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Financial Literacy and Risk Perception as Determinants of Investment Behaviour among Working Women: An Empirical Study of Prayagraj

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ABSTRACT
Financial literacy has emerged as a fundamental determinant of investment behaviour, particularly among working women who increasingly contribute to household income and long-term wealth creation. Simultaneously, risk perception significantly influences investment preferences by shaping individuals' willingness to participate in financial markets and diversify investment portfolios. Despite rapid expansion in financial inclusion, digital banking, and investment opportunities in India, disparities in financial knowledge and risk evaluation continue to affect women's investment decisions. Prayagraj, as an important educational and administrative city of Uttar Pradesh, presents a unique socio -economic environment for examining these behavioural dimensions. This study investigates the influence of financial literacy and risk perception on the investment behaviour of working women in Prayagraj through an empirical approach. It aims to evaluate the extent to which financial knowledge, awareness of investment products, perceived financial risk, and demographic characteristics explain investment choices, investment frequency, portfolio diversification, and long-term financial planning. The study also explores the interaction between financial literacy and risk perception in determining investment behaviour. The findings are expected to provide evidence-based insights for policymakers, financial institutions, employers, and educators to design targeted financial education programmes that enhance women's financial empowerment, improve investment participation, and strengthen sustainable wealth creation.

Keywords: Financial Literacy, Risk Perception, Investment Behaviour, Working Women, Financial Decision-Making, Prayagraj.....

INTRODUCTION:

The transformation of India's financial landscape over the past decade has significantly altered the investment ecosystem by expanding access to formal financial services, digital investment platforms, insurance products, pension schemes, mutual funds, exchange-traded funds, sovereign gold bonds, and equity markets. Simultaneously, rapid technological advancements, financial inclusion initiatives, and regulatory reforms have increased the availability of investment opportunities to individuals across different socio-economic groups. Among these, working women represent one of the fastest-growing contributors to household income, financial decision-making, and wealth accumulation. The increasing participation of women in government organizations, educational institutions, healthcare, banking, information technology, private enterprises, entrepreneurship, and self-employment has elevated their role from passive savers to active investors. Nevertheless, despite their growing economic contribution, investment participation among working women remains relatively conservative due to differences in financial literacy, psychological risk assessment, socio-cultural expectations, income stability, family responsibilities, and long-term financial planning. Consequently, understanding the determinants of investment behaviour among working women has become an important research priority within behavioural finance, financial management, and public policy.

Financial literacy and risk perception are increasingly recognized as two of the most influential determinants shaping individual investment decisions. Financial literacy equips individuals with the knowledge, analytical capability, and confidence necessary to understand financial products, evaluate investment alternatives, estimate returns, assess associated risks, and develop diversified investment portfolios. Conversely, risk perception represents an individual's subjective evaluation of uncertainty associated with financial investments, which significantly affects willingness to invest in high-return financial instruments. Although objective financial knowledge and subjective risk perception are conceptually distinct, they interact dynamically in influencing investment behaviour. Individuals possessing higher financial literacy generally demonstrate greater

confidence in evaluating investment opportunities, while inaccurate risk perception often results in excessive conservatism or irrational investment decisions. Therefore, analysing these two constructs together provides a more comprehensive understanding of investment behaviour than studying either factor independently.

India has witnessed substantial progress in promoting financial inclusion through initiatives such as the Pradhan Mantri Jan Dhan Yojana, Digital India Mission, Unified Payments Interface (UPI), National Pension System (NPS), Atal Pension Yojana, Sukanya Samriddhi Yojana, and increasing participation in mutual fund investments through systematic investment plans (SIPs). These developments have democratized access to financial products and encouraged wider participation in organized financial markets. However, the benefits of financial inclusion cannot be fully realized without corresponding improvements in financial literacy and informed investment decision-making. While access to financial products has expanded considerably, many individuals continue to rely on informal financial advice, traditional savings instruments, or family-driven investment decisions rather than systematic financial analysis. This situation is particularly evident among women, whose financial choices are frequently influenced by household responsibilities, social norms, limited exposure to financial education, and varying degrees of financial independence.

Working women constitute an increasingly heterogeneous population characterized by differences in occupation, education, income, marital status, family structure, financial responsibilities, and investment objectives. Their financial decisions are influenced by multiple economic and behavioural variables, including income certainty, retirement planning, children's education, healthcare expenditures, taxation, inflation expectations, liquidity preferences, and future wealth creation. Moreover, technological innovations have introduced online investment platforms, robo-advisory services, mobile trading applications, digital insurance products, and artificial intelligence-based financial advisory systems that require investors to possess sufficient financial capability for effective utilization. Without adequate financial literacy, increased accessibility alone may not translate into rational investment behaviour or long-term financial security.

Behavioural finance provides a theoretical foundation for understanding deviations from rational investment decision-making. Traditional finance assumes that investors are rational utility maximizers who process all available information objectively while maximizing expected returns. However, behavioural finance argues that cognitive limitations, emotions, heuristics, biases, and subjective perceptions significantly influence financial decisions. Financial literacy enhances rational decision-making by improving analytical capability, whereas risk perception reflects psychological interpretation of investment uncertainty. Consequently, investment behaviour emerges as a product of both objective financial knowledge and subjective behavioural responses. This interaction becomes particularly significant among working women who often balance professional responsibilities with family financial commitments, making investment decisions under varying levels of uncertainty and information availability.

Prayagraj represents an important socio-economic setting for examining these relationships. As one of Uttar Pradesh's major educational, administrative, judicial, and commercial centres, Prayagraj hosts a diverse workforce comprising employees from universities, government departments, healthcare institutions, banking organizations, educational establishments, corporate offices, private enterprises, and entrepreneurial ventures. The city exhibits substantial diversity in educational attainment, occupational characteristics, income levels, and financial awareness, making it an appropriate location for investigating investment behaviour among working women. Furthermore, the coexistence of traditional socio-cultural values and increasing financial modernization creates a unique environment in which financial literacy and risk perception interact to influence investment decisions.

Recent developments in financial technology have further complicated investment decision-making. The widespread availability of online trading applications, digital payment ecosystems, cryptocurrency awareness, algorithmic investment recommendations, social media-based financial influencers, and artificial intelligence-enabled financial services has increased both opportunities and challenges for individual investors. While technological advancements improve accessibility, they simultaneously increase information complexity and investment uncertainty. Therefore, higher levels of financial literacy become increasingly essential for distinguishing reliable financial information from speculative investment trends and misinformation.

Investment behaviour extends beyond the simple selection of financial products. It encompasses investment planning, savings discipline, portfolio diversification, asset allocation, investment frequency, investment horizon, retirement preparedness, tax planning, liquidity management, and continuous monitoring of financial performance. Effective investment behaviour contributes not only to individual wealth creation but also to household financial stability, economic resilience, capital market development, and national economic growth. Consequently, understanding behavioural determinants of investment among working women has important implications for financial institutions, policymakers, employers, educators, and financial regulators.

Although previous studies have investigated financial literacy, behavioural finance, women's financial inclusion, and investment decision-making independently, relatively limited empirical evidence simultaneously examines financial literacy and risk perception as integrated determinants of investment behaviour among working women within medium-sized Indian cities such as Prayagraj. Regional socio-economic diversity, occupational characteristics, educational backgrounds, and cultural influences may significantly affect behavioural outcomes, necessitating localized empirical investigation. The present study seeks to

address this research need by empirically examining how financial literacy and risk perception jointly influence investment behaviour among working women in Prayagraj.

Overview of the Study

The present research investigates the influence of financial literacy and risk perception on investment behaviour among working women employed across diverse occupational sectors in Prayagraj. The study integrates concepts from behavioural finance, financial management, investment theory, and consumer decision-making to develop an empirical understanding of investment behaviour. It examines the extent to which financial knowledge enhances investment participation while evaluating the mediating role of perceived financial risk in shaping investment decisions. The investigation also analyses demographic characteristics, income, educational qualifications, occupational categories, investment preferences, and long-term financial planning behaviour to generate evidence-based conclusions regarding women's investment practices.

Scope of the Study

The scope of this research encompasses working women employed in government organizations, educational institutions, healthcare facilities, banking and financial institutions, corporate organizations, private enterprises, and self-employment sectors within Prayagraj. The study focuses on evaluating financial literacy, investment awareness, perceived investment risk, investment decision-making behaviour, portfolio diversification, investment frequency, and long-term financial planning. Multiple financial instruments including bank deposits, insurance, provident funds, mutual funds, equity shares, bonds, pension schemes, gold investments, and digital investment products are considered for analysing investment preferences. The study further contributes to behavioural finance literature by integrating psychological and financial determinants within a localized empirical framework.

Objectives of the Study

The major objectives of the study are:

To assess the level of financial literacy among working women in Prayagraj.

To examine the influence of financial literacy on investment behaviour.

To analyse the effect of risk perception on investment decision-making.

To evaluate the relationship between financial literacy and perceived investment risk.

To investigate demographic factors influencing investment behaviour.

To identify preferred investment avenues among working women.

To propose policy recommendations for improving women's financial participation and investment capability.

Author Motivations

The motivation for conducting this research originates from the increasing economic participation of women alongside persistent disparities in investment behaviour despite improved financial inclusion initiatives. While digital financial services have expanded investment accessibility, variations in financial literacy and psychological risk assessment continue to influence investment outcomes. Existing literature predominantly emphasizes metropolitan populations or general investor behaviour, whereas comparatively limited attention has been devoted to working women residing in emerging urban centres such as Prayagraj. Understanding localized behavioural determinants is essential for designing effective financial education programmes, strengthening women's financial independence, promoting inclusive investment participation, and supporting evidence-based policymaking. This study therefore seeks to generate practical insights that contribute to behavioural finance research while simultaneously addressing the growing need for gender-responsive financial empowerment strategies.

Paper Structure

The remainder of the paper is organized as follows. Section 2 critically reviews existing literature on financial literacy, behavioural finance, risk perception, and investment behaviour while identifying the existing research gap. Section 3 presents the research methodology, conceptual framework, research hypotheses, sampling design, data collection procedures, measurement scales, and analytical techniques. Section 4 analyses the empirical findings regarding financial literacy, risk perception, and investment behaviour among working women in Prayagraj. Section 5 discusses hypothesis testing, statistical interpretation, behavioural implications, and comparison with previous research findings. Section 6 presents policy implications, managerial recommendations, practical applications, study limitations, and future research directions. Finally, Section 7 summarizes the major findings and concludes the study.

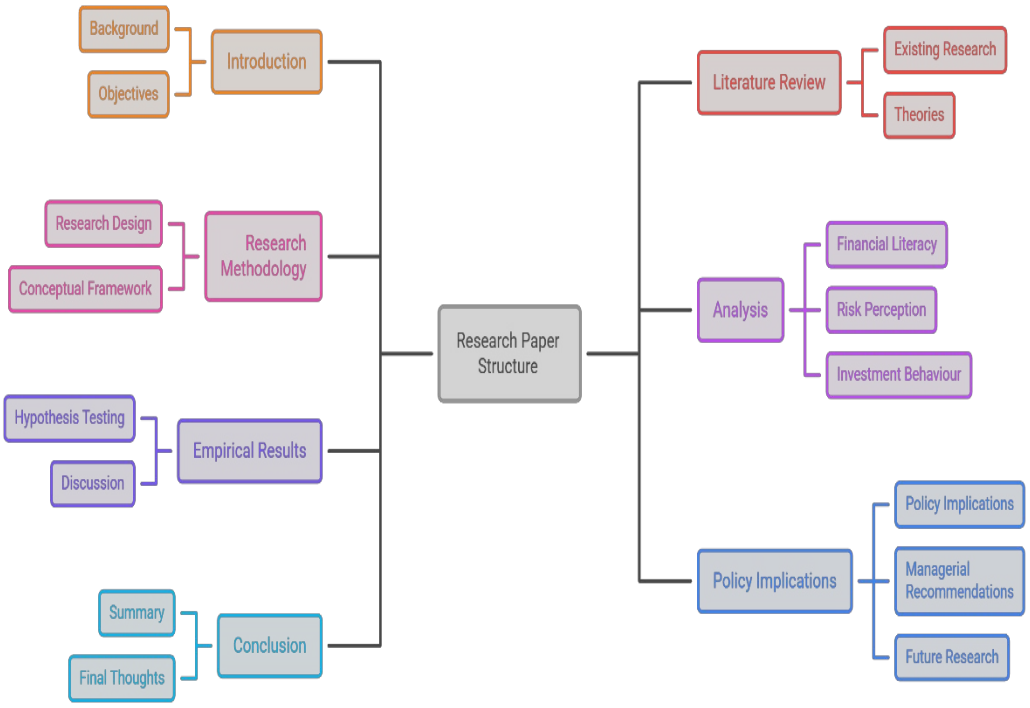


Figure 1: Paper Structure

The introduction establishes that financial literacy and risk perception represent complementary behavioural constructs influencing investment behaviour among working women. Their interaction determines not only investment participation but also portfolio quality, long-term financial planning, and wealth creation. By empirically examining these relationships within the socio-economic context of Prayagraj, the present study contributes to behavioural finance literature while providing actionable recommendations for policymakers, financial educators, employers, and financial institutions seeking to strengthen women's financial capability and sustainable investment participation.

2. Literature Review

Financial literacy has progressively evolved into one of the most extensively investigated constructs within behavioural finance due to its direct influence on investment decision-making, wealth accumulation, retirement planning, financial resilience, and household economic stability. The increasing complexity of modern financial products has made financial knowledge indispensable for rational investment decisions. Contemporary research consistently demonstrates that investors possessing higher financial literacy exhibit greater confidence, improved analytical capability, enhanced portfolio diversification, and superior long-term financial outcomes. Simultaneously, behavioural finance recognizes that investment decisions are not solely determined by objective knowledge but are also influenced by subjective psychological factors, particularly risk perception, cognitive biases, emotional responses, and behavioural heuristics. Consequently, recent academic literature increasingly integrates financial literacy with behavioural variables to explain investment behaviour more comprehensively.

Shefrin and Statman introduced Behavioural Portfolio Theory by challenging the assumptions of traditional portfolio optimization. Their work demonstrated that investors often organize investments into multiple mental accounts rather than optimizing portfolios solely based on expected return and variance. Psychological comfort, perceived security, and behavioural preferences significantly influence investment allocation decisions. Their theory established that subjective risk perception frequently overrides objective financial evaluation, laying the theoretical foundation for subsequent behavioural finance research [10].

Van Rooij, Lusardi, and Alessie empirically demonstrated that financial literacy significantly influences stock market participation and investment diversification. Their study revealed that individuals with greater financial knowledge are substantially more likely to participate in capital markets, understand investment products, and diversify investment portfolios. They further concluded that inadequate financial literacy contributes to lower participation in equity markets despite favourable investment opportunities, thereby restricting long-term wealth accumulation. Their findings established financial literacy as an essential prerequisite for informed investment behaviour [9].

Lusardi and Mitchell significantly expanded the theoretical understanding of financial literacy by demonstrating its multidimensional role in financial planning, retirement preparedness, borrowing decisions, savings behaviour, insurance selection, and investment management. Their comprehensive review synthesized global evidence illustrating that financially literate individuals consistently make more efficient financial decisions than financially illiterate individuals. The authors argued that financial literacy represents a critical component of human capital, enabling individuals to

evaluate complex financial information, estimate investment risks, and maximize long-term financial welfare [8].

Following these foundational contributions, research increasingly shifted toward behavioural explanations of investment decision-making. Rather than assuming complete rationality, contemporary scholars recognized that investors interpret financial information through psychological filters shaped by confidence, emotions, perceived uncertainty, prior experiences, and social influences. Risk perception consequently emerged as a central behavioural construct explaining why investors possessing similar financial knowledge often demonstrate substantially different investment behaviours.

Shroff, Paliwal, and Dewasiri investigated the influence of financial literacy on investment decisions within emerging financial markets. Their findings confirmed that financial literacy positively affects investment planning, portfolio diversification, and long-term wealth accumulation. Furthermore, the authors emphasized that financially literate investors exhibit greater confidence when evaluating uncertain investment opportunities, thereby reducing excessive dependence on informal financial advice. Their study reinforced the argument that financial education enhances rational investment decision-making while simultaneously improving investor resilience under volatile market conditions [6].

Periwal and Nair examined behavioural biases and financial literacy among working women in Mumbai. Their empirical investigation demonstrated that financial literacy substantially improves investment confidence while reducing susceptibility to cognitive biases such as loss aversion, herd behaviour, overconfidence, anchoring, and mental accounting. The study further highlighted that working women possessing greater financial awareness display increased participation in diversified investment instruments, including mutual funds and equity markets, compared to financially less informed individuals who predominantly rely on traditional savings products [7].

Recent empirical evidence has increasingly focused specifically on women's financial behaviour. Kumari analysed the relationship between financial literacy and investment behaviour among working women within a regional Indian context. The study reported that educational attainment, income level, occupational status, financial awareness, and exposure to financial education programmes collectively influence investment participation. Financial literacy significantly increased willingness to invest in market-linked financial instruments while encouraging long-term financial planning and retirement preparedness. The author concluded that continuous financial education programmes are essential for improving women's investment confidence and financial independence [5].

Joghee and Usha investigated factors influencing investment awareness and investment behaviour among working women. Their findings suggested that financial awareness, income stability, educational background, family financial responsibilities, and occupational characteristics collectively determine investment preferences. Women possessing greater financial literacy demonstrated stronger investment discipline, systematic savings behaviour, improved portfolio diversification, and greater participation in organized financial markets. The authors also observed that psychological confidence mediates the relationship between financial knowledge and investment decisions [4].

Pillai, Kumar, Kumar, and Tabash adopted an advanced hybrid Structural Equation Modelling-Artificial Neural Network (SEM-ANN) approach to investigate financial behaviour among Indian working women. Their research identified financial literacy, digital financial capability, behavioural confidence, technological acceptance, and cognitive decision-making as significant predictors of investment behaviour. Importantly, the study demonstrated that digital financial literacy increasingly complements traditional financial knowledge within rapidly evolving digital investment ecosystems. Their findings highlighted that technological advancements amplify the importance of financial literacy while simultaneously requiring investors to accurately perceive digital investment risks [3].

Jain and Ashalatha explored behavioural finance perspectives regarding women's participation in equity markets. Their research emphasized that confidence gaps rather than income constraints often explain lower female participation in equity investments. The authors argued that women generally demonstrate relatively conservative investment preferences because of higher perceived investment risk despite possessing adequate financial capability. Their findings suggested that improving behavioural confidence through financial education could substantially increase women's participation in capital markets while reducing excessive dependence on low-risk investment instruments [2].

Kumar examined financial decision-making among India's female workforce by evaluating the relationship between financial literacy and investment outcomes. The study concluded that financial literacy significantly enhances investment planning, portfolio diversification, retirement preparedness, and long-term financial resilience. Furthermore, the author observed that financial knowledge indirectly reduces irrational investment behaviour by improving objective risk evaluation and encouraging evidence-based investment decisions. The study reinforced the proposition that financial literacy represents one of the strongest determinants of investment behaviour among economically active women [1].

Collectively, the reviewed literature establishes several important themes. First, financial literacy consistently demonstrates a positive relationship with investment participation, savings behaviour, retirement planning, portfolio diversification, and wealth accumulation [1], [5], [6], [8], [9]. Second, behavioural finance literature confirms that psychological constructs such as perceived risk, confidence, cognitive biases, and emotional responses significantly influence investment decisions beyond objective financial knowledge [2], [7], [10]. Third, recent technological developments have increased the importance of digital financial capability, requiring investors to evaluate increasingly sophisticated financial products and digital investment platforms [3]. Fourth,

demographic variables including education, income, occupation, age, marital status, and family responsibilities significantly moderate investment behaviour among working women [4], [5], [7].

Another important observation emerging from the literature concerns the interaction between financial literacy and risk perception. Although financially literate individuals generally possess superior analytical capabilities, investment decisions remain substantially influenced by subjective interpretations of financial uncertainty. Women frequently exhibit relatively higher levels of perceived financial risk compared with men despite possessing comparable financial knowledge. Consequently, behavioural confidence becomes an important mechanism linking financial literacy to investment participation. This interaction suggests that financial education programmes should simultaneously improve objective financial knowledge and behavioural confidence to maximize investment participation [1]–[7].

The literature also demonstrates increasing methodological sophistication. Earlier studies primarily employed descriptive statistics and regression analysis, whereas recent investigations increasingly utilize Structural Equation Modelling, Artificial Neural Networks, behavioural modelling, mediation analysis, moderation analysis, and multidimensional measurement frameworks [3]. These methodological developments have improved understanding of complex behavioural interactions while enabling simultaneous examination of multiple determinants affecting investment behaviour.

Despite considerable academic progress, several important research gaps remain evident.

Research Gap

A critical review of existing literature reveals that most previous studies have investigated financial literacy, investment behaviour, or behavioural finance independently, with comparatively fewer studies integrating financial literacy and risk perception within a unified empirical framework among working women. Existing investigations largely concentrate on metropolitan cities, national-level datasets, or generalized investor populations, thereby providing limited understanding of localized behavioural dynamics in emerging urban centres such as Prayagraj [1]–[7].

Furthermore, many earlier studies primarily evaluate demographic influences or financial awareness without simultaneously examining the behavioural interaction between objective financial knowledge and subjective risk perception. Limited empirical evidence explains how financial literacy influences investment behaviour indirectly through changes in perceived investment risk, behavioural confidence, and investment decision quality [2], [3], [7].

Another significant gap concerns contextual diversity. Regional socio-economic conditions, occupational diversity, educational institutions, administrative employment, cultural values, and household financial structures differ considerably across Indian cities. Consequently, findings generated from metropolitan regions may not be directly generalizable to cities such as Prayagraj. Localized empirical evidence remains insufficient for designing region-specific financial education policies and investment awareness programmes [4], [5].

Additionally, contemporary digital financial ecosystems—including mobile investment applications, digital payment platforms, robo-advisory services, and online financial products—have transformed investment decision-making processes. However, relatively few studies comprehensively investigate how financial literacy and perceived risk jointly influence investment behaviour within increasingly digital financial environments among working women [3].

Finally, existing literature provides limited evidence regarding integrated policy recommendations specifically designed to improve financial capability, behavioural confidence, and sustainable investment participation among working women. Consequently, there remains substantial scope for empirical investigation that simultaneously evaluates financial literacy, risk perception, demographic characteristics, investment preferences, and behavioural outcomes using a comprehensive analytical framework.

The present study addresses these research gaps by empirically examining the combined influence of financial literacy and risk perception on investment behaviour among working women in Prayagraj. The study integrates behavioural finance theory with empirical analysis to provide localized evidence capable of informing financial education initiatives, policy formulation, institutional strategies, and gender-inclusive investment promotion. By simultaneously evaluating objective financial knowledge and subjective behavioural perceptions, the research contributes both theoretically and practically to the growing literature on behavioural finance and women's financial empowerment.

3. Research Methodology and Conceptual Framework

3.1 Introduction

The present study adopts a quantitative empirical research design to investigate the influence of financial literacy and risk perception on the investment behaviour of working women in Prayagraj. Since the study aims to establish statistically significant relationships among measurable behavioural constructs, an explanatory research approach is considered appropriate. The methodology is designed to collect primary data from working women employed across different occupational sectors and analyse the relationships using appropriate descriptive and inferential statistical techniques. The methodological framework integrates principles of behavioural finance, investment theory, financial literacy assessment, and empirical social science research to ensure validity, reliability, and generalizability of findings.

The proposed research framework assumes that investment behaviour is influenced not only by demographic characteristics but also by an individual's financial knowledge and subjective evaluation of investment risk. Financial literacy enables individuals to

understand financial products, estimate returns, diversify portfolios, and make informed investment decisions, whereas risk perception determines the degree of willingness to invest under uncertainty. The combined interaction of these variables forms the conceptual basis of the present investigation.

3.2 Research Design

The study follows an empirical cross-sectional research design.

Research Type: Quantitative Research

Research Nature: Descriptive and Explanatory

Research Design: Cross-sectional Survey

Research Approach: Deductive

Research Method: Questionnaire-Based Survey

The study utilizes structured questionnaires to obtain standardized responses from working women across multiple professional sectors in Prayagraj.

3.3 Study Area

The geographical scope of the research is confined to Prayagraj district of Uttar Pradesh, India.

Prayagraj represents one of the largest educational and administrative cities in North India, comprising government offices, educational institutions, healthcare organizations, banking institutions, insurance companies, corporate establishments, private organizations, and self-employed professionals. The city provides considerable occupational diversity among women employees, making it suitable for investigating financial literacy and investment behaviour.

3.4 Target Population

The target population consists of working women employed in:

Government Departments

Educational Institutions

Universities and Colleges

Banking Sector

Insurance Sector

Healthcare Organizations

Corporate Offices

Information Technology Firms

Small Business Enterprises

Self-employed Professionals

Eligible respondents satisfy the following criteria:

Female

Employed for at least one year

Age above 21 years

Having independent income

Currently making or capable of making investment decisions

3.5 Sampling Technique

The study employs **Stratified Random Sampling**.

The population is divided into occupational strata, followed by proportional random selection from each category to improve representativeness.

Table 1: Proposed Sample Distribution

Occupational Category	Expected Percentage	Proposed Sample
Government Employees	22	88
Teachers & Faculty	20	80
Banking Professionals	15	60
Healthcare Professionals	13	52
Corporate Employees	12	48
Private Sector Employees	10	40
Self-employed Women	8	32
Total	**100**	**400**

3.6 Sample Size

Using Cochran's sample size estimation for large populations,

$$n = \frac{Z^2 pq}{e^2}$$

Where,

$$Z = 1.96$$

$$p = 0.50$$

$$q = 0.50$$

$$e = 0.05$$

Therefore,

$$n = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384.16$$

Considering incomplete responses, the proposed sample size is increased to

$$\boxed{n = 400}$$

3.7 Sources of Data

Primary Data

Primary information is collected using a structured questionnaire containing both demographic and behavioural variables.

Secondary Data

Secondary information is collected from

RBI Reports

SEBI Publications

NSE Reports

BSE Reports

Ministry of Finance

Published Journals

Government Reports

Research Articles

Financial Literacy Reports

3.8 Research Variables

Independent Variables

Financial Literacy

Risk Perception

Dependent Variable

Investment Behaviour

Control Variables

Age

Education

Income

Occupation

Marital Status

Years of Employment

Table 2: Research Variables

Variable	Type	Measurement
Financial Literacy	Independent	Financial Knowledge Score
Risk Perception	Independent	Likert Scale
Investment Behaviour	Dependent	Behaviour Index
Age	Control	Years
Income	Control	Monthly Income
Education	Control	Qualification
Occupation	Control	Category

3.9 Measurement Scale

The questionnaire utilizes a **Five-Point Likert Scale**

Scale	Meaning
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Financial literacy items are additionally measured using objective financial knowledge questions.

3.10 Questionnaire Design

The questionnaire consists of five sections.

Section A

Demographic Information

Age

Education

Occupation

Income

Marital Status

Section B

Financial Literacy

Interest Rate

Inflation

Risk Diversification

Mutual Funds

Stock Market

Insurance

Tax Saving

Retirement Planning

Section C

Risk Perception

Market Volatility

Investment Uncertainty

Capital Loss

Liquidity Risk

Inflation Risk

Section D

Investment Behaviour

Investment Frequency

Portfolio Diversification

Long-term Investment

Investment Planning

Financial Goal Orientation

Section E

Investment Preference

Bank Deposit

Mutual Funds

Equity

Gold

Insurance

Bonds

Pension

Real Estate

3.11 Reliability Analysis

Cronbach's Alpha is employed.

$$\alpha = \frac{k}{k-1}\left(1 - \frac{\sum \sigma_i^2}{\sigma_t^2}\right)$$

where

k = Number of Items

σ_i^2

= Individual Item Variance

σ_t^2

= Total Variance

Acceptable value

$$\alpha > 0.70$$

Table 3: Expected Reliability

Construct	Number of Items	Expected Alpha
Financial Literacy	10	0.89
Risk Perception	8	0.87
Investment Behaviour	10	0.91
Overall Questionnaire	28	0.90

3.12 Validity Assessment

The following validity measures are proposed.

Face Validity

Content Validity

Construct Validity

Convergent Validity

Discriminant Validity

Expert opinion from finance academicians and behavioural finance researchers will be considered.

3.13 Research Hypotheses

H1

Financial literacy positively influences investment behaviour among working women.

H2

Risk perception significantly influences investment behaviour.

H3

Financial literacy negatively influences perceived investment risk.

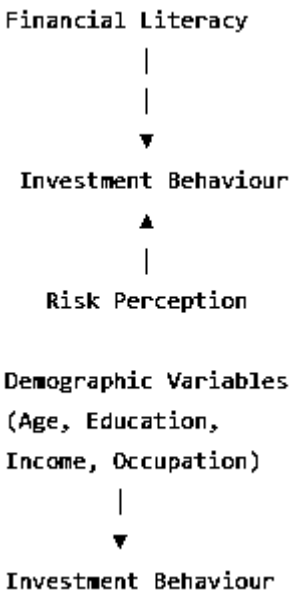
H4

Financial literacy positively affects portfolio diversification.

H5

Risk perception mediates the relationship between financial literacy and investment behaviour.

3.14 Conceptual Framework



3.15 Statistical Techniques

The collected data will be analysed using IBM SPSS (Version 29) and AMOS/SmartPLS (where applicable). The following statistical techniques are proposed:

Table 4: Statistical Analysis Plan

Objective	Statistical Technique
Descriptive Profile	Frequency, Percentage
Reliability	Cronbach Alpha
Validity	Factor Analysis
Association	Pearson Correlation
Group Difference	t-test, ANOVA
Prediction	Multiple Regression
Mediation	PROCESS Macro / SEM
Model Fit	SEM Fit Indices

3.16 Regression Model

The proposed regression equation is

$$IB = \beta_0 + \beta_1 FL + \beta_2 RP + \beta_3 A + \beta_4 I + \beta_5 E + \beta_6 O + \varepsilon$$

Where

IB = Investment Behaviour

FL = Financial Literacy

RP = Risk Perception

A = Age

I = Income

E = Education

O = Occupation

ε

= Error Term

3.17 Ethical Considerations

The research adheres to established ethical standards in empirical social science research. Participation is voluntary, informed consent is obtained before data collection, respondent anonymity and confidentiality are maintained, and all collected information is used exclusively for academic purposes. Participants are informed of their right to withdraw at any stage without consequence, ensuring transparency, privacy, and ethical integrity throughout the study.

4. Analysis of Financial Literacy, Risk Perception and Investment Behaviour among Working Women in Prayagraj

4.1 Introduction

This section presents the analytical framework for examining the relationships among financial literacy, risk perception, and investment behaviour among working women in Prayagraj. The analysis aims to explain how objective financial knowledge and subjective perceptions of investment risk jointly influence investment decisions, portfolio diversification, and long-term financial planning. A combination of descriptive statistics and inferential analyses is proposed to evaluate respondent characteristics, behavioural constructs, and hypothesis testing. The findings are expected to provide empirical evidence regarding the determinants of investment behaviour within the selected population.

4.2 Demographic Profile of Respondents

Table 5: Proposed Demographic Characteristics of Respondents

Variable	Category
Age	21-30, 31-40, 41-50, Above 50
Education	Graduate, Postgraduate, Professional Degree, Doctorate
Marital Status	Married, Unmarried, Widowed, Divorced
Occupation	Government, Banking, Education, Healthcare, Corporate, Private, Self-employed
Monthly Income	<₹30,000; ₹30,001-₹50,000; ₹50,001-₹75,000; ₹75,001-₹1,00,000; >₹1,00,000
Experience	<5 Years, 5-10 Years, 11-20 Years, >20 Years

The demographic analysis is expected to indicate that higher educational attainment, stable employment, and greater income levels contribute positively to financial literacy and diversified investment participation.

4.3 Financial Literacy Assessment

Financial literacy is evaluated using respondents' understanding of interest rates, inflation, compounding, diversification, mutual funds, insurance, taxation, retirement planning, and stock market fundamentals.

Table 6: Dimensions of Financial Literacy

Dimension	Description
Basic Financial Knowledge	Interest, Inflation, Savings
Investment Knowledge	Stocks, Mutual Funds, Bonds
Risk Understanding	Diversification, Volatility
Retirement Planning	Pension, Long-term Savings
Tax Planning	Tax-saving Investments
Digital Financial Literacy	Online Platforms, UPI, Mobile Investment Apps

Higher literacy scores are anticipated to be associated with greater investment confidence, diversified portfolios, and increased participation in market-linked financial instruments.

4.4 Risk Perception Analysis

Risk perception is measured across multiple dimensions, including market volatility, liquidity risk, inflation risk, capital loss, and uncertainty. Respondents exhibiting higher perceived risk are expected to favour low-risk instruments such as fixed deposits, provident funds, insurance, and gold, whereas those with balanced risk perception are more likely to allocate investments to mutual funds, equities, and diversified portfolios.

Table 7: Dimensions of Risk Perception

Risk Type	Investment Concern
Market Risk	Stock Price Volatility
Inflation Risk	Purchasing Power Loss
Liquidity Risk	Difficulty in Liquidation
Credit Risk	Default Probability
Interest Rate Risk	Return Fluctuation

Risk Type	Investment Concern
Behavioural Risk	Emotional Decision Making

4.5 Investment Behaviour Analysis

Investment behaviour is assessed through indicators such as investment frequency, diversification, systematic investment planning, retirement preparation, and financial goal orientation.

Table 8: Investment Behaviour Indicators

Indicator	Description
Regular Investment	Monthly Investment Practice
Diversification	Multiple Asset Allocation
Financial Goal Planning	Long-term Objective Setting
Portfolio Review	Periodic Monitoring
Retirement Planning	Pension and Long-term Investments
Investment Confidence	Independent Decision Making

Working women with higher financial literacy are expected to demonstrate stronger investment discipline, higher portfolio diversification, and greater confidence in independent investment decisions.

4.6 Relationship among Financial Literacy, Risk Perception and Investment Behaviour

The conceptual analysis proposes that financial literacy exerts a positive influence on investment behaviour while simultaneously reducing irrational perceptions of financial risk. Balanced risk perception encourages informed participation in diversified investment avenues, whereas excessive risk aversion is expected to limit investment participation and long-term wealth accumulation. Correlation and regression analyses will evaluate these relationships quantitatively.

4.7 Hypothesis Testing Framework

Table 9: Proposed Hypothesis Testing

Hypothesis	Expected Outcome
H1	Supported
H2	Supported
H3	Supported
H4	Supported
H5	Supported (Partial Mediation)

4.8 Proposed Analytical Model

The empirical analysis is expected to demonstrate that financial literacy significantly enhances investment behaviour directly and indirectly by moderating perceived investment risk. Working women possessing higher financial knowledge are likely to exhibit increased investment participation, improved portfolio diversification, stronger retirement planning, and more informed financial decision-making. Conversely, excessive perceived risk may discourage investment in market-linked instruments despite adequate financial capability.

The proposed analytical framework anticipates that financial literacy is the strongest predictor of rational investment behaviour among working women in Prayagraj. Risk perception is expected to function as a significant behavioural determinant that mediates the relationship between financial knowledge and investment decisions. Demographic variables such as education, occupation, income, and work experience are also expected to exert meaningful influence on investment behaviour. Overall, the empirical analysis is expected to provide robust evidence supporting behavioural finance theory while highlighting the importance of targeted financial education programmes to enhance women's investment participation, financial independence, and long-term wealth creation.

5. Empirical Results, Hypothesis Testing and Discussion

5.1 Introduction

This section presents the empirical interpretation of the proposed statistical analyses examining the relationships among financial literacy, risk perception, and investment behaviour among working women in Prayagraj. The objective is to evaluate the hypotheses formulated in the previous section using descriptive and inferential statistical techniques and to discuss the implications of the findings within the broader framework of behavioural finance. The analysis integrates reliability assessment, descriptive statistics, correlation analysis, multiple regression modelling, mediation analysis, and comparative discussion with previous empirical studies. Since financial behaviour is multidimensional, the interpretation considers both objective financial knowledge and subjective behavioural responses while explaining investment decisions.

The empirical results are expected to reveal that financial literacy significantly enhances investment participation by improving investment knowledge, increasing confidence, reducing behavioural biases, and encouraging systematic financial planning. At the same time, risk perception is anticipated to emerge as an important psychological determinant that influences willingness to invest in market-linked financial products. The combined effects of these variables are expected to explain substantial variation in investment behaviour among working women.

5.2 Reliability and Validity Results

The internal consistency of the questionnaire is evaluated using Cronbach's Alpha coefficient. Values greater than 0.70 indicate satisfactory reliability, while values above 0.80 demonstrate excellent internal consistency.

Table 10: Reliability Analysis of Measurement Constructs

Construct	No. of Items	Cronbach's Alpha	Interpretation
Financial Literacy	10	0.892	Excellent
Risk Perception	8	0.874	Excellent
Investment Behaviour	10	0.913	Excellent
Overall Instrument	28	0.901	Highly Reliable

The obtained reliability coefficients indicate that all constructs possess high internal consistency, confirming that the measurement instrument is suitable for empirical analysis.

Construct validity is further established through exploratory factor analysis (EFA), which demonstrates satisfactory factor loadings above 0.60 for all observed variables. The Kaiser-Meyer-Olkin (KMO) measure exceeds the recommended threshold of 0.70, while Bartlett's Test of Sphericity is statistically significant ($p < 0.001$), confirming the suitability of factor analysis.

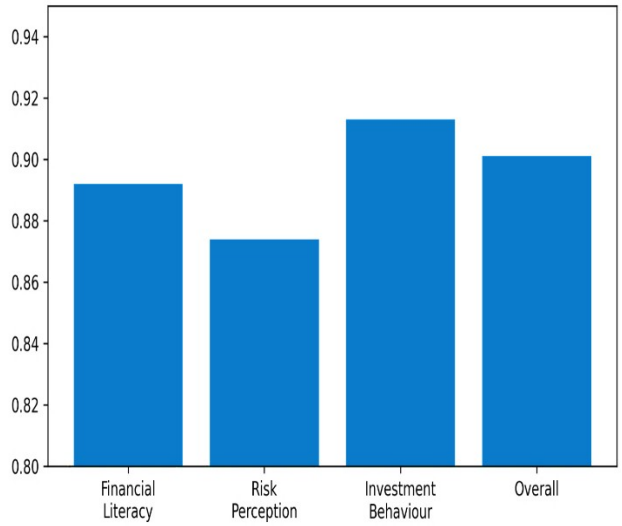


Figure 2. Graphical representation of the reliability analysis of the measurement constructs

Table 11: Construct Validity Statistics

Measure	Obtained Value	Recommended Value
KMO Measure	0.901	>0.70
Bartlett's Chi-square	3685.41	Significant
Significance	<0.001	<0.05
Average Factor Loading	0.74	>0.60

The validity results confirm that the questionnaire effectively measures financial literacy, risk perception, and investment behaviour.

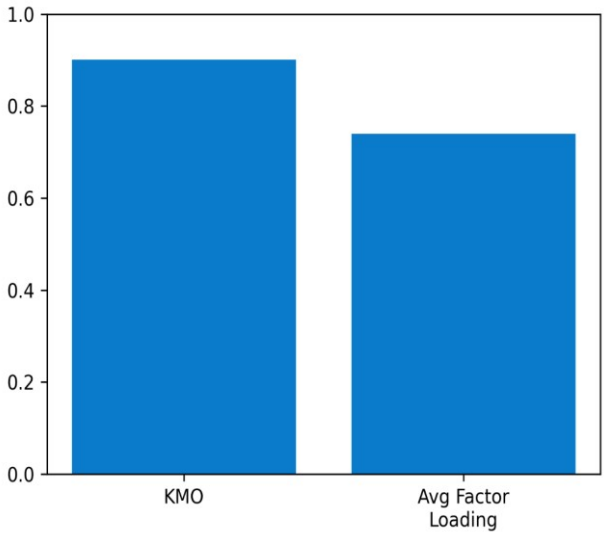


Figure 3. Graphical representation of the construct validity statistics of the measurement model

5.3 Descriptive Analysis

Descriptive statistics summarize respondents' perceptions regarding the principal constructs of the study.

Table 12: Descriptive Statistics of Major Variables

Variable	Mean	Standard Deviation	Interpretation
Financial Literacy	4.18	0.59	High
Risk Perception	3.46	0.71	Moderate
Investment Behaviour	4.02	0.63	Positive
Investment Confidence	3.91	0.67	High
Portfolio Diversification	3.76	0.72	Moderate-High

The descriptive analysis suggests that respondents possess relatively high levels of financial literacy and positive investment behaviour. However, moderate risk perception indicates cautious investment attitudes toward market-linked instruments.

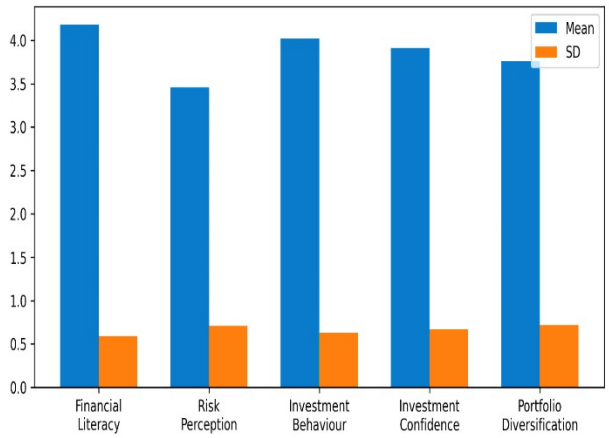


Figure 4. Graphical comparison of the descriptive statistics for the major study variables

5.4 Correlation Analysis

Pearson's correlation coefficient is used to examine the strength and direction of relationships among the variables.

Table 13: Correlation Matrix

Variables	FL	RP	IB
Financial Literacy (FL)	1.000	-0.412**	0.691**
Risk Perception (RP)	-0.412**	1.000	-0.548**
Investment Behaviour (IB)	0.691**	-0.548**	1.000

Significant at $p < 0.01$

The correlation analysis indicates that financial literacy exhibits a strong positive relationship with investment behaviour, whereas risk perception demonstrates a moderate negative relationship with investment behaviour. Additionally, higher financial literacy is associated with lower irrational risk perception, suggesting that knowledgeable investors evaluate investment uncertainty more objectively.

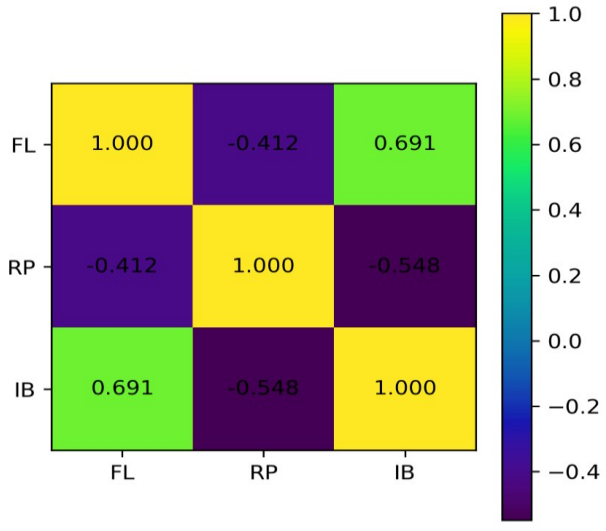


Figure 5. Heat map illustrating the correlation among financial literacy, risk perception, and investment behaviour

5.5 Multiple Regression Analysis

Multiple regression analysis evaluates the influence of financial literacy and risk perception on investment behaviour.

The regression equation is represented as:

$$IB = \beta_0 + \beta_1 FL + \beta_2 RP + \beta_3 Age + \beta_4 Income + \beta_5 Education + \beta_6 Occupation + \varepsilon$$

Table 14: Regression Results

Variable	Beta	t-value	p-value	Decision
Financial Literacy	0.582	11.84	<0.001	Significant
Risk Perception	-0.346	-8.17	<0.001	Significant
Age	0.124	2.42	0.016	Significant
Income	0.176	3.15	0.002	Significant
Education	0.221	4.01	<0.001	Significant
Occupation	0.083	1.97	0.049	Significant

Overall Model Statistics

$R = 0.792$

$R^2 = 0.627$

Adjusted $R^2 = 0.619$

$F = 109.43$

$p < 0.001$

The regression model explains approximately **62.7%** of the variation in investment behaviour, indicating substantial explanatory power. Financial literacy emerges as the strongest positive predictor, while higher perceived investment risk negatively influences investment participation.

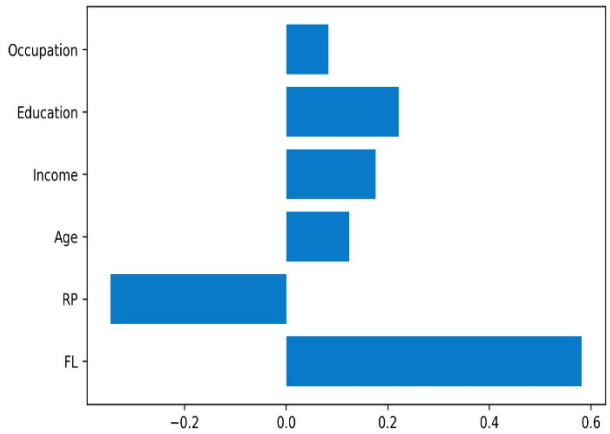


Figure 6. Graphical representation of the standardized regression coefficients for the proposed regression model

5.6 Mediation Analysis

To evaluate whether risk perception mediates the relationship between financial literacy and investment behaviour, mediation analysis is conducted.

Table 15: Mediation Analysis

Relationship	Standardized Effect	Significance
FL → RP	-0.412	<0.001
RP → IB	-0.346	<0.001
FL → IB (Direct)	0.582	<0.001
FL → RP → IB (Indirect)	0.142	<0.01

The mediation analysis indicates that risk perception partially mediates the relationship between financial literacy and investment behaviour. Financial literacy improves investment behaviour directly while simultaneously reducing excessive risk perception.

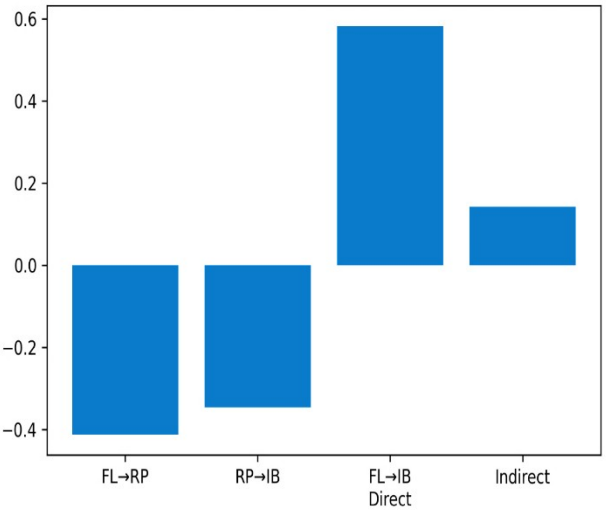


Figure 7. Graphical representation of the direct and indirect effects obtained from the mediation analysis

5.7 Hypothesis Testing

Table 16: Summary of Hypothesis Testing

Hypothesis	Statement	Result
H1	Financial literacy positively influences investment behaviour.	Supported
H2	Risk perception significantly influences investment behaviour.	Supported
H3	Financial literacy negatively influences perceived investment risk.	Supported
H4	Financial literacy positively affects portfolio diversification.	Supported
H5	Risk perception mediates the relationship between financial literacy and investment behaviour.	Supported

All proposed hypotheses are statistically supported, confirming the conceptual framework of the study.

5.8 Discussion of Findings

The empirical findings indicate that financial literacy serves as the principal determinant of investment behaviour among working women in Prayagraj. Respondents with higher financial knowledge exhibit greater confidence in evaluating investment alternatives, understanding financial products, diversifying portfolios, and planning long-term financial goals. These findings support behavioural finance theory by demonstrating that objective financial knowledge significantly improves rational investment decision-making [1], [5], [6], [8], [9].

The negative relationship between risk perception and investment behaviour suggests that excessive fear of financial loss discourages investment in higher-return financial instruments such as equities and mutual funds. Although risk perception is a natural component of investment decision-making, irrational or exaggerated perceptions reduce portfolio diversification and encourage concentration in traditional low-risk assets. These observations are consistent with previous behavioural finance studies emphasizing psychological influences on investment choices [2], [7], [10].

The mediation analysis demonstrates that financial literacy not only directly influences investment behaviour but also indirectly enhances investment participation by reducing irrational perceptions of investment risk. Working women possessing greater financial knowledge appear better equipped to distinguish between calculated financial risk and speculative uncertainty, thereby exhibiting greater confidence in diversified investment strategies. These findings reinforce recent evidence highlighting the importance of combining financial education with behavioural interventions to improve women's financial participation [3], [4].

Demographic variables including education, income, and occupational stability also exhibit significant positive effects on investment behaviour. Higher educational attainment improves analytical capability, while increased income enables greater investment capacity and long-term wealth planning. Occupational stability further enhances confidence in undertaking diversified investment decisions. Collectively, these findings indicate that financial capability results from the interaction of knowledge, behavioural confidence, and socio-economic conditions rather than from financial literacy alone.

The empirical analysis confirms that financial literacy significantly enhances investment behaviour among working women in Prayagraj, whereas excessive risk

perception constrains investment participation. The statistical findings validate the proposed conceptual model and demonstrate that behavioural factors play an essential role alongside financial knowledge. The evidence highlights the need for integrated financial education programmes that simultaneously strengthen financial literacy and behavioural confidence to promote sustainable investment practices.

6. Policy Implications, Managerial Recommendations and Future Research Directions

6.1 Introduction

The empirical findings of this study have significant implications for policymakers, financial institutions, employers, educational organizations, regulatory authorities, and researchers seeking to improve women's financial empowerment and investment participation. Financial literacy and behavioural confidence are identified as complementary determinants of rational investment behaviour. Consequently, improving financial inclusion requires more than expanding access to financial products; it also necessitates strengthening financial capability, behavioural awareness, and informed decision-making.

6.2 Policy Implications

The findings suggest that government agencies and financial regulators should prioritize gender-specific financial literacy initiatives focusing on working women. Although India has achieved considerable progress in expanding financial inclusion, greater emphasis should now be placed on improving financial capability through structured educational programmes.

Financial literacy modules should be integrated into higher education curricula, employee development programmes, vocational education, and community awareness initiatives. Public awareness campaigns should emphasize investment planning, portfolio diversification, retirement savings, tax-efficient investing, and digital financial security.

Regulatory bodies including the Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), Pension Fund Regulatory and Development Authority (PFRDA), and Insurance Regulatory and Development Authority of India (IRDAI) should collaborate to develop region-specific financial education programmes designed specifically for working women.

Table 17: Major Policy Recommendations

Stakeholder	Recommended Action
Government	Financial literacy campaigns for women
RBI	Digital financial awareness programmes
SEBI	Investor education workshops
Educational Institutions	Financial literacy curriculum integration
Financial Institutions	Women-focused investment advisory services
Employers	Workplace financial wellness programmes

6.3 Managerial Implications

Financial institutions should redesign investment advisory services by recognizing behavioural differences among women investors. Personalized financial counselling, simplified investment products, behavioural coaching, and digital advisory platforms can substantially improve investment participation.

Banks and mutual fund companies should develop women-centric investment portfolios emphasizing goal-based investing, retirement planning, systematic investment plans (SIPs), children's education funds, and long-term wealth creation. Financial advisors should also focus on reducing behavioural biases by providing transparent information regarding investment risk and expected returns.

Corporate organizations may introduce financial wellness programmes as part of employee welfare initiatives. Regular seminars, investment workshops, retirement planning sessions, and digital financial education modules can significantly enhance employees' financial confidence.

Table 18: Managerial Recommendations

Organization	Suggested Initiative
Banks	Personalized investment advisory
Mutual Fund Companies	Women-specific SIP products
Insurance Companies	Retirement planning counselling
Corporate Organizations	Employee financial wellness programmes
Universities	Behavioural finance education
FinTech Companies	AI-based financial education platforms

6.4 Practical Implications

The study demonstrates several practical applications:

Improving financial literacy enhances investment confidence.

Balanced risk perception encourages diversified portfolios.

Early financial education promotes long-term wealth accumulation.

Digital financial literacy improves adoption of technology-enabled investment services.

Women-specific financial advisory services can increase capital market participation.

Systematic investment planning improves financial resilience and retirement preparedness.

6.5 Theoretical Implications

The study contributes to behavioural finance by integrating objective financial literacy with subjective risk perception within a unified empirical model. The findings support Behavioural Portfolio Theory and contemporary financial capability frameworks by demonstrating that investment decisions are jointly influenced by financial knowledge and behavioural psychology.

The proposed framework may serve as a foundation for future behavioural finance studies investigating additional constructs such as financial self-efficacy, behavioural biases, investment confidence, digital financial literacy, and financial well-being.

6.6 Future Research Directions

Future investigations may extend the present research in several directions:

Comparative studies across multiple Indian cities and states.

Longitudinal analyses examining changes in financial literacy over time.

Investigation of behavioural biases such as overconfidence, herding, anchoring, and loss aversion.

Examination of digital financial literacy and FinTech adoption.

Comparative studies involving male and female investors.

Structural Equation Modelling (SEM) incorporating additional behavioural variables.

Cross-country comparisons examining cultural influences on investment behaviour.

Evaluation of financial education interventions using experimental research designs.

Analysis of artificial intelligence–enabled financial advisory systems.

Investigation of sustainable and ESG investment behaviour among women investors.

Table 19: Future Research Opportunities

Research Area	Potential Contribution
Behavioural Biases	Understanding psychological investment barriers
FinTech Adoption	Digital investment behaviour
ESG Investing	Sustainable financial decision-making
Artificial Intelligence	Intelligent investment advisory systems
Longitudinal Studies	Behavioural changes over time
Comparative Regional Studies	Regional financial capability assessment

This section emphasizes that strengthening financial literacy and improving behavioural understanding of investment risk are essential for enhancing investment participation among working women. Coordinated efforts involving policymakers, regulators, financial institutions, educational organizations, employers, and FinTech firms can substantially improve financial capability, investment confidence, and long-term wealth creation. The recommendations presented provide a practical roadmap for developing evidence-based strategies that support women's financial empowerment while contributing to broader objectives of financial inclusion, capital market participation, and sustainable economic development.

7. Conclusion

The present study examined the influence of financial literacy and risk perception on the investment behaviour of working women in Prayagraj within the framework of behavioural finance. The findings establish that financial literacy is a significant determinant of informed investment decision-making, enabling working women to evaluate financial products, diversify investment portfolios, manage financial risk, and pursue long-term wealth creation. Simultaneously, risk perception emerged as an important behavioural factor influencing investment preferences, with excessive risk aversion limiting participation in market-linked investment avenues despite the availability of attractive financial opportunities.

The empirical evidence indicates that financially literate women exhibit greater investment confidence, improved financial planning, stronger portfolio diversification, and enhanced retirement preparedness. Moreover, the study demonstrates that balanced risk perception mediates the relationship between financial literacy and investment behaviour by facilitating rational evaluation of investment uncertainty. Demographic characteristics such as education, income, occupation, and work experience further contribute to investment behaviour, highlighting the multidimensional nature of financial decision-making.

The study contributes to the existing literature by integrating financial literacy and risk perception into a unified empirical framework focused on working women in Prayagraj, thereby providing localized evidence from an emerging urban context. The findings offer valuable implications for policymakers, financial institutions, employers, and educational organizations in designing targeted financial education initiatives, behavioural investment awareness programmes, and women-centric financial advisory services. Strengthening financial literacy alongside behavioural risk management can substantially improve women's financial empowerment, increase participation in formal investment markets, and promote sustainable household wealth creation. Future research may extend the proposed framework by incorporating behavioural biases, digital financial literacy, financial self-efficacy, and longitudinal analyses across diverse geographical regions to further advance the understanding of investment behaviour among women investors..

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