value = 0.166 and P-Values = 0.004; X5 \rightarrow Y14: Original sample value = 0.101 and P Values = 0.029). The higher a person's education and income level, the better their spending behavior and the higher their level of financial satisfaction. This finding aligns with Syrén et al. (2020), who indicated that higher monthly income increases life satisfaction. Çopur (2015) also showed that monthly income positively affects satisfaction with financial status.

This study found that age has a positive but not significant relationship with financial satisfaction at the 5% alpha (Appendix—Table A1, X2 \rightarrow Y2: Original sample value = 0.088 and P-Values = 0.073). Age positively but not significantly related to financial well-being at the 5% alpha (Appendix—Table A1 X2 \rightarrow Y3: Original sample value = 0.009 and P-Values = 0.836). This confirms the findings of Çopur (2015), who indicates that age positively affects financial satisfaction. However, this does not agree with Taft et al. (2013), who states that age is not positively related to financial satisfaction; Narges and Laily (2011), who show that age positively affects financial well-being; and (Dickason-Koekemoer et al., 2019) who said that old investors have lower financial well-being than investors aged 16–24 years.

In addition, it was also found that the higher the neuroticism score, the worse the investing, and debt behavior (Appendix—Table A1, X6 \rightarrow Y11: Original sample value = -0.120 and P-Values = 0.002; X6 \rightarrow Y12: Original sample value = -0.118 and P-Values = 0.008). Neurotic people also tend to exhibit herding behavior (Appendix—Table A1, X6 \rightarrow Y14: Original sample value = 0.138 and P-Values = 0.001). This indicates that people with neurotic personalities do not make good investment decisions, are more likely to be in debt, shop beyond their means, and follow group trends. It was also found that the higher the neuroticism score, the more financially dissatisfied a person was.

This finding is in line with previous research, which states that people with high neuroticism scores tend to seek advice in making investment decisions (Tauni et al., 2016). They avoid short-term investments (Mayfield et al., 2008), suffer from financial distress, accrue simple debt products like overdrafts (Brown & Taylor, 2014), are in debt (Ibrahim, 2021), and engage in compulsive buying (Brougham et al., 2011; Hoch & Loewenstein, 1991).

Our study indicates that women tend to have high levels of financial well-being (Appendix— Table A1, X1 \rightarrow Y3: Original sample value = -0.062 and P-Values = 0.020). This finding is not in line with the research by S. H. S. H. Joo and Grable (2004), who found no relationship between gender and financial well-being. It was also noted that financial prosperity is associated with higher education and income levels, good investment, debt and spending behavior, and satisfaction with one's financial situation. Conversely, individuals with high neuroticism scores tend not to be financially prosperous. This finding is in line with previous research, which states that educational level is positively related to financial well-being (Baek & DeVaney, 2004; S. H. S. H. Joo & Grable, 2004), and income is positively related to financial well-being (Narges & Laily, 2011).

Marital status had no significant effect on financial well-being (Appendix—Table A1, X4 \rightarrow Y3: Original sample value = 0.023 and P-Values = 0.538). This finding agrees with Taft et al. (2013) but disagrees with Baek and DeVaney (2004) and S. H. S. H. Joo and Grable (2004), who found that married individuals have high financial well-being. Other researchers have stated that gender, marital status, and education have a weak but significant relationship with financial wellness. Previous studies have shown that gender, marital status, and education relate to financial health (O'Neill, 1995).

4.2. The influence of financial behavior on financial satisfaction and well-being

The results show that spending behavior has a positive and significant effect on financial satisfaction, whereas other financial behaviors have a positive but insignificant effect (Appendix—Table A1, Y13 \rightarrow Y2: Original sample value = 0.288 and P-Values = 0.000; Y11 \rightarrow Y2: Original sample value = 0.061 and P-Values = 0.239; Y12 \rightarrow Y2: Original sample value = 0.038 and P Values = 0.446; and Y14 \rightarrow Y2: Original sample value = 0.023 and P-Values = 0.627).This finding is supported by previous research, which shows that financial behavior positively correlates with financial satisfaction (Nosita et al., 2020; S. H. S. H. Joo & Grable, 2004; Xiao et al., 2009). This study also reaffirms previous research, which shows that financial behavior is a good predictor of financial well-being (Oquaye et al., 2020).

4.3. The influence of socioeconomic characteristics and neurotic personality on financial satisfaction through financial behavior

This study, which proposes that financial behavior is an intervening variable, is empirically proven. The test results show that investment, debt, and spending behaviors can mediate the influence of several socioeconomic characteristics and neurotic personalities on financial satisfaction. Investment behavior can mediate the influence of gender and neuroticism on financial satisfaction. This can, in turn, mediate the effects of age, income, and neuroticism on financial satisfaction. Spending behavior can mediate the effect of education on financial satisfaction. Spending behavior can mediate the effect of education on financial satisfaction. Spending behavior can mediate the effect of education on financial satisfaction (Appendix—Table A3, X1 \rightarrow Y11 \rightarrow Y2: Original sample value = 0.025 and P-Values = 0.017; X6 \rightarrow Y11 \rightarrow Y2: Original sample value = -0.023 and P-Values = 0.012; Table A4, X2 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.026 and P-Values = 0.045; X5 \rightarrow Y12 \rightarrow Y2: Original sample value = 0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; X6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; Y6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; Y6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; Y6 \rightarrow Y12 \rightarrow Y2: Original sample value = -0.019 and P-Values = 0.025; Y6 \rightarrow Y1

Gender has no significant direct effect on financial satisfaction; however, males with good investment behavior tend to be financially satisfied. The higher the neuroticism score, the lower the financial satisfaction; however, this effect becomes smaller when mediated by investment behavior. This means that neurotic personality types tend to be financially dissatisfied. If, however, they manage their investments and debts well, their financial satisfaction will increase slightly.

Age has no significant direct effect on financial satisfaction, but if young person manages their debt well, they will feel financially satisfied. A neurotic personality negatively influences financial satisfaction. This dissatisfaction can be lowered through effective debt management.

Education has a direct positive and significant effect on financial satisfaction; however, this effect becomes negative after being mediated by spending behavior (Appendix—Table A4, X3 \rightarrow Y13 \rightarrow Y2: Original sample value = -0.049 and P-Values = 0.001; People with a high level of education will be financially satisfied, but if they have poor shopping behaviors, this satisfaction will decrease. Thus, the results of this study have answered the main question, namely whether financial behavior is able to mediate the influence of socio-economic characteristics and neurotic personality traits on financial satisfaction.

4.4. The effect of financial satisfaction on financial well-being

This study found that financial satisfaction positively and significantly affects financial well-being (Appendix—Table A1, Y2 \rightarrow Y3: Original sample value = 0.623 and P-Values = 0.000). This finding is supported by (Walson & Fitzsimmons, 1993) who found that satisfaction with resources and living standards are essential predictors of perceived economic well-being; and (Wan et al., 2019) who found that financial satisfaction was an important predictor of life satisfaction and psychological distress.

4.5. Influence of individual characteristics, neurotic personality, and financial behavior on financial well-being through financial satisfaction

The test results show that at an alpha of 5%, financial satisfaction can mediate the influence of education level, marital status, income level, neuroticism, investment behavior, and spending behavior on financial well-being. This can be explained as follows (from Appendix—Table A7):

- Education level has a direct positive and significant effect on financial well-being (original sample value 0.062; p-value 0.024). This effect was stronger and more significant when mediated by financial satisfaction (original sample value 0.094; p-value 0.004).
- (2) Marital status has a direct positive and insignificant effect on financial well-being (original sample value 0.023; p-value 0.538); however, this effect becomes negative and significant when mediated by financial satisfaction (original sample value -0.092; p-value 0.018). This indicates that marital status has a significant direct effect on financial well-being. Still, bachelors who are financially satisfied will also feel financially prosperous compared to married people.
- (3) Income level has a direct positive and significant effect on financial well-being (original sample value 0.118, p-value < 0.001). This effect is stronger and more significant when mediated by financial satisfaction (original sample value -0.129, p-value < 0.001). This shows that the higher a person's income, the more prosperous they will be financially, especially if they feel financially satisfied.</p>
- (4) Neuroticism has a direct negative and insignificant effect on financial well-being (original sample value −0.060; p-value 0.051). When mediated by financial satisfaction, this effect remains negative but significant (original sample value −0.109 p-value < 0.001). This means that people with neurotic traits tend not to be financially prosperous, and if they are not satisfied with their finances, their well-being will worsen.</p>
- (5) Investment behavior has a direct positive and significant effect on financial well-being (original sample value 0.097; p-value 0.016). This effect remained positive and significant when mediated by financial satisfaction (original sample value 0.074; p-value 0.036). This means that good investment behavior increases financial well-being, especially when financial satisfaction is high.
- (6) Spending behavior has a direct positive and significant effect on financial well-being (original sample value 0.115, p-value 0.001). When mediated by financial satisfaction, this effect becomes stronger and more significant (original sample value 0.203; p-value < 0.001). This means that good spending behavior improves financial welfare, particularly when financial satisfaction is high.</p>

Meanwhile, the influence of gender, age, debt behavior, and herding behavior on financial wellbeing is not significantly mediated by FS. This means that gender and debt behavior can only have a direct effect on FWB without having to be mediated by satisfaction. Meanwhile, age and herding behavior has no significant effect either directly or indirectly on financial well-being. This finding is not in line with Titus et al. (1989) who state that there is no relationship between gender and financial well-being and (Taft et al., 2013) and (Baek & DeVaney, 2004) who say that age is associated with financial wellbeing. The results of this study are in line with The Theory of Planned Behavior (TPB) and were expanded by (Lai, 2019) which says that behavior is related to personality. This research shows that neuroticism traits influence financial behavior. The Transtheoretical Model (TTM) can also be explained by the results of this study. The model said that people will change their behavior if they feel that it will be useful. This study shows that spending behavior has a significant effect on financial satisfaction. Investment behavior, debt behavior, and spending behavior have a significant effect on financial well-being. If a person feels that financial satisfaction and wellbeing are important to him, then he will change his financial behavior.

5. Conclusion

This study demonstrates the importance of financial behavior in mediating the influence of socioeconomic variables and neuroticism on financial satisfaction. However, while characteristics and personality are both intrinsic to an individual, it is evident that by improving their financial behavior, their financial satisfaction can be improved as well. Good financial behaviors need to be instilled from childhood and maintained to improve financial satisfaction and well-being. The limitation of this study is that it only looks at one personality from the big five personalities. Therefore, it is suggested that further researchers can examine the role of these four financial behaviors in mediating the effect of socio-economic characteristics and five broad personality traits on financial satisfaction and financial well-being. Replication of this study should also be carried out to allow for more robust results.

The practical contribution of this research is that a person must try to change his financial behavior to achieve financial satisfaction and well-being. The family or company also needs to encourage this behavior change. The managerial contribution is that employers should pay attention to the socio-economic characteristics and personality of their employees. The results of this study have shown that the higher a person's neuroticism score, the worse the four financial behaviors, so employees with high neuroticism scores should not be authorized to make decisions related to investment, debt, and shopping. Managerial also need to assist to form good financial behavior for all employees.

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Appendix

Table A1. R	A1. Results of hypothesis testing					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values	
X1 Y11	0.128	0.128	0.042	3.035	0.003***	
X1 Y12	0.071	0.069	0.042	1.694	0.091*	
X1 Y13	0.047	0.046	0.041	1.166	0.244	
X1 Y14	-0.084	-0.081	0.039	2.157	0.032**	
X1 Y2	0.007	0.002	0.041	0.178	0.859	
X1 Y3	-0.062	-0.063	0.026	2.335	0.020**	
X2 Y11	-0.107	-0.112	0.063	1.695	0.091*	
X2 Y12	-0.161	-0.162	0.062	2.590	0.010	
X2 Y13	-0.024	-0.023	0.052	0.457	0.648	
X2 Y14	-0.133	-0.130	0.049	2.731	0.007***	
X2 Y2	0.088	0.089	0.049	1.796	0.073*	
X2 Y3	0.009	0.003	0.041	0.207	0.836	
X3 Y11	0.035	0.033	0.048	0.730	0.466	
X3 Y12	-0.002	-0.003	0.041	0.060	0.952	
X3 Y13	-0.154	-0.154	0.039	3.890	0.000***	
X3 Y14	0.116	0.116	0.040	2.872	0.004***	
X3 Y2	0.130	0.131	0.044	2.959	0.003***	
X3 Y3	0.062	0.060	0.027	2.267	0.024**	
X4 Y11	-0.027	-0.028	0.056	0.479	0.632	
X4 Y12	0.160	0.157	0.061	2.624	0.009***	
X4 Y13	-0.086	-0.088	0.051	1.679	0.094*	
X4 Y14	0.001	0.002	0.049	0.023	0.982	
X4 Y2	-0.126	-0.128	0.050	2.553	0.011**	
X4 Y3	0.023	0.024	0.037	0.616	0.538	
X5 Y11	0.063	0.064	0.046	1.362	0.174	
X5 Y12	0.120	0.120	0.039	3.090	0.002***	
X5 Y13	-0.092	-0.094	0.047	1.961	0.050*	
X5 Y14	0.101	0.101	0.046	2.189	0.029**	
X5 Y2	0.175	0.176	0.042	4.143	0.000***	
X5 Y3	0.118	0.118	0.030	3.934	0.000***	
X6 Y11	-0.120	-0.124	0.038	3.124	0.002***	
X6 Y12	-0.118	-0.121	0.044	2.662	0.008***	
X6 Y13	-0.060	-0.061	0.033	1.857	0.064*	
X6 Y14	0.138	0.146	0.042	3.279	0.001***	
X6 Y2	-0.149	-0.150	0.045	3.314	0.001***	
X6 Y3	-0.060	-0.066	0.031	1.959	0.051*	
Y11 Y2	0.061	0.064	0.052	1.178	0.239	
Y11 Y3	0.097	0.092	0.040	2.415	0.016**	
Y12 Y2	0.038	0.041	0.050	0.762	0.446	
Y12 Y3	0.094	0.091	0.034	2.784	0.006***	

(Continued)

Table A1. (Continued)					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values
Y13 Y2	0.288	0.291	0.049	5.944	0.000***
Y13 Y3	0.115	0.116	0.034	3.371	0.001***
Y14 Y2	0.023	0.026	0.047	0.486	0.627
Y14 Y3	-0.053	-0.052	0.032	1.645	0.101
Y2 Y3	0.623	0.626	0.032	19.684	0.000***

*, **, *** significant at alpha 10%, 5%, and 1%

Table A2. Coefficient of determination				
	R Square			
Y11	0.047			
Y12	0.056			
Y13	0.049			
Y14	0.073			
Y2	0.194			
Y3	0.631			

Table A3. The results of testing the hypothesis about the role of Y11 as a mediating variable					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values
X1 Y11 Y2	0.025	0.025	0.010	2.401	0.017**
X2 Y11 Y2	-0.021	-0.022	0.013	1.606	0.109
X3 Y11 Y2	0.007	0.007	0.010	0.682	0.496
X4 Y11 Y2	-0.005	-0.005	0.010	0.490	0.624
X5 Y11 Y2	0.012	0.011	0.009	1.280	0.201
X6 Y11 Y2	-0.023	-0.024	0.009	2.512	0.012**

*, **, *** significant at alpha 10%, 5%, and 1%

Table A4. The results of testing the hypothesis about the role of Y12 as a mediating variable					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values
X1 Y12 Y2	0.011	0.011	0.007	1.572	0.117
X2 Y12 Y2	-0.026	-0.026	0.013	2.009	0.045**
X3 Y12 Y2	0.000	-0.001	0.007	0.053	0.957
X4 Y12 Y2	0.026	0.025	0.014	1.906	0.057
X5 Y12 Y2	0.019	0.019	0.009	2.254	0.025**
X6 Y12 Y2	-0.019	-0.020	0.009	2.048	0.041**

*, **, *** significant at alpha 10%, 5%, and 1%

Table A5. The results of testing the hypothesis about the role of Y13 as a mediating variable					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values
X1 Y13 Y2	0.016	0.016	0.015	1.127	0.260
X2 Y13 Y2	-0.007	-0.007	0.017	0.442	0.658
X3 -> Y13 -> Y2	-0.049	-0.051	0.015	3.235	0.001***
X4 -> Y13 -> Y2	-0.027	-0.028	0.017	1.609	0.108
X5 -> Y13 -> Y2	-0.031	-0.031	0.016	1.897	0.058*
X6 -> Y13 -> Y2	-0.020	-0.020	0.011	1.799	0.073*

*, **, *** significant at alpha 10%, 5%, and 1%

Table A6. The results of testing the hypothesis about the role of Y14 as a mediating variable					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values
X1 Y14 Y2	0.009	0.009	0.007	1.222	0.222
X2 Y14 Y2	0.014	0.014	0.009	1.586	0.113
X3 Y14 Y2	-0.011	-0.012	0.008	1.497	0.135
X4 Y14 Y2	0.000	0.000	0.006	0.031	0.975
X5 Y14 Y2	-0.010	-0.011	0.007	1.450	0.148
X6 Y14 Y2	-0.014	-0.015	0.009	1.522	0.129

*, **, *** significant at alpha 10%, 5%, and 1%

Table A7. The results of testing the hypothesis about the role of Y2 as a mediating variable					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values
X1 Y3	0.002	0.000	0.029	0.063	0.950
X2 Y3	0.065	0.064	0.038	1.689	0.092*
X3 Y3	0.094	0.093	0.030	3.167	0.002***
X4 Y3	-0.092	-0.096	0.039	2.383	0.018**
X5 Y3	0.129	0.129	0.030	4.349	0.000***
X6 Y3	-0.109	-0.111	0.031	3.481	0.001***
Y11 Y3	0.074	0.079	0.035	2.101	0.036**
Y12 Y3	0.020	0.020	0.037	0.534	0.594
Y13 Y3	0.203	0.201	0.037	5.414	0.000***
Y14 Y3	0.015	0.013	0.034	0.425	0.671

*, **, *** significant at alpha 10%, 5%, and 1%



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