


## THE INFLUENCE OF ANXIETY, ATTITUDE, TENSION, AND IMPULSIVITY ON FINANCIAL BEHAVIOR

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### ABSTRACT

Understanding psychological and emotional aspects is essential for identifying changes in people's financial behavior, including factors like attitude, anxiety, financial tension, and impulsive buying. This study aimed to explore the relationship between financial anxiety, financial attitude, financial tension, and impulsivity in purchases within the financial behavior of Brazilians. A quantitative, cross-sectional research approach was adopted, collecting primary data through a semi-structured questionnaire, resulting in 203 respondents of various ages, genders, educational levels, and marital statuses. After data collection, model validation was conducted using SMARTPLS 4 software, followed by an analysis of the relationships between the variables. The results indicated a statistically significant relationship between the variables studied, except for the relationships between financial tension and financial behavior and between financial anxiety and impulsive buying.

**Keywords:** Attitude; Anxiety; Financial Behavior; Tension; Impulsivity.

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## INTRODUCTION

The interactions between financial and emotional aspects play a crucial role in determining individual and family financial well-being. Understanding these interactions has become an area of growing interest for researchers, financial professionals, and individuals aiming to achieve sustainable financial health. Additionally, financial capability, which includes internal characteristics, is necessary for individuals to make informed financial decisions and practice desirable financial behaviors that contribute to their financial well-being (Kim, Falconier, & Conway, 2023).

In the context of finance-related emotions, the literature highlights financial attitude as an important variable in determining financial behavior (Baptista & Dewi, 2021; Adiputra & Patricia, 2020; Talwar, Talwar, Kaur, Tripathy, & Dhir, 2021). Other factors may also be associated, such as anxiety and tension, which can influence individuals' risk tendencies and their level of self-confidence in assessing investment options, financial well-being, and control over financial resources (Kuhnen & Knutson, 2011; Talwar, Talwar, Kaur, Tripathy, & Dhir, 2021; Sabri et al., 2021). Furthermore, impulsive buying is considered a significant factor, as it often leads to financial hardship and distress and is associated with a higher likelihood of experiencing financial problems (Fenton-O'Creevy, Dibb, & Furnham, 2018; Fenton-O'Creevy & Furnham, 2022).

Despite the extensive literature, understanding psychological and emotional factors in the Brazilian context is essential for understanding individual financial behavior. Given that Brazil has a high debt rate and low financial literacy, findings from new research could provide relevant insights for building and improving the country's financial aspects.

Thus, this study is guided by the following question: What is the influence of anxiety, attitude, tension, and impulsive buying on individuals' financial behavior? In this context, the objective of the research is to analyze the relationship between financial anxiety, financial attitude, financial tension, and impulsivity in purchases with financial behavior.

This research is justified by its potential to identify factors influencing individuals' financial behavior in a country characterized by a traditionally impulsive and immediate culture, low financial literacy, and high levels of default and indebtedness (CNC, 2024). Furthermore, this study introduces aspects into the literature that should be considered in financial literacy and education, expanding the scope of data and observations that may support future research.

## **THEORETICAL FRAMEWORK**

### **FINANCIAL BEHAVIOR**

Xiao (2008) defines financial behavior as any human behavior relevant to managing financial resources, which includes behaviors related to money, credit, and saving. Mutlu and Özer (2022) suggest that financial behavior can also be described as the ability of individuals to manage their savings, expenses, debt, and investments.

The importance of financial behavior is reinforced by Tang (2017), who found that parents' behavior directly impacts young people's financial behavior. Moreover, the financial behavior of guardians can indirectly affect the financial behavior of young adults through their overall self-control ability. The role of behavioral aspects becomes prominent when individuals aim to maximize utility (Negi & Jaiswal, 2024). Financial behavior is also associated with financial outcomes and financial well-being (Kim & Lee, 2021).

Furthermore, it has been shown that psychological factors play an important role in shaping financial behavior. Self-control, mental well-being, self-esteem, tension, and anxiety are some of the main determinants that influence how individuals manage their finances. Understanding these factors can help develop more effective interventions to improve financial behavior and financial well-being (Grable et al., 2020; Porcelli & Delgado, 2009; Strömbäck et al., 2017). Additionally, Kijkasiwat (2021) highlighted those other characteristics, such as the attitudes of small and medium-sized business owners, significantly influence good financial behavior among investors.

### **FINANCIAL ATTITUDE**

Financial attitude is a measure of mindset, opinions, and judgments about the world, reflecting a position based on personal values, though more flexible than values themselves (Pankow, 2003). An individual's financial attitude influences how they regulate their financial behavior (Herdjono & Damanik, 2016).

An individual's financial attitude can help determine their stance and behavior on financial issues, including financial management, personal budgeting, and investment decisions. People who consistently adopt a positive financial attitude in their lives find it easier to establish a stance and behavior on financial matters (Perangin-angin, Fachrudin, & Irawati, 2022).

Amagir, Groot, Van den Brink, and Wilschut (2020) report that financial socialization factors, such as discussing financial matters with peers and parents and participating in

family financial decisions, are positively associated with financial planning and thinking before acting. Furthermore, there is a positive relationship between discussing financial matters with peers and parents and the factors of power/prestige and self-reported financial behavior. Financial attitude is one of the factors behind individuals' financial actions or behaviors (Armilia & Isbanah, 2020). A positive attitude can guide individuals to take the correct actions regarding their finances (Shah, 2021).

De Almeida, Ferreira, Soro, and Silva (2021) affirm that belief patterns and attitudes were not only associated with lower total assets, lower earnings, and higher levels of revolving credit but could also predict disordered money practices, such as impulsive buying and financial dependence. Conversely, attitudes and beliefs favoring money vigilance, including frugality, caution, and money anxiety, seemed to protect against poor financial health and risky financial practices. Based on this, the following hypotheses are suggested:

- H1: Financial attitude positively influences financial behavior.
- H2: Financial attitude negatively influences impulsive buying.

## FINANCIAL TENSION

Financial tension reflects perceptions of assets and the ability to meet needs, shaped by perceptions of others' prosperity (Ettman et al., 2023). Thus, financial tension represents both the subjective and objective economic state of the individual (Gasiorowska, 2014).

Garner and Toney (2020) state that family financial tension is linked to children's emotional issues, such as depression and anxiety. Financial tension alone has a negative effect; the longer a family experiences financial difficulties, the greater the negative impact on children's emotional health.

Financial stress levels were also related to subjective well-being, serving as a mediating model in which perceived financial tension mediates the effect of financial behaviors. In this model, financial behavior and perceptions of economic status independently and directly impact satisfaction and mood (Bartholomae & Fox, 2021). Based on this, the following hypotheses were developed:

- H3: Financial tension positively impacts financial anxiety.
- H4: Financial tension negatively influences financial behavior.

## FINANCIAL ANXIETY

Financial anxiety is considered a syndrome involving psychosocial factors, creating discomfort and stress about one's finances (Basyouni & El Keshky, 2021), or it can be described as feeling anxious or worried about one's financial situation (Archuleta, Dale, & Spann, 2013).

Lee, Rabbani, and Heo (2023) assert that the intensity of financial anxiety may be associated with financial self-efficacy and knowledge. As consumer transactions grow more complex with increasing consumer burden and responsibility, individuals may feel their understanding of financial markets and decisions is limited. Archuleta, Dale, and Spann (2013) found similar results, positively linking financial anxiety to investment behavior but negatively mediating cognitive factors and credit behavior.

A study by Xin, Xiao, and Lin (2023) also related financial anxiety to financial and mathematical knowledge and behaviors. It revealed that participants with high financial anxiety tended to score lower in financial knowledge compared to those with lower financial anxiety. The study also suggested that financial anxiety leads people to avoid financial matters not due to a lack of skills but because their anxiety affects their willingness to engage with financial issues. Based on this, we infer:

- H5: Financial anxiety negatively influences financial behavior.

## IMPULSIVE BUYING BEHAVIOR

Impulsive buying is an unplanned purchase driven by a strong urge that is difficult to resist. It is often triggered by external conditions, accompanied by pleasant, passionate feelings, and can lead to anxiety, regret, and sometimes new debt (Secapramana, Magdalena, & Yuwanto, 2021). Impulsive buying is an unplanned, on-the-spot decision triggered by a stimulus (Pandya & Pandya, 2020).

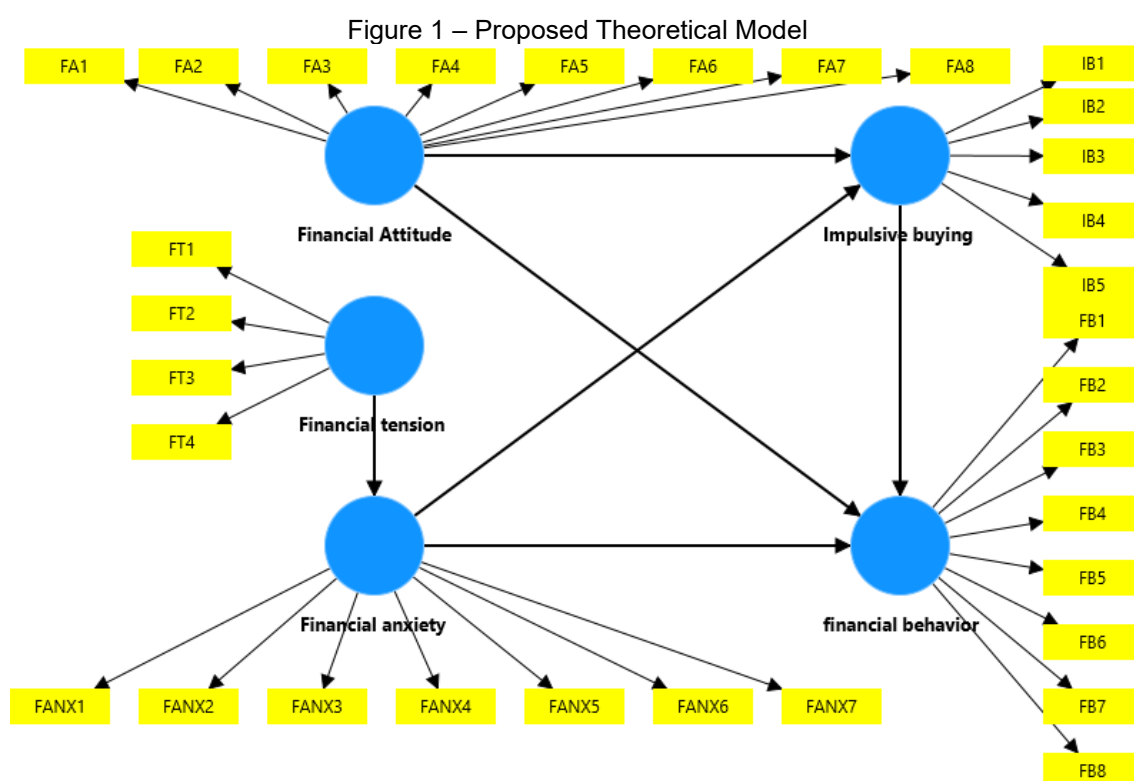
Gui, Dai, Zheng, and Liu (2023) conducted a study showing that smartphone separation increased state anxiety, leading to more impulsive decisions in intertemporal choice tasks and higher impulsive buying intentions. Additionally, various factors play a role in impulsive buying, such as personality. Impulsive buyers tend to have lower self-esteem, higher anxiety, and even depressive tendencies (Renamae D. Azul et al., 2023).

Feelings of euphoria and anxiety during shopping can quickly turn into guilt, worry, shame, and even depression after making purchases (Pandya & Pandya, 2020). These

authors found that women suffering from anxiety and depression may use impulsive buying to improve their mental state, with higher impulsive buying rates reported among women than men.

Cognitive exhaustion from survival-related concerns leads to emotional distress and impairs decision-making, resulting in impulsive financial choices. Similarly, internal factors like impulsivity and low self-control put consumers at greater risk of over-indebtedness, and lack of self-control can be seen as an outcome rather than a cause of financial scarcity (de Almeida et al., 2021). Based on this, the following hypotheses were formulated:

- H6: Financial anxiety positively influences impulsive buying.
- H7: Impulsive buying negatively influences financial behavior.



Source: Developed by the author using SMART PLS 4

## METHODOLOGY

To analyze the achievement of the research objectives, a quantitative, cross-sectional, descriptive study was chosen. The study field consisted of individuals of various ages, education levels, income, and marital statuses who volunteered to answer the questionnaire, providing a broad view of the results obtained.

Primary data collection was conducted using a semi-structured questionnaire, with statements measuring financial attitude (Mustafa; Islam; Asyraf; Hassan; Royhan &

Rahman, 2023), financial anxiety (Archuleta, Dale & Spann, 2013), financial stress, impulsive buying (Veiga, Avelar, Moura & Higuchi, 2019), and financial behavior (Mutlu & Özer, 2022).

The questionnaire included 32 statements that assessed responses in relation to the constructs and 5 control questions that measured socioeconomic data. All statements were translated into Portuguese, and a pre-test with 10 participants was conducted, which indicated no need for significant adjustments to the research instrument. After the pre-test, the questionnaire was distributed via email and social media from May to June 2024. A total of 205 responses were collected, with 203 validated. A non-probabilistic convenience sampling technique was used to maximize responses.

The data analysis was performed using SMART PLS 4 software. Initially, structural equation modeling (SEM) with partial least squares (PLS) estimation was employed. The measurement model was validated through confirmatory component analysis (CCA). Convergent validity and internal consistency were verified using factor loadings, average variance extracted (AVE), composite reliability (CR), Cronbach's alpha (CA), and Spearman correlation. Discriminant validity was assessed using the heterotrait-monotrait ratio of correlations (HTMT) and the Fornell and Larcker criterion.

Finally, the structural model was evaluated according to the assessment criteria of Hair et al. (2019), which include the coefficient of determination ( $R^2$ ), predictive validity ( $Q^2$ ), path coefficient relevance, indirect effects (mediation), Cohen's effect size ( $f^2$ ), predictive effect size ( $q^2$ ), and variance inflation factors (VIFs) of indicators and constructs. To test the study's proposed hypotheses, statistically significant differences between path coefficients were examined.

## **DATA ANALYSIS**

### **MODEL VALIDATION**

Initially, Confirmatory Component Analysis was used to validate the constructs and indicators. After the first rounds, indicators FA8, FA2, IB5, FT2, FA5, FB7, FA3, FB5, IB2, FB8, FA4, and FB6 were removed due to low factor loadings (values below 0.708), as recommended by Hair et al. (2020).

Following the factor loading analysis, the average variance extracted (AVE), composite reliability (CR), Cronbach's alpha (CA), and Spearman correlation were assessed, as detailed in Table 1.



**Table 1 – Convergent Validity and Internal Consistency**

Construct	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)
FX	0.927	0.929	0.942	0.699
FA	0.704	0.718	0.832	0.624
FB	0.766	0.771	0.865	0.682
IB	0.722	0.751	0.842	0.641
FT	0.755	0.757	0.860	0.672

*Source: Research Data*

*Legend:*

*FX – Financial Anxiety*

*FA – Financial Attitude*

*FB – Financial Behavior*

*IB – Impulse Buying*

*FT – Financial Tension*

The Average Variance Extracted (AVE) results showed values greater than 0.500, suggesting that constructs explain at least 50% of the variance of their indicators, indicating adequate convergence. Composite reliability, which measures the internal consistency of the item values for a given construct, showed results above 0.700. Cronbach's alpha also indicated internal consistency for the variables, with results above the lower limit of 0.700 for satisfactory reliability and below the upper limit of 0.950. Finally, Spearman Correlation was verified, with values between Cronbach's alpha and Composite Reliability. Based on Hair et al. (2020) recommendations, the analyzed model can be considered to have convergent validity and internal consistency.

Discriminant validity was analyzed using the Fornell-Larcker and HTMT criteria, as shown in Tables 2 and 3, respectively. A discriminant validity issue was initially observed between the loadings of the Financial Behavior and Financial Attitude constructs. After cross-loading analysis, indicator CF2 was excluded, resolving the issue. After excluding this indicator, the Fornell-Larcker criterion showed that the square root of the AVE for each construct was greater than its correlation with other constructs in the model. Since the diagonal values are greater than the correlations between latent variables, discriminant validity is achieved (de Bido and da Silva, 2019). In terms of HTMT, most values were below 0.850, and all were below 0.900, within the maximum thresholds suggested by Hair et al. (2020), with 0.850 for conceptually distinct constructs and 0.900 for conceptually similar constructs.



**Table 2 – Discriminant Validity Fornell-Larcker Criterion**

	FX	FA	FB	IB	FT
FX	0.836				
FA	-0.170	0.790			
FB	-0.410	0.655	0.826		
IB	0.175	-0.325	-0.377	0.801	
FT	0.747	-0.324	-0.487	0.277	0.820

Source: Research Data

Legend:

FX – Financial Anxiety

FA – Financial Attitude

FB – Financial Behavior

IB – Impulse Buying

FT – Financial Tension

**Table 3 – Discriminant Validity HTMT**

	FX	FA	FB	IB	FT
FX					
FA	0.213				
FB	0.481	0.875			
IB	0.204	0.449	0.506		
FT	0.895	0.411	0.631	0.356	

Source: Research Data

Legend:

FX – Financial Anxiety

FA – Financial Attitude

FB – Financial Behavior

IB – Impulse Buying

FT – Financial Tension

## STRUCTURAL MODEL EVALUATION

To evaluate the structural model, the influence of control variables on the endogenous constructs was first examined. The results showed significant relationships between income and financial anxiety, gender and financial behavior, and gender and impulsive buying. The other control variables did not show a significant relationship with the endogenous constructs and were therefore excluded from further analyses.

Assessing the model without controls revealed statistically significant relationships between Anxiety and Financial Behavior; Attitude and Financial Behavior; Attitude and Impulsive Buying; Impulsive Buying and Financial Behavior; Financial Stress and Financial Anxiety; and Financial Stress and Financial Behavior.

Subsequently, control variables that showed a significant relationship in the previous analysis were added to the model. The results were similar to those obtained without using controls. Among the control variables, only gender showed a relationship with impulsive buying in this new analysis. The others did not show a significant relationship. Analyzing

indirect effects (mediation) revealed the mediating role of anxiety in the relationship between financial stress and financial behavior. The effects with and without controls are shown in Table 4.

**Table 4 – Effects with and without Controls**

<b>WITHOUT CONTROLS</b>					
	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>p values</b>
<b>FX -&gt; FB</b>	-0,205	-0,205	0,077	2,674	0,008
<b>FX -&gt; IB</b>	0,120	0,120	0,080	1,505	0,132
<b>FA -&gt; FB</b>	0,537	0,539	0,054	9,862	0,000
<b>FA -&gt; IB</b>	-0,306	-0,312	0,073	4,171	0,000
<b>IB -&gt; FB</b>	-0,133	-0,133	0,060	2,220	0,026
<b>FT -&gt; FX</b>	0,749	0,751	0,032	23,474	0,000
<b>FT -&gt; FB</b>	-0,125	-0,125	0,078	1,610	0,107
<b>WITH CONTROLS</b>					
	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>p values</b>
<b>FX -&gt; FB</b>	-0,195	-0,195	0,077	2,538	0,011
<b>FX -&gt; IB</b>	0,103	0,102	0,077	1,342	0,180
<b>FA -&gt; FB</b>	0,538	0,540	0,055	9,862	0,000
<b>FA -&gt; IB</b>	-0,297	-0,302	0,076	3,914	0,000
<b>IB -&gt; FB</b>	-0,120	-0,120	0,060	1,992	0,046
<b>FT -&gt; FX</b>	0,740	0,741	0,035	21,012	0,000
<b>FT -&gt; FB</b>	-0,132	-0,132	0,077	1,717	0,086
<b>INDIRECT EFFECTS</b>					
	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>p values</b>
<b>FT -&gt; FX -&gt; FB</b>	-0,145	-0,145	0,058	2,498	0,013
<b>FT -&gt; FX -&gt; IB</b>	0,076	0,076	0,058	1,320	0,187
<b>FT -&gt; FX -&gt; IB -&gt; FB</b>	-0,009	-0,009	0,009	1,040	0,298
<b>FX -&gt; IB -&gt; FB</b>	-0,012	-0,012	0,012	1,049	0,294
<b>FA -&gt; IB -&gt; FB</b>	0,036	0,037	0,022	1,633	0,103
<b>CONTROLS</b>					
	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>p values</b>
<b>INCOME -&gt; FX</b>	-0,057	-0,057	0,046	1,238	0,216
<b>GENDER -&gt; FB</b>	-0,116	-0,112	0,098	1,184	0,236
<b>GENDER -&gt; IB</b>	0,391	0,393	0,130	3,009	0,003

Source: Research Data

Legend:

FX – Financial Anxiety

FA – Financial Attitude

FB – Financial Behavior

IB – Impulse Buying

FT – Financial Tension

Model fit quality was further assessed through the Coefficient of Determination ( $R^2$ ) and Predictive Relevance ( $Q^2$ ), indicating the predictive power and accuracy of the model.

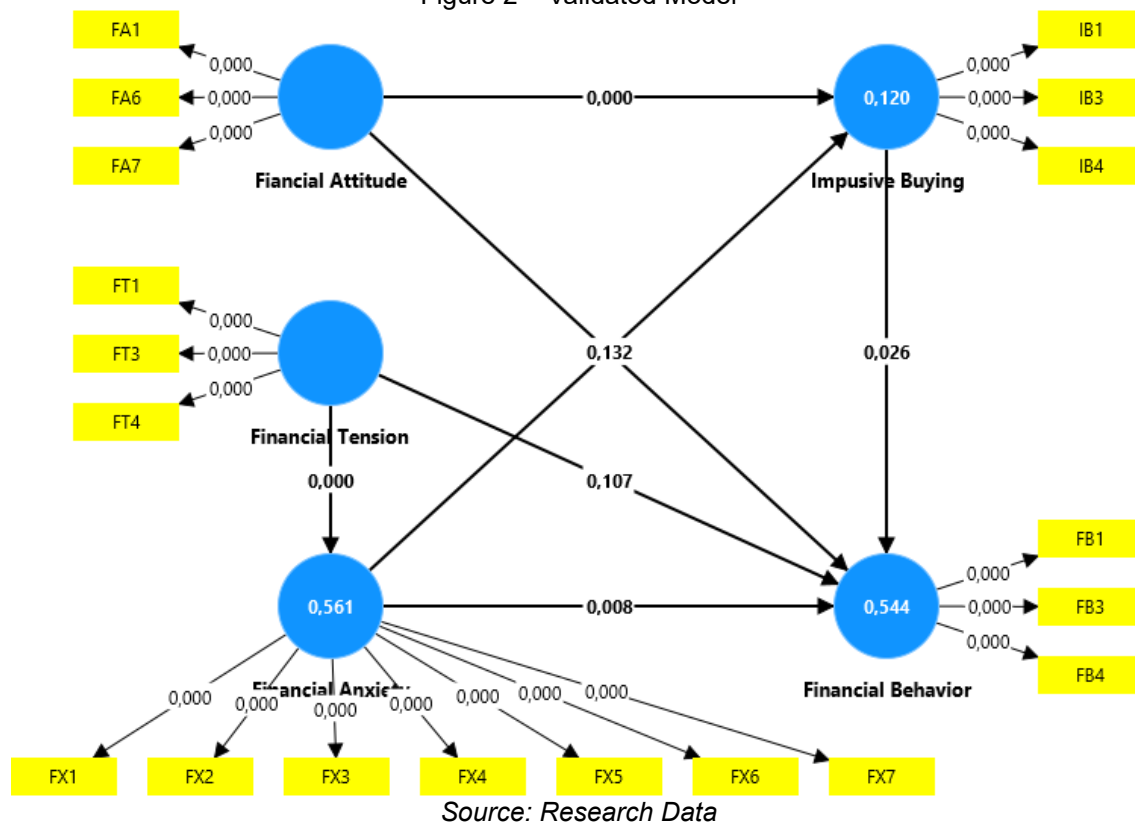
According to Hair et al. (2020), values equal to or above 0.75 for the coefficient of determination are considered substantial, 0.50 are moderate, and up to 0.25 are weak. The results showed that the  $R^2$  values for the Financial Anxiety and Financial Behavior constructs were moderate, at 0.564 and 0.547, respectively, while Impulsive Buying showed a low predictive value of 0.155.

For predictive relevance ( $Q^2$ ), Hair et al. (2020) consider a substantial value of 0.50, moderate at 0.25, and weak at 0.00. The research results indicated 0.555 for Financial Anxiety, 0.494 for Financial Behavior, and 0.107 for Impulsive Buying. Thus, all constructs showed some degree of significance, from substantial to between moderate and weak.

Finally, the variance inflation factor (VIF) was analyzed to assess the collinearity of the indicators and constructs. Collinearity must be checked to ensure it does not bias regression results. This process is similar to assessing formative measurement models, but the latent variable scores of predictor constructs in a partial regression are used to calculate VIF values. VIF values above 5 indicate potential collinearity issues among predictor constructs, while ideally, VIF values should be close to or below 3 (Hair et al., 2019).

The results show VIF values for the indicators mostly below 5 and, in most cases, below 3. All VIF values for the constructs were below 3, following the recommendations by Hair et al. (2019). These results indicate collinearity of the indicators and constructs. Figure 2 shows the final model outcome.

Figure 2 – Validated Model



## EVALUATION OF THE HYPOTHESES AND DISCUSSION OF THE RESULTS

Table 5 presents the results of the hypothesis evaluations.

Table 5 – Hypothesis Analysis

HYPOTHESES		Original Sample	Sample Mean	Standard Deviation	T Statistic ( O/STDEV )	p-value
FA -> FB	H1	0,538	0,540	0,055	9,862	0,000
FA -> IB	H2	-0,297	-0,302	0,076	3,914	0,000
FT -> FX	H3	0,740	0,741	0,035	21,012	0,000
FT -> FB	H4	-0,132	-0,132	0,077	1,717	0,086
FX -> CF	H5	-0,195	-0,195	0,077	2,538	0,011
FX -> IB	H6	0,103	0,102	0,077	1,342	0,180
IB -> FB	H7	-0,120	-0,120	0,060	1,992	0,046

Source: Survey Data

Legend:

FX – Financial Anxiety  
FA – Financial Attitude  
FB – Financial Behavior  
IB – Impulse Buying  
FT – Financial Tension

The results show that hypotheses H1, H2, H3, H5, and H7 were supported. The other two relationships, contained in hypotheses H4 and H6, did not show significant results among the survey respondents.

Hypothesis H1, which proposed that the influence of financial attitude on financial behavior, was supported. This influence showed a direct relationship (Original Sample 0.538). This result aligns with findings by Perangin-angin, Fachrudin, and Irawati (2022), who indicated that individuals who consistently apply financial attitudes in their lives will find it easier to determine their behavior in financial matters. Bapat (2020) reiterates the importance of financial attitude in responsible financial behavior. In his study, the author explains that it is not enough to have knowledge to influence financial behavior unless it leads to the development of an appropriate financial attitude. In this context, it seems that the attention and efforts to improve attitudes toward financial resources tend to have a significant impact on how financial resources are managed.

Hypothesis H2, which suggested a negative influence of financial attitude on impulse buying, was also supported. These results suggest that previous positive beliefs and experiences regarding money, which shaped individuals' current thoughts and attitudes, may help reduce impulsive buying behavior. These results are consistent with the work of Almeida et al. (2021), who argue that attitudes can prevent disordered financial practices such as impulse buying. Furthermore, Lai (2010) observed that impulsive buying behavior in teenagers is inversely related to past experiences. If they had taken finance-related courses, they were less likely to engage in impulsive buying behavior. If they had experienced the use of money with rewards at its source, they were more likely to engage in impulsive buying.

Hypothesis H3, which suggested that financial tension positively influences financial anxiety, was also supported. The results are similar to those found by Dijkstra-Kersten et al. (2015), who identified that participants with financial tension were more likely to have a depressive or anxiety disorder compared to those without financial tension. Additionally, the authors found that associations between financial pressure and depressive/anxiety disorders remained, regardless of income level. Findings indicated that participants with mild or severe financial tension were more likely to have a depressive or anxiety disorder compared to participants without financial pressure. In this sense, it seems evident that managing the perception and control of financial assets and liabilities is important in

reducing financial stress and the possibility of anxiety crises derived from financial problems.

Hypothesis H4, which indicated that financial tension negatively influences financial behavior, was rejected ( $p\text{-value} > 0.05$ ). These results suggest that financial behavior is not directly influenced by financial tension, whether mild, moderate, or severe. In this case, the pressure or financial strain of an individual did not show evidence of influencing their financial behavior on its own. Watson, Barbeiro, and Dziurawiec (2015) focused on the perception of financial tension as a mediator of financial behaviors and found that perceived financial tension links saving behaviors to well-being. Serido et al. (2014) further identified that financial tensions lead to changes in the financial behavior of university students. One possible reason for the contrast in results compared to previous studies could be the focus of earlier research on university students, who may have limited or no experience with financial autonomy, whereas the data in this study sought to understand a diverse age range and profiles.

Hypothesis H5, which suggested an inverse relationship between financial anxiety and financial behavior, was supported. Literature has already found a negative relationship between financial anxiety and financial behavior. Archuleta, Dale, and Spann (2013) stated that financial anxiety negatively influences financial behavior by leading investors to believe they are limited in their ability to invest. Xin, Xiao, and Lin (2023) found that people with high financial anxiety tend to avoid financial matters, not because they lack the ability to solve problems in this area, but because the anxiety itself interferes with their willingness to engage with these issues. In this sense, it seems important to seek measures that reduce individuals' anxiety levels, especially in financial matters, in order to prevent negative behaviors associated with finances.

Hypothesis H6, which established that financial anxiety positively influences impulse buying, was rejected ( $p\text{-value} > 0.05$ ), as observed in Table 3. Literature presents some studies showing this relationship. Gui et al. (2023) tested the anxiety level caused by the withdrawal of smartphone use, which led to an increase in impulsive decision-making tendencies in the buying process. Furthermore, impulsive buyers have low self-esteem, depression, and high levels of anxiety (Azul et al., 2023). Again, these studies focused on anxiety and impulsivity in buying behavior among young people. According to Maggalatta and Adhariani (2020), young managers are more manipulative and less concerned about morality than older individuals. This suggests that people become more ethical as they age,

as wisdom comes from life experiences; therefore, the older the individual, the more wisdom they have in dealing with finances.

Finally, Hypothesis H7, which suggested that impulse buying negatively influences financial behavior, was supported. These results seem to indicate that individuals' financial behavior may be influenced by psychological and emotional aspects that lead to impulsive behavior. Thus, focusing on certain psychological aspects can reduce impulse buying, improving individuals' financial behavior, as internal or individualistic factors, such as impulsivity and low self-control, put consumers at higher risk of over-indebtedness. Lack of self-control is more of a consequence than a cause of financial scarcity and over-indebtedness (Almeida et al., 2021).

In addition to the research hypotheses, the mediating effect of financial anxiety in the relationship between financial tension and financial behavior was also verified in Table 4. Given the increasing concerns about psychological and emotional factors in relation to the financial context, especially after the Covid-19 pandemic, this result introduces a new perspective to the financial education literature, as it includes the mediation perspective in a developing country.

Finally, another significant relationship was that between gender and impulse buying behavior. The results indicate that women tend to be more impulsive when making purchases than men. These data are corroborated by Pandya and Pandya (2020), who reported higher impulse buying rates for women compared to men. They also identified that women who suffer from anxiety and depression may use impulse buying as a way to improve their mental state.

## CONCLUSION

This study aimed to analyze the impact of psychological and emotional aspects on individuals' financial behavior. Based on the current literature, the relationships between the variables financial anxiety, financial attitude, financial tension, and impulsive buying with financial behavior were tested. Structural equation modeling was used to measure these relationships, and the results identified significant relationships between the independent variables attitude, anxiety, and impulsivity in buying with financial behavior. Furthermore, the study also revealed significant relationships between attitude and impulsivity in buying, as well as between financial tension and financial anxiety.



Based on these findings, it is clear that seeking solutions to reduce financial anxiety and tension can help foster good financial behavior and management, as well as improve the decision-making process. The results also suggest that past experiences and life events related to money can influence future impulsive buying behavior, highlighting the need to introduce sound financial concepts and information as early as possible. Moreover, efforts must be made to avoid financial stress and tensions, potentially by adopting financial control methods to reduce anxiety levels regarding money, thus preventing it from compromising financial behavior.

In this context, this research is particularly important in Brazil, where, according to the National Confederation of Commerce of Goods, Services, and Tourism (2024), over 78% of the population is in some form of debt, and about 29% are delinquent. In contrast to developed countries, where up to 75% of individuals are financially literate, in the leading emerging economies – the so-called BRICS (Brazil, Russia, India, China, and South Africa) – on average, only 28% of adults are financially literate. This underscores the importance of understanding not only socio-economic factors but also psychological aspects. This research could also assist in the creation of public policies that address solutions to improve people's emotional aspects, with the goal of enhancing how they manage their financial resources.

Theoretically, this work contributes to the novelty of introducing studies on psychological and emotional variables that can influence individuals' financial behavior in an emerging country with high levels of debt, delinquency, and low financial literacy rates. This study provides new knowledge and expands research in the area of financial education. In this sense, understanding the influence of variables such as anxiety, tension, attitude, and impulsivity on financial behavior, as well as their interrelationships, makes this research innovative and opens new avenues for future authors to explore.

However, despite these contributions, this study used a non-probabilistic accessibility sampling, making it impossible to generalize the results. Therefore, future studies could employ other sampling methods to achieve generalizability. Additionally, the study was cross-sectional, capturing the respondents' perceptions at the time of data collection. In this case, longitudinal studies could yield different results, depending on the context of each period over time.

Future studies could explore the impact of other variables, considering their effects on financial behavior. Another approach for new studies could involve comparing factors

such as age and/or generation, given that most of the research has been conducted with young individuals at the start of their financial lives, which may offer a different perspective. Longitudinal studies could also track life experiences over time, taking into account the different contexts and socio-economic profiles. Ultimately, studying the factors that contribute to individuals' financial behavior opens the door to diversified research with the potential for valuable theoretical and practical contributions.

## REFERENCES

1. Adiputra, I. G., & Patricia, E. (2020, May). The effect of financial attitude, financial knowledge, and income on financial management behavior. In Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2019) (pp. 107–112). Atlantis Press.
2. Amagir, A., Groot, W., van den Brink, H. M., & Wilschut, A. (2020). Financial literacy of high school students in the Netherlands: Knowledge, attitudes, self-efficacy, and behavior. *International Review of Economics Education*, 34, 100185.
3. Archuleta, K. L., Dale, A., & Spann, S. M. (2013). College students and financial distress: Exploring debt, financial satisfaction, and financial anxiety. *Journal of Financial Counseling and Planning*, 24(2), 50–62.
4. Armilia, N., & Isbanah, Y. (2020). Faktor yang memengaruhi kepuasan keuangan pengguna financial technology di Surabaya. *Jurnal Ilmu Manajemen*, 8(1), 39–50.
5. Bapat, D. (2020). Antecedents to responsible financial management behavior among young adults: Moderating role of financial risk tolerance. *International Journal of Bank Marketing*, 38(5), 1177–1194.
6. Baptista, S. M. J., & Dewi, A. S. (2021). The influence of financial attitude, financial literacy, and locus of control on financial management behavior. *International Journal of Social Science and Business*, 5(1), 93–98.
7. Bartholomae, S., & Fox, J. J. (2021). A decade review of research on college student financial behavior and well-being. *Journal of Family and Economic Issues*, 42(Suppl 1), 154–177.
8. Basyouni, S. S., & El Keshky, M. E. S. (2021). Job insecurity, work-related flow, and financial anxiety in the midst of COVID-19 pandemic and economic downturn. *Frontiers in Psychology*, 12, 632265.
9. Confederação Nacional de Comércio de Bens, Serviço e Turismo. (2024). Pesquisa de Endividamento e Inadimplência do Consumidor (PEIC). <https://pesquisascnc.com.br/pesquisa-peic/>. Acesso em 25 jun. 2024.
10. de Almeida, F., Ferreira, M. B., Soro, J. C., & Silva, C. S. (2021). Attitudes toward money and control strategies of financial behavior: A comparison between overindebted and non-overindebted consumers. *Frontiers in Psychology*, 12, 566594.
11. Dijkstra-Kersten, S. M., Biesheuvel-Leliefeld, K. E., van der Wouden, J. C., Penninx, B. W., & van Marwijk, H. W. (2015). Associations of financial strain and income with depressive and anxiety disorders. *Journal of Epidemiology and Community Health*, 660–665.
12. Ettman, C. K., Fan, A. Y., Philips, A. P., Adam, G. P., Ringlein, G., Clark, M. A., ... & Galea, S. (2023). Financial strain and depression in the US: A scoping review. *Translational Psychiatry*, 13(1), 168.

13. Fenton-O'Creevy, M., & Furnham, A. (2022). Money attitudes, financial capabilities, and impulsiveness as predictors of wealth accumulation. *PLOS ONE*, 17(11), e0278047.
14. Fenton-O'Creevy, M., Dibb, S., & Furnham, A. (2018). Antecedents and consequences of chronic impulsive buying: Can impulsive buying be understood as dysfunctional self-regulation? *Psychology & Marketing*, 35(3), 175–188.
15. Fiksenbaum, L., Marjanovic, Z., & Greenglass, E. (2017). Financial threat and individuals' willingness to change financial behavior. *Review of Behavioral Finance*, 9(2), 128–147.
16. Garner, P. W., & Toney, T. D. (2020). Financial strain, maternal attributions, emotion knowledge and children's behavioral readiness for school. *Journal of Applied Developmental Psychology*, 67, 101122.
17. Grable, J. E., Archuleta, K. L., Ford, M. R., Kruger, M., Gale, J., & Goetz, J. (2020). The moderating effect of generalized anxiety and financial knowledge on financial management behavior. *Contemporary Family Therapy*, 42(1), 15–24. <https://doi.org/10.1007/s10591-019-09520-x>
18. Gui, D. Y., Dai, Y., Zheng, Z., & Liu, S. (2023). Losing control without your smartphone: Anxiety affects the dynamic choice process of impulsive decision-making and purchase. *Frontiers in Neuroscience*, 17, 998017.
19. Herdjiono, M. V. I., & Damanik, L. A. (2016). Pengaruh financial attitude, financial knowledge, parental income terhadap financial management behavior. *Jurnal Manajemen Teori dan Terapan*, 9(3), 226–241.
20. Kijkasiwat, P. (2021). The influence of behavioral factors on SMES' owners intention to adopt private finance. *Journal of Behavioral and Experimental Finance*, 30, 100476. <https://doi.org/10.1016/j.jbef.2021.100476>
21. Kim, J., Falconier, M. K., & Conway, C. A. (2023). Relationships among emotion regulation, financial self-efficacy, and financial management behaviors of couples. *Journal of Family and Economic Issues*, 44(2), 342–355.
22. Kim, K. T., & Lee, J. M. (2021). A review of a decade of financial behavior research in the journal of family and economic issues. *Journal of Family and Economic Issues*, 42, 131–141.
23. Kuhnen, C. M., & Knutson, B. (2011). The influence of affect on beliefs, preferences, and financial decisions. *Journal of Financial and Quantitative Analysis*, 46(3), 605–626.
24. Lee, J. M., Rabbani, A., & Heo, W. (2023). Examining financial anxiety focusing on interactions between financial knowledge and financial self-efficacy. *Journal of Financial Therapy*, 14(1), 2.
25. Maggalatta, A., & Adhariani, D. (2020). For love or money: Investigating the love of money, Machiavellianism and accounting students' ethical perception. *Journal of International Education in Business*, 13(2), 203–220.

26. Mutlu, Ü., & Özer, G. (2022). The moderator effect of financial literacy on the relationship between locus of control and financial behavior. *Kybernetes*, 51(3), 1114–1126.
27. Negi, P., & Jaiswal, A. (2024). Impact of financial literacy on consumer financial behavior: A systematic review and research agenda using TCCM framework. *International Journal of Consumer Studies*, 48(3), e13053.
28. Pandya, P. R., & Pandya, D. K. (2020). A study on compulsive and impulsive buying behaviour of consumers in Gujarat state in retail mall with special focus on FMCG products (Doctoral dissertation, FPT University, Vietnam).
29. Pankow, D. (2003). Financial values, attitudes and goals.
30. Perangin-angin, N., Fachrudin, K. A., & Irawati, N. (2022). The effect of financial literacy, financial inclusion and financial attitude on saving behavior with self-control as moderation: Study on households in Cingkes Village, Dolok Silau District, Simalungun Regency. *International Journal of Research and Review*, 9(1), 470–477.
31. Porcelli, A. J., & Delgado, M. R. (2009). Acute stress modulates risk-taking in financial decision-making. *Psychological Science*, 20(3), 278–283. <https://doi.org/10.1111/j.1467-9280.2009.02288.x>
32. Renamae, D. A., Cadano, K. D. Q., Guiao, R. J. M., Maranga, N., Salonga, C. H., & Usita, M. N. (2023). The impulse buying behavior and financial well-being profile of young professionals in the Philippines. *International Journal of Scientific and Research Publications (IJSRP)*, 13(03). <https://doi.org/10.29322/IJSRP.13.03.2023.p13537>
33. Sabri, M. F., Anthony, M., Wijekoon, R., Suhaimi, S. S. A., Abdul Rahim, H., Magli, A. S., & Isa, M. P. M. (2021). The influence of financial knowledge, financial socialization, financial behaviour, and financial strain on young adults' financial well-being. *International Journal of Academic Research in Business and Social Sciences*, 11(12), 566–586.
34. Secapramana, L. V. H., Magdalena, G. J., & Yuwanto, L. (2021, May). Impulsive buying, post-purchase regret, and credit card. In *2nd International Conference on Business and Management of Technology (ICONBMT 2020)* (pp. 5–10). Atlantis Press.
35. Serido, J., Shim, S., Xiao, J. J., Tang, C., & Card, N. A. (2014). Financial adaptation among college students: Helping students cope with financial strain. *Journal of College Student Development*, 55(3), 310–316.
36. Shah, A. (2021). Study of influence of financial behaviour and financial attitude on financial literacy on today's youth in Ahmedabad district. *International Journal of Research in Social Sciences*, 11(08).
37. Strömbäck, C., Lind, T., Skagerlund, K., Västfjäll, D., & Tinghög, G. (2017). Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance*, 14, 30–38. <https://doi.org/10.1016/j.jbef.2017.04.002>

38. Talwar, M., Talwar, S., Kaur, P., Tripathy, N., & Dhir, A. (2021). Has financial attitude impacted the trading activity of retail investors during the COVID-19 pandemic? *Journal of Retailing and Consumer Services*, 58, 102341.
39. Tang, N. (2017). Like father like son: How does parents' financial behavior affect their children's financial behavior? *Journal of Consumer Affairs*, 51(2), 284–311.
40. Watson, S. J., Barbeiro, B. L., & Dziurawiec, S. (2015). O papel da economia e da pressão financeira no bem-estar psicológico de estudantes universitários australianos. *Journal of Family and Economic Issues*, 36(3), 421–433.
41. Xiao, J. J. (2008). Applying behavior theories to financial behavior. In *Handbook of consumer finance research* (pp. 69–81). Springer New York.
42. Xin, Z., Xiao, H., & Lin, G. (2023). Math anxiety and financial anxiety predicting individuals' financial management behavior. *Depression and Anxiety*, 2023(1), 3131631.