

Exploring the relationship between Financial Literacy and Financial Behaviour: The Mediating Role of Risk Tolerance

Priyanka¹, Dr. Rekha Narang²

²Research Scholar, School of Commerce and Business Management, Geeta University, Panipat, India

²Professor, School of Commerce and Business Management, Geeta University, Panipat, India

Abstract:

Financial literacy plays a vital role in shaping the financial behaviour of working women by enhancing their ability to make informed financial decisions, manage personal finances efficiently, and adopt appropriate saving and investment strategies. As women increasingly contribute to household income and financial planning, understanding financial concepts becomes essential for achieving long-term financial security and independence. This study examines the impact of financial literacy on the financial behaviour of working women, with financial risk tolerance acting as a mediating variable. The research aims to investigate the relationship between financial literacy and financial behaviour and to assess how risk tolerance influences this relationship. Primary data were collected from working women using a structured questionnaire. Descriptive frequency analysis was conducted to examine the demographic profile of the respondents and their response patterns. Independent sample t-tests and one-way Analysis of Variance (ANOVA) were employed to identify significant differences among respondent groups. The findings provide valuable insights into the influence of financial knowledge and risk tolerance on the financial decision-making behaviour of working women. The study highlights the importance of strengthening financial literacy initiatives to promote responsible financial practices, effective financial management, and greater financial well-being among working women.

Keywords: Financial Literacy; Financial Behaviour; Risk Tolerance; Financial Decision-Making; Investment Behaviour; Personal Finance

Introduction

In today's 21st century, the process of financial decision-making has become more and more complicated because of the rapid development of technology, globalization and digital financial services, as well as the increasing volume of investment opportunities. People now have to make decisions about saving, borrowing, investing, insurance, retirement planning and wealth management that they must have the information to make informed choices. These choices have a huge impact on not just a person's finances, but the economy as well. In this context Financial Literacy is one of the most basic skills that are necessary for carrying out financial management. It allows people to appreciate financial ideas, assess alternatives, handle risks, and make sensible monetary choices that lead to long-term monetary security (Lusardi & Mitchell, 2014).

In spite of financial products/services becoming more accessible, many people still display poor financial behaviour, stemming from low financial knowledge and poor understanding of financial concepts. The poor financial decisions that are made can lead to paying too much in debt, being unable to save much money, making poor investments, and financial distress. Thus, financial literacy has been acknowledged as a key element in the quest for financial inclusion, responsible financial behaviour and sustainable economic development globally by policy makers, educational institutions, financial organisations and governments. (OECD, 2020)

1.1 Financial Literacy: Concept and Importance

Financial Literacy is the knowledge, awareness, attitudes, and skills that are needed to make informed financial decisions and reach financial well-being. It includes knowledge of budgeting, saving, borrowing, investing, insurance, taxation, inflation, interest rates, and diversification of risk. The Organisation for Economic Co-operation and Development (OECD) defines financial literacy as the ability of a person to use financial

information, products and services to make effective decisions in financial life and enhance their financial resilience (OECD, 2020).

The importance of financial literacy has grown significantly as the individual is now responsible for his/her own financial future. Fixed benefit pension plans have been replaced by defined contribution plans, where the investor must make their own choices. Likewise, consumers must have the necessary financial literacy to assess the opportunities and prevent financial fraud in areas such as digital banking, online investment channels, cryptocurrencies, and fintech innovations.

Financial education has been shown repeatedly to improve the outcomes for savers, including their regular saving, investment diversification, debt management, and retirement planning (Lusardi & Mitchell, 2014). Hence, financial literacy enhanced has been regarded as a policy goal in developed and developing economies.

1.2 Financial Behaviour and its significance.

Financial behaviour is how people really behave when they are using their cash. It involves activities like saving regularly, financial planning, budgeting, smart borrowing, timely payments, planning for investments, and planning for retirement and insurance coverage. Good financial habits help build financial stability, financial wealth, and an improved quality of life, while bad financial habits are likely to result in financial insecurity and indebtedness.

Financial behaviour is affected by various factors such as financial knowledge, income, education, personality, financial attitudes, social influences and psychological characteristics. Those with greater financial literacy tend to have healthier financial behaviors as they can better assess financial options and the long-term implications of financial choices (Xiao & Porto, 2017).

But, it's not just finance that determines people's behavior in comparable circumstances. According to behavioural finance, psychological forces play an important role in financial decision-making when ignoring the rational economic assumptions (Kahneman & Tversky, 1979).

1.3 Relation between Financial Literacy and Financial Behaviour.

There has been a considerable amount of research and policy attention to the link between financial literacy and financial behaviour. A large number of empirical studies have confirmed that financially knowledgeable people tend to exhibit positive behaviors concerning their finances, like systematic saving, diversifying their investment, planning for retirement, and debt management (Lusardi & Mitchell, 2014).

Financial Literacy helps people understand financial products, compare financial products and options, predict future returns, and identify potential financial risks. This knowledge helps build confidence to make financial decisions, and can help to decrease reliance on informal advice and/or impulsive decision making.

However, there is some evidence that financial knowledge may not necessarily translate to positive financial behaviour. People with comparable financial attitudes and financial knowledge may have different behaviours because of differences in financial attitudes, emotions, confidence and financial risk taking. Thus, more and more researchers have turned their focus to psychological factors that could potentially affect this relationship.

1.4 Risk Tolerance as a Psychological Construct

Risk tolerance is a person's willingness and capacity to withstand uncertainty and potential monetary losses when making an investment or monetary choice. It represents an individual's tolerance for both risk and uncertainty in achieving financial returns. One of the most important behavioural variables that influences investment decisions and investment behavior in general is risk tolerance (Grable & Lytton, 1999).

Risk-tolerant people tend to choose investment vehicles that have the potential for more high returns but also present more risk, like bonds, stocks, mutual funds, and businesses. On the other hand, those who dislike risk will look for financial instruments like fixed deposits, government bonds, insurance, and other low-risk investments.

Demographic variables such as age, income, education, occupation, gender, financial experience and psychological traits are important determinants of risk tolerance. It could also change over time as a result of shifting financial experiences, financial conditions and life circumstances.

1.5 The role of risk tolerance as a mediator between the variables

The implementation of financial knowledge will require the willingness to take financial risk, which is not simply a function of financial literacy and financial knowledge nor of financial analytics, but of both. In this context, risk tolerance can be a mediator variable that explains the relationship between financial literacy and financial behaviour.

People with a high degree of financial literacy tend to understand better the nature of risk/return trade-offs, portfolio diversification, inflation, and investment planning. This knowledge can boost their self-assurance in assessing financial prospects, and help to build their risk-taking threshold in relation to financial decisions. Financial literacy, therefore, can increase risk-taking, thereby encouraging better and more rational financial actions.

The mediating role of risk tolerance is corroborated by the theories of behavioural finance that emphasize the importance of psychological risk and uncertainty perceptions in financial decision-making, along with the cognitive knowledge (Kahneman & Tversky, 1979). This mediation is examined to gain a better understanding of the financial decision making process.

1.6 Financial Literacy, Risk Tolerance and Financial Behaviour in the Indian Context

The financial inclusion revolution in India has been remarkable, with the Pradhan Mantri Jan Dhan Yojana (PMJDY), Unified Payments Interface (UPI), Aadhaar enabled financial services, digital banking and fintech innovations all playing a significant role. These trends have led to an increase in the penetration of formal financial services among all groups, irrespective of whether they live in urban or rural areas.

While there have been significant advances in financial access, financial literacy is still low for many segments of the population. The lack of knowledge about investments, insurance, retirement planning, tax, and risk management often prevents the proper use of available financial products. As a result, there are many who remain using traditional methods of saving, financial advice from unofficial sources, or risky investments.

Financial literacy plays a crucial role in shaping financial behavior, especially in the Indian context where individuals are increasingly entering the equity markets, mutual funds, digital investments, and fintech platforms, necessitating a growing need for informed financial decision-making. Enhancing financial literacy and conducting proper risk assessment may help the households in financial management and economic resilience.

Table: Review of Literature

Author(s) & Year	Objective of the Study	Research Methodology	Major Findings
Grable and Lytton (1999)	To develop and validate a reliable instrument for measuring individuals' financial risk tolerance.	Scale development study using survey data, exploratory factor analysis, and reliability analysis.	The study developed a valid and reliable Financial Risk Tolerance Scale. It concluded that risk tolerance is influenced by demographic characteristics, financial knowledge, and investment experience, making it an important determinant of financial decision-making.
Atkinson and Messy (2012)	To develop an international framework for measuring financial literacy and financial	OECD pilot survey using standardized	The study found that financial literacy consists of financial knowledge, financial attitude, and financial behaviour. It emphasized

	behaviour across countries.	questionnaires across several countries.	that financial education programmes should improve all three dimensions to enhance overall financial capability.
Lusardi and Mitchell (2014)	To examine the importance of financial literacy in influencing financial decision-making and economic well-being.	Systematic review of international empirical studies on financial literacy and financial outcomes.	The findings revealed that financial literacy significantly improves saving behaviour, investment decisions, retirement planning, and wealth accumulation. Individuals with higher financial literacy are more likely to make informed and responsible financial decisions.
Klapper, Lusardi, and van Oudheusden (2015)	To assess the level of financial literacy among adults worldwide and identify demographic variations.	Secondary analysis of the Standard & Poor's Global Financial Literacy Survey covering more than 140 countries.	The study reported considerable variation in financial literacy across countries. Education and income positively influence financial literacy, while developing countries continue to experience relatively lower levels of financial knowledge.
Potrich, Vieira, and Kirch (2015)	To construct and validate a comprehensive financial literacy model by integrating financial knowledge, attitude, and behaviour.	Cross-sectional survey using factor analysis and structural equation modelling.	The study concluded that financial knowledge and financial attitude significantly influence financial behaviour. Individuals with higher financial literacy demonstrate better financial management practices and long-term financial planning.
Aren and Zengin (2016)	To examine the influence of financial literacy and risk perception on individuals' investment preferences.	Quantitative survey using regression analysis among individual investors.	The findings indicated that financial literacy positively affects investment decisions, while risk perception influences the selection of investment alternatives. Financially literate investors exhibited greater risk tolerance and better portfolio diversification.
Xiao and Porto (2017)	To investigate whether financial literacy influences financial satisfaction through financial behaviour and financial capability.	Quantitative research using Structural Equation Modelling (SEM) based on household survey data.	The study found that financial literacy positively influences financial behaviour, which subsequently enhances financial capability and financial satisfaction. Financial behaviour partially mediates the relationship between financial literacy and financial well-being.
OECD (2020)	To evaluate financial literacy, financial attitudes, and financial behaviour among adults	International comparative survey conducted under the	The survey revealed that financially literate individuals exhibit better budgeting, saving, borrowing, and investment behaviour. It

	across participating countries.	OECD/INFE framework.	recommended strengthening financial education programmes to improve financial resilience, consumer protection, and financial inclusion.
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1.7 Research Gap

While there has been a considerable amount of research on the direct association between financial literacy and financial behaviour, fewer researchers have studied the psychological processes. However, the role of risk tolerance as a mediator is still less explored particularly in the emerging economies like India.

Previous studies have concentrated on either financial knowledge or demographic factors that influence financial behaviour but have not included behavioural finance factors. Furthermore, a shift in financial situations, driven by DfS, online investments and fintech innovations, requires a fresh look on the role that financial literacy plays in financial decisions from a psychological perspective.

Therefore, the current research fills this gap by investigating whether the risk tolerance construct lies between financial literacy and financial behaviour and whether it moderates the relationship between the two constructs. Hence, the present study aims to explore the moderating and mediating role of risk tolerance between financial literacy and financial behaviour to expand financial decision making of individuals.

1.8 Significance of the Study

The present study is of value for both the academic literature and for practice, as a financial literacy, financial behaviour and risk tolerance are combined in one conceptual framework. The results will contribute to the knowledge of behavioural finance by helping to determine the psychological path that links financial literacy to the financial decisions made.

The study will benefit policy makers, financial institutions, financial education institutions, and financial educators in creating a financial literacy programme that will not only lead to the enhancement of financial literacy, but also to the improvement of the capability of the individual to evaluate the financial risks well. Moreover, the results might help investors' advisors and financial planners design tailored financial education plans that account for both financial competence and risk preferences of investors.

In conclusion, better financial literacy and attitudes towards financial risk may facilitate responsible financial behaviour which in turn can foster financial well-being, financial inclusion and sustainable economic development.

Objective of the study

To examine the impact of financial literacy on financial behaviour and analyze the mediating role of risk tolerance in influencing individuals' financial decision-making and management practices

Research Methodology

Based on the objectives of the present study, which examines the relationship between financial literacy, risk tolerance, and financial behaviour among working women, an appropriate sample of respondents was selected for analysis. The study is based on primary data collected from working women through a structured questionnaire designed to measure their financial literacy, financial decision-making ability, risk tolerance, and financial behaviour. A quantitative research approach was adopted to assess the financial management practices, investment decisions, and overall financial behaviour of the respondents.

Descriptive and inferential statistical techniques, including frequency analysis, independent sample t-test, and one-way Analysis of Variance (ANOVA), were employed to analyze the collected data and identify significant differences in financial behaviour across various demographic groups. In addition, secondary data were obtained

from relevant research articles, books, journals, and authentic online sources to support the research objectives and establish the theoretical foundation of the study. The adopted methodology provides a comprehensive understanding of the relationship between financial literacy and financial behaviour among working women while examining the mediating role of risk tolerance in influencing their financial decision-making process.

Data Analysis

Data analysis involves examining and interpreting collected information to uncover patterns, trends, and insights. Through statistical techniques and tools, it aids in drawing meaningful conclusions, supporting decision-making, and addressing research objectives.

Frequency Analysis of Demographic Variable

Demographic Variables		Frequency
Age (in years)	18-25	33
	25-30	29
	30-35	21
	Above 35	17
	Total	100
Marital Status	Unmarried	38
	Married	62
	Total	100
Educational Qualification	Graduation	21
	Post graduation	37
	M. Phil/Ph. D	28
	Others	14
	Total	100

Source: Researcher's Compilation

The demographic variables provide valuable insights into the composition of the surveyed population. In terms of age distribution, the majority of respondents fall within the 18-25 and 25-30 age brackets, comprising 33% and 29%, respectively. Notably, a significant portion falls in the 30-35 age groups (21%), and a further 17% are above 35, reflecting a diverse representation across various career stages. Regarding marital status, the data reveals that 62% of respondents are married, while 38% are unmarried. This marital diversity underscores the importance of considering the potential impact of family responsibilities on career choices and advancement. Educational qualifications exhibit a range of academic achievements, with 37% holding postgraduate degrees, 28% having pursued M. Phil/Ph.D. studies, 21% completing graduation, and 14% falling into the "Others" category. This educational diversity highlights the varied backgrounds of individuals contributing to the study, emphasizing the need for nuanced approaches in addressing career advancement challenges within this demographic.

Frequency Analysis of Financial Literacy, Risk Tolerance and Financial Behaviour

Statements			SD	D	N	A	SA
1	Financial Literacy	I have adequate knowledge about basic financial concepts such as savings, investment, interest rates, and inflation.	3	5	2	17	73
2	Financial Literacy	I understand the risks and returns associated with different investment options.	8	7	3	55	25
3	Financial Literacy	I am capable of evaluating financial products before making investment decisions.	3	3	5	32	57
4	Financial Literacy	I regularly seek information to improve my financial knowledge and awareness.	3	4	5	53	35
5	Risk Tolerance	I am willing to take calculated risks to achieve higher returns on my investments.	7	6	7	33	47
6	Risk Tolerance	I can accept temporary losses in my investments without making impulsive decisions.	11	4	5	33	47
7	Risk Tolerance	I prefer investment options based on my risk capacity rather than only on expected returns.	4	4	5	32	55
8	Financial Behaviour	I prepare and follow a proper budget for managing my income and expenses.	1	3	7	27	62
9	Financial Behaviour	I regularly save and invest a portion of my income for future financial goals.	2	2	8	25	63
10	Financial Behaviour	I make financial decisions after carefully analyzing available information and potential consequences.	2	8	3	25	62

Source: Researcher's Compilation

The frequency analysis was performed to find out the perception of the respondents about financial literacy, risk tolerance and financial behaviour. The results demonstrate that the respondents in general are very financially literate. Most respondents agreed they know the basics of financial terms well (73%) and are able to analyze financial products before investing (57%). Likewise, 55% of respondents indicated they knew the risks and returns of various investment products and 35% strongly agreed that they regularly looked for information to increase their financial awareness.

When asked about risk tolerance, the findings are that individuals are moderately to highly willing to take calculated risks. Approximately 47% agreed strongly that they are willing to take calculated risks for higher returns and the same percentage agreed strongly that they would not make hasty decisions if a loss occurs, albeit temporary. Moreover, 55% strongly agreed that they would like to make investment decisions based on their risk capacity.

Financial behaviour analysis reveals positive financial management practices with the respondents. The majority strongly agreed that they were following budgeting practices (62%), regularly save and invest for future purposes (63%), and analyze financial information before making decisions (62%). Overall, the results indicate that there is a positive link between financial literacy and responsible financial behaviour and risk management.

H₀₁: There is no significant difference in the impact of financial literacy on financial behaviour and the mediating role of risk tolerance among respondents across different age groups.

Impact of financial literacy on financial behaviour and the mediating role of risk tolerance among respondents across different age groups

ANOVA					
Age	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	33.619	8	1.865	10.677	.000
Within Groups	103.756	92	.176		
Total	137.375	100			

Source: Researcher's Compilation

The One-way ANOVA was used to determine if significant differences between the effect of financial literacy on financial behaviour exist among respondents across the different age groups with the mediating role of risk tolerance. The results shown in the table suggest that the value of F is 10.677 and the significance value is 0.000 (smaller than 0.05) level of significance. This means that there are statistically significant differences between the various age groups in terms of financial literacy, financial behaviour and risk tolerance. Thus, the null hypothesis (H₀₁) that there is no significant difference between the respondents in different age group is rejected. The results indicated that age affects their financial literacy, risk-taking ability, and financial behaviors.

H₀₂: There is no significant difference in the impact of financial literacy on financial behaviour and the mediating role of risk tolerance among respondents based on marital status.

Impact of financial literacy on financial behaviour and the mediating role of risk tolerance among respondents across Marital status

Levene's Test for Equality of Variances	t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Error
Equal variances assumed	7.935	.000	-1.374	98	.159	-.387	.276	
Equal variances not assumed			-1.639	56.000	.119	-.396	.253	

Source: Researcher's Compilation

The independent sample t-test was used to identify if there is a significant difference between the effect of financial literacy on financial behaviour and financial behaviour explaining the risk tolerance between the respondents when concerning marital status. The result is that Levene's test is significant ($F = 7.935$, $\text{Sig.} = 0.000$) which means that equal variances cannot be assumed. Thus, the unequal variance test was taken into consideration. The t value obtained was (-1.639) with a significance value is 0.119 , which is higher than the significance level of 0.05 . The difference between the respondents according to marital status is not significant. Hence, the null hypothesis (H_02) is accepted. The results indicate that marital status is not a significant variable in the relationship between financial literacy, financial behaviour and risk attitude of the respondents.

H₀₃: There is no significant difference in the impact of financial literacy on financial behaviour and the mediating role of risk tolerance among respondents across different educational qualifications.

Impact of financial literacy on financial behaviour and the mediating role of risk tolerance among respondents across Educational Qualification

ANOVA					
Educational Qualification	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	184.988	9	9.683	30.195	.000
Within Groups	184.985	78	.321		
Total	369.973	100			

Source: Researcher's Compilation

To determine whether there were any significant differences between the effects of financial literacy on financial behaviour among the respondents with respect to their educational qualifications, one-way ANOVA was used to determine if there was a mediating effect of risk-tolerance. The result obtained in the table shows that the value of F is 30.195 and the significant value is 0.000 which is less than the 0.05 level of significance. This suggests that there are key differences between those with different educational levels in terms of financial literacy, financial behaviour and risk tolerance. The null hypothesis (H_03), which says there is no significant difference among respondents on different education levels is therefore rejected. The results indicate that having more education is closely associated with better financial knowledge, better effective financial behaviour and an impact on individuals' risk-taking level.

Findings and Conclusion

Finally, the study found that financial literacy is a significant determinant of financial behavior, as it enhances financial skills and ability in managing finances, critically analyzing investment opportunities, and making sound decisions. Those with higher financial knowledge are more likely to have the confidence to understand financial products, to know what risks to look out for and to be able to implement good financial management practices. The results also suggest that risk-tolerance has an important mediating effect in shaping the attitude toward financial knowledge and financial decision making in investment and saving. Those who are risking in a higher volume are more likely to take risks and invest accordingly to their goals. The study also shows that age and level of education have significant impacts on financial literacy, financial behavior and risk taker while marital status does not show a significant difference. Thus, bolstering financial literacy initiatives and boosting financial risk awareness can help one have responsible financial practices and better financial health.

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