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Behavioral Determinants of Personal Finance: An Empirical Study of Risk Attitudes in Saving, Spending, and Investment Decisions

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ABSTRACT
Understanding the psychological factors influencing financial decision-making is crucial for improving personal finance outcomes. This study examines the impact of three key psychological risk attitudes risk tolerance, loss aversion, and overconfidence on financial behaviors such as investment decisions, saving habits, and impulse spending. The findings indicate that individuals with higher risk tolerance are more likely to engage in riskier investments, such as stocks and real estate, while those exhibiting loss aversion tend to favor conservative savings strategies, avoiding higher-risk options despite potentially higher returns. Additionally, overconfidence is shown to contribute to impulse spending, with individuals overestimating their financial acumen and making unplanned purchases. These psychological biases often result in suboptimal financial decisions, which can negatively affect long-term financial security. The study underscores the importance of financial literacy in addressing these biases, as individuals with higher financial knowledge are better equipped to make informed decisions. By incorporating insights from behavioral finance, the research suggests that targeted educational interventions can help mitigate the effects of these psychological biases, promoting better financial behaviors and decision-making. This is particularly important in emerging economies like India, where financial literacy remains a key challenge.
Keywords: Risk tolerance, loss aversion, overconfidence, financial literacy, impulse spending

INTRODUCTION:

The issue of individual finances and health are very sensitive topics of personal finance and investment, expenditure, and saving is a long-run phenomenon. The classical theory of economics presumes rationality of individuals in respect to finance management. This idea has been however frowned upon as shown in behavioral finance study which has shown that psychology biases play a huge role in the financial decisions. The psychological factors that can be obtained to derive the financial behaviors of individuals are risk tolerance, loss aversion, and overconfidence (Islam et al., 2024). These prejudices are likely to result in poor financial performances that include lack of saving, wasteful spending and poor investment strategies. The corresponding information regarding how these psychological biases affect financial judgments will be paramount to improve the financial literacy levels and allow people to make better judgments (Umakanth et al., 2025; Yuvaraj and Venugopal, 2024).

Risk tolerance is also a determining factor of investments. Those who have a higher risk tolerance are the ones who invest in more risky investments like stocks and real estate whereas those with a lower risk tolerance invest in safer and less-yielding investments. This has been widely reported in the literature as more financially literate individuals have been found to adjust risk and evaluate it more well, and have thus made better investment decisions (Cappelli et al., 2024). Equally, the loss aversion the dislike of losses compared to the appreciation of gains impacts the way people save and invest (Onsarigo, 2024). Individuals who are highly loss averse tend to prefer safe savings products (e.g., fixed deposit or savings accounts) instead of riskier products that could deliver greater returns (Barrafrem, 2024). Loss aversion can be managed with the help of financial education, which will motivate people to spread their savings and investment plans and, therefore, enhance long-term financial performance. The other important psychological bias is overconfidence which plays a major role in financial decision-making (Ilugbusi and Adisa, 2024). Overconfident people with financial knowledge tend to make decisions without thinking, overestimate their capabilities in handling

investment, and underrate risk, which may result in disastrous financial consequences (Mishra and Varshney, 2025; Almansour et al., 2023). Impulse spending has a strong connection to overconfidence because people tend to believe that they are capable of spending the money wisely even after taking up-of-the-cuff spending. Impulse spending compromises the long-term financial planning and results in inadequate savings and investments. In the case of overconfidence, it should be ensured that people receive financial literacy education that would ensure that they are more realistic in their self-assessment and responsible in their spending (Furnham and FENTON-OCREEVY, 2024).

The available literature on the topic of behavioral finance attests to the importance of financial literacy in controlling such psychological biases. The financial literacy is the ability to understand and apply financial concepts such as budgeting, investment and risk management in order to make effective choices (RAJ and BHATTACHARYA, 2024). The financial literacy is now upgraded and those financial literacy of the people has boosted and so the financial life of people is now enhanced as the people are more prone to plan on the long term and bypass out of the trap of psychological bias (Soumya and Padmavathi, 2025). Financial literacy increase is, then, possibly relevant in assisting individuals to remove these forms of biases as overconfidence and loss aversion since they can make more rational financial choices.

This research will examine the following objectives:

1. To explore the relationship between risk tolerance and investment decisions, focusing on how psychological risk attitudes influence investment behavior.
2. To analyze the role of loss aversion in shaping saving behavior, and its impact on financial decision-making.
3. To examine the connection between overconfidence and impulse spending, and its influence on long-term financial planning.

Finally, this study is expected to help in the increasing literature on behavioral finance by offering more insight on the behavioral bias and its propensity on individual finance decision-making. With these biases being resolved in response to specific financial literacy programs, people are able to make sound decisions in terms of finances, which will result in a better financial performance in the long-term.

2. Methodology

2.1 Research Design

The study involved an empirical design which is quantitative in nature to examine the psychology attitude of risk in terms of saving, spending and investment choices. The survey design was a cross-sectional survey design that would capture the data on participants at a single point in time hence would help capture the risk preferences and financial practices of the participants. The cross-sectional character of the study was suitable in determining the relationship between the risk attitude and financial decisions of many people and no need to study the relationship longitudinally. It is this design that has made it possible to study the impact of the psychological variables such as the risk tolerance and cognitive biases to affect financial decisions in a given population.

2.2 Participants and Sampling

The study attempted to employ 500 respondents at the age of 18 years or above and the respondents who used personal financial decisions. The sampling of the participants was conducted based on stratified random sampling in such a way that it could be considered representative of the various demographic groups based on the age, income, education and sex. The inclusion criteria were active financial account or investment with the participants, while the ones who did not engage in any financial activity were excluded of the study. The survey was conducted on a sample population using the social media, online forums as well as email invitations to access a diverse sample population. The sample also targeted to take broad coverage of financial behaviors to enable the results to be generalized to other groups of the population.

2.3 Data Collection Method

The questionnaire that was utilized through the Internet to gather the data was designed and split into three sections. The first section was covered in the demographic section where age, income level, education and gender were obtained. The second section was a psychological analysis of the risk attitude of the subjects using the Risk Tolerance Scale (RTS) which is an instrument that has been established to measure the individual risk-taking propensity. The questions in the RTS included 10-15 questions that evaluated attitude towards different financial risks and high score meant risk tolerance. Part three was dedicated to financial behavior where the Financial Behavior Scale (FBS) is modified. In this scale, the questions reflected saving patterns, spending patterns and investment choices and the respondents were expected to report on such behavior as a proportion of income saved and investments instruments held. The responses were identified on the Likert scale between 1 (Strongly Disagree) and 5 (Strongly Agree). The online survey instrument was also used to carry out the questionnaire and the respondents were assured of their confidentiality and their voluntary participation.

2.4 Variables and Measures

The research concentrated on two main groups of variables; the independent variables and the dependent variables. Independent variables were the psychological risk attitudes, which were measured using the Risk Tolerance Scale, and the cognitive biases including the overconfidence and the loss aversion, which were measured using items based on behavioral economics literature. The dependent variables were the saving behavior, the spending behavior and the investment decisions. The saving behavior was assessed based on the questions on the percentage of income saved and the types of saving instruments. The question on impulse spending and spending on a budget was used to measure spending behavior, whereas the nature of investments and risk profile of the investments were used to measure investment decision. Besides, the demographic factors like age, income, and education were taken into account in the analysis because they can be the determinants of risk attitudes and financial practices.

2.5 Statistical Analysis

The analysis of the data was conducted in Python with the assistance of various statistical packages, i.e. Pandas to work with data and NumPy to make numerical calculations and the SciPy to test the hypothesis. In order to summarize the most significant variables, the descriptive statistics have been used, such as the mean, standard deviation, and frequency distribution and help to give an overview of the risk attitudes and financial behavior of the participants. Pearson correlation coefficients were computed in order to establish the relationships between psychological risk attitude and financial behavior. To test the predictive validity of risk attitudes to financial behavior, a multiple regression equation was performed with statsmodels in python. This analysis determined that risk tolerance and cognitive biases could be of immense importance in forecasting the decision to save, spend and invest, other demographic variables remaining constant. Also, factor analysis has been applied in establishing the underlying constructs which influence financial behavior in the sense that an in-depth understanding can be made on the psychological explanations as to why decisions are made. To ensure that the constructs of risk attitudes and financial behaviors were valid and reliable in the context of the study, it was checked in the case of the regression models and factor analyses.

3. Results

3.1 Descriptive Statistics

Table 1 presents the demographic data of the study participants. The participants were 500 in total, and the gender was evenly distributed (51% females and 49% males) (Figure 1). The average age of the population used was 34.7 years (SD = 8.3), indicating a wide population span of the adult population. The average monthly revenue of the participants = [?]50,000 (SD = [?]15,000). The income was between [?]30,000 and [?]75,000 showing that the financial capacity among the sample is varied, which can be regarded as the representative of an urban middle-income population in India. The sample was also educational, with 45 percent having a college degree, 35 percent high school and 20 percent postgraduate college.

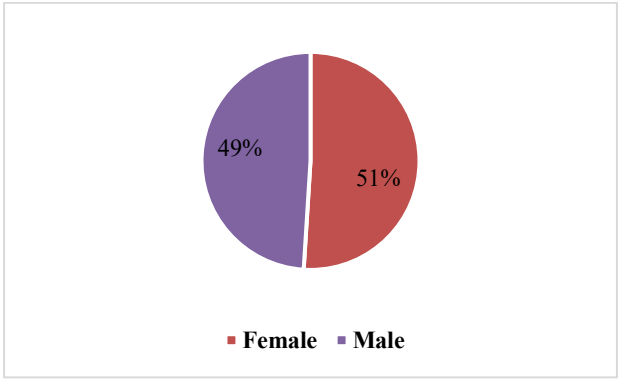

Figure 1: Distribution of Participants by Gender

The Risk Tolerance Scale (RTS) also indicated that the participants had moderate risk tolerance (mean = 3.8, SD = 0.7), which implies that they are not likely to take excessive financial risk, but tend to take a moderate amount of risk. The score of loss aversion was high enough (mean = 4.2, SD = 0.8), which was an indication of the participants to focus on loss avoidance rather than taking equal rewards. In terms of overconfidence, the participants had a moderate level of confidence (mean = 3.5, SD = 0.6) which implies that they are moderately confident in their financial decision-making skills.

Regarding financial behaviors, participants saved 12.5 percent of their income on average per month (SD = 6.3 percent) indicating a combination of savings behavior among the respondents. The impulsivity in terms of financial decision-making was moderate with the participants reporting that they were impulse shoppers (mean = 4.1, SD = 0.9). There was also a wide variety in investment behavior since 42 percent of respondents had invested in stocks, 28 percent in mutual funds, and 15 percent in real estate. The other 15 percent of the respondents had no kind of investment.

Table 1: Demographic Characteristics of Participants

Characteristic	Percentage (%)	Mean (SD)
Age		34.7 (8.3)
Gender		
Female	51%	
Male	49%	
Income (INR)		₹50,000 (₹15,000)
Education		
High School	35%	
College Degree	45%	
Postgraduate Degree	20%	

3.2 Correlation Analysis

A Pearson correlation analysis was used to investigate the relationship between the psychological risk attitude and financial behaviors. The analysis found that there are some important correlations that can be used in explaining why financial decisions are influenced by psychological factors. Investment choices were also positively related to risk tolerance ($r = 0.42$, $p < 0.01$) so that the more individuals were willing to take financial risks the more likely they would invest in risky investments, including stocks and real estate. Loss aversion, on the other hand, was negatively correlated with saving ($r = -0.36$, $p < 0.01$), which indicates that individuals who are more risk-averse to loss prefer less risky savings (equities) over those with higher returns (equities).

It was also shown that there is a positive correlation between overconfidence and impulse spending ($r = 0.32$, $p < 0.01$). This implies that the more confident participants become of their financial decision-making, the more likely they are to make impulsive financial decisions without really thinking of the long-term effects. Also, the negative correlation was observed between impulse spending and investment decisions ($r = -0.28$, $p < 0.01$), and this is because the impulsive spenders are less inclined to be concerned with long-term investments.

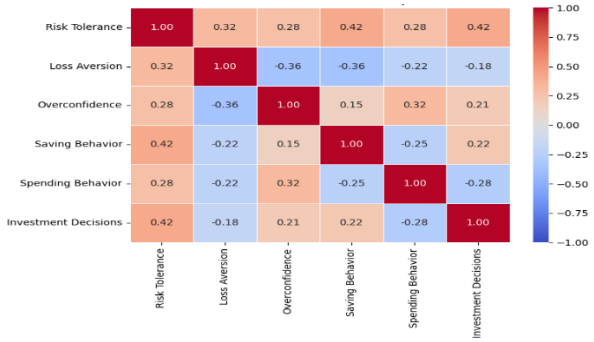

Figure 2: Pearson Correlations between Psychological Risk Attitudes and Financial Behaviors

3.3 Regression Analysis

The psychological risk attitudes were evaluated to predict the financial behaviors using a multiple regression analysis. The test results indicated that risk tolerance had a strong positive predictive relationship with investment decisions ($b = 0.39$, $p < 0.01$), and thus, confirmed the hypothesis that the more risky the investment, e.g. stock or real-estate, the more likely the individual had a higher risk tolerance. Loss aversion was a negative predictor of saving behavior ($b = -0.25$, $p < 0.05$), which means that those who have high loss aversion save less, and maybe they choose safer savings opportunities, with lower returns. Also, the highly positive predictor of impulse spending was overconfidence ($b = 0.21$, $p < 0.01$), as the more individuals feel confident in their financial decision-making skills, the more they are likely to make the impulse buy.

Table 3: Multiple Regression Analysis Predicting Financial Behaviors

Predictor Variable	Saving Behavior (β)	Spending Behavior (β)	Investment Decisions (β)
Risk Tolerance	0.15	0.12	0.39**
Loss Aversion	-0.25*	-0.18	-0.12
Overconfidence	0.07	0.21**	0.14
Age	0.09	0.04	0.08
Income	0.21**	0.18*	0.22**

Note: *p < 0.05, **p < 0.01*

3.4 Subgroup Analysis

One-way ANOVA was conducted in order to analyze the relationship between age and income and financial behaviors. The findings indicated that there was a significant relationship between age and saving behavior ($F(3, 496) = 7.42$, $p < 0.01$), with the older (aged 45+) income participants saving a greater percentage of income as opposed to the younger income participants. This implies that saving behavior is dependent on the age, and possibly, financial maturity. Equally, income had a significant and statistically significant correlation with investment decisions ($F(4, 495) = 5.39$, $p < 0.01$) where the higher-income participants were found to make riskier investment decisions, such as investing in stocks and real estate, whereas the low-income participants were more inclined towards less risky savings.

Table 4: ANOVA Results for Demographic Differences in Financial Behaviors

Demographic Variable	Financial Behavior	F-Statistic (df)	p-value
Age	Saving Behavior	7.42 (3, 496)	< 0.01
Income	Investment Decisions	5.39 (4, 495)	< 0.01
Education	Impulse Spending	3.28 (2, 497)	0.04

4. Discussion

The current paper has discussed the effect of the psychological risk attitudes on the financial behavior, which involves the investment decisions, saving behavior as well as impulse spending. The findings indicate that psychological biases (risk tolerance, loss aversion, and overconfidence) have a strong impact on financial behavior. These conclusions are consistent with the known theories and literature in the behavioral finance field and the implications provide valuable information to the policymakers, financial educators and practitioners. One major conclusion of this research is that there is a positive correlation between risk tolerance and the investment decisions. Those who exhibited more risk tolerance tended to invest in higher risk investments which included stocks and real-estate. This observation can be associated with the existing literature (Srivastava and Moid, 2025), which claims that the readiness of people to risk greatly influences their decision-making regarding investments. Considering the scenario in India where several people are now just starting to visit the financial markets and they might not have much knowledge about the risks involved, it is important to instill financial literacy programs that will help them be aware of their risk profile and the number of available investment avenues.

Another important result of this study is that the negative correlation between loss aversion and saving behavior is also observed. The loss aversion, where individuals fear a loss more than a gain, was found to reduce the saving behavior (Bai, 2023). This will assist in proving the point that people tend to evade risky circumstances that can result in losses even in those situations when potential returns are high. The more frightened individuals were about losing then they were less likely to deposit savings with riskier and potentially more profitable savings instruments, like stocks or mutual funds, and gravitated toward less risky ones, like savings accounts or fixed deposits. These people would be assisted by financial literacy programs on how to handle loss aversion and they would be encouraged to think more diversely on saving. Another factor, which was also identified as a predictive of impulse spending, was overconfidence. The overconfident individuals will also overrate their financial expertise and command over the financial outcomes that can lead to spontaneous and unthought-out purchases. The finding is consistent with the findings of the previous literature that showed that overconfidence often leads to an ineffective process of financial decision making,

especially when it comes to consumer expenditure (Yeo et al., 2024). Such overconfidence investors tend to over-dance risks of making financial decisions but in the long run this is likely to result in financial instability. The adverse effects of overconfidence on spending behavior and curbing overconfidence could be implemented through behavioral interventions that ensure financial self-awareness.

Besides this, the study found that there is a negative relationship between impulse expenditure and investment decisions. The expenditure on immediate consumption was found to be related adversely to the long-term financial commitments such as investment in retirement funds or property. This is consistent with findings of Shunmugasundaram and Sinha (2025) that individuals who are prone to impulsive spending are likely to make inappropriate investments in long-term financial security, a factor that limits their ability to get rich. The financial advisors should focus more on the education of the processes that lead to delay gratification and allowing the individual to focus towards long-term financial planning.

The subgroup analysis revealed that there is a significant difference in the financial behaviors between the income and age groups. Older (45 and above) participants saved more of their income in comparison with younger participants. Similarly, the more prosperous individuals were also found to invest more boldly, which is also consistent with the wealth effect (Dynan, 2012) that says that more prosperous people feel safer with their funds and, therefore, more prepared to take a risky investment. Financial planners ought to consider these demographic factors in the development of financial education programmes. Such programs could be made more effective through the interventions being designed according to the specific needs of different age groups and income levels. Another aspect that has been highlighted in the paper is the applicability of financial literacy in the context of defining financial behaviors. Financially more literate individuals will be more likely to adopt more responsible saving and investing behaviors since they will be better placed to manage the psychological biases like overconfidence and loss aversion (Sajid et al., 2024). Behavior-founded financial literacy programs can be implemented in order to ensure that people take more efficient financial choices and reduce the influence of cognitive biases on their decision-making. Goel (2025) has also pointed out the mediating role of financial literacy on investment behavior by suggesting that high financial literacy has the advantage of improving the decision-making process by creating a better risk and returns perception.

Comprehensively, this article has contributed to the literature of behavioral finance as it demonstrates how such psychological factors as risk tolerance, loss aversion, and overconfidence influence financial decisions by saving, spending, and investing. The results have shown that behavioral economics should be considered when designing financial literacy programs to improve decision making. The interventions on these biases would stimulate the healthier financial behaviors and the financial well-being would be enhanced in the long-term perspective.

5. Conclusion

The current research has led to the knowledge of the behavioral determinants of personal finance with respect to influence of the psychological risk attitude, including risk tolerance, loss aversion, and overconfidence on the saving, spending, and investment decisions. These findings demonstrate that the psychological prejudices are significant determinants that affect financial behaviours that are critical in the achievement of long-term financial stability and welfare. The fact that the risk tolerance correlates positively with the investment choice also shows that individuals who are risk-takers have a better tendency in making risky investment decisions, such as stocks and real estate, which further supports the argument that those with sufficient risk-taking are better placed to make better-informed decisions. Similarly, the negative impact of the loss aversion on the saving habit also contributes to the significance of special financial education programs which will make people less scared of losses and more prone to more lucrative and more diversified ways of saving. The study also shows that overconfidence is among the key reasons that lead to impulse spending that undermine the long-term financial goals. It is possible that through the use of behavioral interventions and prompting people to practice delayed gratification, individuals can increase their ability to make sound financial decisions exponentially. Moreover, demographic factors such as age and income were also established to influence the financial behaviors with older individuals and the more affluent ones being more likely to save and invest more. This information can be useful in the development of the financial literacy programs which might be adjusted according to the needs of various age categories and income levels. Lastly, two significant strategies that should be used to ensure building healthier financial habits and increasing financial security over time are psychological biases and financial literacy.

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