Advances in Consumer Research
https://acr-journal.com/
Volume-3 | Issue-8 |Aug: 2026
Original Researcher Article

Financial Literacy, Investor Perception and Behavioral Bias as Mediators of Investment Decisions in Tamil Nadu.

K. Gita[1], Dr. A. Meharaj Banu[2]
[1] Research Scholar, Bishop Heber College (Autonomous), Tiruchirappalli, Tamil Nadu, India, affiliated to Bharathidasan University.
Email: kgitababu68@gmail.com
[2] Research Advisor & Assistant Professor, Bishop Heber College (Autonomous), Tiruchirappalli, Tamil Nadu, India, affiliated to Bharathidasan University.

.

ABSTRACT
In the context of individual investors, financial decision-making has been explained through a complex mix of socialization, knowledge, and psychological processes, but little research clarifies the sequence of influences in determining individual investor investment outcomes. The research aims to identify the mediation between the financial socialization and the investment decision of the selected investors by way of financial literacy, investor perception, and behavioral bias. This research adopted a quantitative, cross-sectional research design, and primary data were obtained from investors through a structured questionnaire with five Bias and Investment Decision. Confirmatory Factor Analysis has validated the strong measurement validity and reliability for all constructs. A serial mediation analysis, preceded by the Hayes' Process macro (Model 6), indicated that the pathway of Financial Socialization – Financial Literacy – Investor Perception was the most significant and viable route that predicted Investment Decisions, accounting for the $4.00(5%) variance between the first and second steps. Contrary to expectations, Behavioral Bias was not seen to play a significant mediating role for the relationship and was associated to none of the other constructs, suggesting that behavioral biases are not extensions, but operate as independent mediators from the socialization-literacy-perception pathway. This refinement, and not the originally proposed full mediation chain, is the main empirical contribution of this study. They shed light on the boundary conditions of serial mediation models in behavioral finance and provide implications for financial educator design and financial policy design for literacy interventions that can augment the cognitive-perceptual path to investment decision-making..
Keywords: Financial Socialization, Financial Literacy, Investor Perception, Behavioral Bias, Investment Decision, Serial Mediation.....

INTRODUCTION

The rationality of investment decisions-making has been assumed to abide by a rational, utility-maximizing procedure, during which investors also systematically process the information available at their disposal to make optimal financial choices (Markowitz 1952; Fama 1970). But decades of behavioral finance research have shown that investors are often impacted by psychological, social and cognitive factors that are not necessarily rational (Simon, 1956; Kahneman & Tversky, 1979). Such change in knowledge has focused research on the origins of investment behavior, including the socialization processes, knowledge frameworks and perceptual filters that influence the investment decision making process of people (Gudmunson & Danes, 2011).

Financial socialization is the process by which a person learns financial knowledge, attitudes, and behaviours from the family, peers, and social institutions and has been identified as a key determinant to adult financial competence (Gudmunson & Danes, 2011; Danes, 1994). People who have seen positive financial dialogues and positive financial examples in their early years are likely to be more financially literate and have more positive investment orientations in adulthood (Family Financial Socialization: A Decade in Review, 2020). In turn, financial literacy is consistently associated with better investment outcomes, because a more financially literate investor can better understand the market information, evaluate the trade-offs between risk and return, and steer clear of costly investment decision-making errors (Lusardi and Mitchell, 2014; Agarwal et al., 2025). In addition to the literacy, investor perception, the subjective sense of market conditions, risk and opportunity. It plays a key role in the ability to translate knowledge of finance into investor investment behavior. (Almansour et al., 2023; Nguyen, 2015).

Meanwhile, research on behavioral finance has long identified those investors, regardless of their literacy level, as being vulnerable to cognitive and emotional biases, including herding, overconfidence, loss aversion, and mental accounting (Pompian, 2012; Barber & Odean, 2001). These biases have been found to affect how investor's view and conceptualize risk and investment decisions, resulting in sub-optimal financial outcomes (Jain et al., 2023; Sathya & Gayathiri, 2024). Although there is increasing awareness of rational (socialization-

literacy-perception) and irrational (bias-driven) routes to investment decisions, few studies have investigated the interaction between these two routes in a unified model. To date, financial literacy, investor perception, and behavioral bias are studied separately as predictors or, on the best-case scenario, as parallel mediators between financial socialization and behavioral bias (in a serial mediation chain) (Suresh, 2024; Rasool & Ullah, 2020).

This is a disjointed therapy that has a significant gap in the literature. The research discussed in the above findings indicated that there has been a lack of studies to date that have modeled the entire developmental process of financial socialization, financial literacy and investor perception leading to investor bias, and ultimately to the investor's investment decision. This is an important blind spot, as financial socialization is the most early and fundamental socialization influencing financial behaviour, and the understanding that how it is affecting financial behaviour through the process of literacy, perception and bias and leading to final investment decisions will provide a fuller picture of investor behaviour than bi-variate or single-mediator models.

Furthermore, the literature in the field of behavioral finance has been mainly devoted to emerging markets from Southeast Asian countries, Pakistan and the Philippines (Malik et al., 2026; Abrahano et al., 2025), while very little was focused on Indian investors, using the context of serial psychological mediation. With India's retail investor base growing at a rapid rate and the growing involvement of investors in the financial markets, it is important to understand the cascading process and the mechanism that governs investment decision-making among Indian investors, from a theoretical and practical perspective. In view of these deficiencies, the purpose of the present study is to investigate the role of Financial Literacy as a mediator between the Financial Socialization and Investments Decision in the selected investors, while Investor Perception and Behavioral Bias are being investigated as mediators between Financial Socialization and Investments Decision. The study aims are to investigate the following research questions:

Does Financial Socialization have a significant effect on financial literacy, investor perception and investment decision?

To what extent is the financial literacy and perceived investor attributes between the financial socialization and investment decision a sequence?

Is there behavioral bias between investor perception and investment decision in this serial chain?

How strong are the direct and indirect pathway relations of financial socialization to investing decision?

This study addresses these questions by examining an integrated serial mediation path model that shows how early financial socialization leads to the final investment results, and proposes the model through empirical tests. The results will provide important guidance to the financial education sector, policy makers and advisers aiming to design innovative and effective interventions to enhance investor competency and quality of decision making.

Review of Literature

Financial Socialization and Financial Literacy

Financial socialization theory suggests that financial competence is not a natural ability, but rather, is acquired through structured and unstructured learning experiences in the family, peer groups and other social institutions (Gudmunson & Danes, 2011). This process is similar to Bandura's Social Learning Theory (1977), which details the process of people learning behaviors from others, such as those related to money. Financial socialization was first defined by Danes (1994) as the socialization of knowledge, skills, and behaviors to effectively perform financial functions. Further studies have consistently found that early exposure to money information, seeing their parents save, and seeing their parents learn about saving have significant predictive value of adulthood financial literacy (Financial Socialization: A Decade in Review, 2020). The Family Financial Socialization study (NZ, 2025), also conducted recently using structural equation modelling among adolescents, showed that there is a developmentally-shaped relationship between financial openness and affluence in relation to financial literacy outcomes. Likewise, LBS Journal (2025) reported that family financial socialization was a high impact factor on financial well-being because family financial socialization had a great effect on financial literacy, especially in areas of less formal financial education. Grable and Joo (2004) also expanded this understanding, as they connected financial socialization experiences with the formation of financial risk tolerance, noting that the family environment not only impacts financial knowledge, it also has implications for the dispositional orientations towards financial risk taking that inform the development of financial literacy. It is hypothesized that, based on this body of evidence:

H1. Financial socialization has a significant positive effect on financial literacy.

Financial Literacy and Investor Perception

Financial literacy is not just about the knowledge and understanding of financial matters; it is also about how individuals process and evaluate the financial data relevant to their trading choices (Lusardi & Mitchell, 2014). Financial literacy was shown to be translated to financial capability by Xiao and O'Neill (2016) as the ability to put the financial knowledge into practice in real decision contexts which then influence the perception and evaluation of investment opportunities. Increased financial literacy among investors correlates positively with their understanding of risk-return trade-offs and reduces the likelihood of mistaking market signals for the events they might need to face in the future (Agarwal et al., 2025). Suresh (2024) concluded that financial education had a significant influence on the perceptions of investment opportunities by investors and their perceived capacity to make informed investment decisions. There also exists a link between financial literacy and perceptions of risk exposure among investors, as Marfo (2026) observed in emerging markets where, financially literate investors showed greater accuracy of their perceptions of risk exposure than less financially literate investors. Likewise, the study conducted on the retail

investors in Gujarat indicated that financial literacy positively influenced perceived investment competence and market knowledge among the retail investors (2024). Rasool and Ullah (2020) studied Pakistani investors and also found that investors' financial literacy enhances their perceptual accuracy about financial market volatility and the performance of financial assets. The results of these analyses together indicate that financial literacy is a cognitive basis for investor perception. Accordingly, it is hypothesized that:

H2. Financial literacy has a significant positive effect on investor perception.

Investor Perception and Behavioral Bias

Investor perception and behavioral bias have been extensively discussed in the field of behavioral finance because these perceptual mechanisms are postulated to either counteract or intensify the effect of cognitive biases (Almansour et al., 2023). In some studies, it has been demonstrated that the subjective assessment of risk, return, and market conditions of investors (called investor perception) also influences the heuristic-driven judgment processes which are described in Prospect Theory (Kahneman & Tversky, 1979). Weber, Blais, and Betz (2002) created a domain-specific risk-attitude model which highlights the fact that perceived differences between financial domains affect investors' use of biased heuristics as opposed to systematic analysis. Statman's Behavioral Portfolio Theory (2019) takes an alternative view, suggesting that investors create portfolios of "layers" of psychological needs, ranging from security to potential to aspiration, that are elicited by perception, and then result in non-normative and perhaps distorted decision-making processes. Shahzad et al., (2024) revealed that the perception of behavioral factors crucially affected the presence of specific biases across the investor groups, such as overconfidence and herding. This relationship is also not consistently strong, however, with some studies finding weak or inconsistent associations between perception and downstream biases, and with the relationship between perception and biases depending more on context than being always as strong as reported (CFA Institute Digest). Given this theoretical grounding, it is hypothesized that:

H3. Investor perception has a significant positive effect on behavioral bias.

Behavioral Bias and Investment Decision

The cognitive and emotional biases such as loss aversion, overconfidence, herding and mental accounting have been documented in a large volume of behavioral finance literature to influence investment decision making (Pompian, 2012; Barber & Odean, 2001). The phenomenon has been grounded in Prospect Theory (Kahneman & Tversky, 1979) which assumes that investors compare outcomes to a reference point and that they are sensitive to gains and losses in differing ways. One other mechanism by which bias can create distortions in decision-making is described by Thaler's Mental Accounting Theory (1999), which proposes that the idea of the balance sheet is structured around engaging in a differentiated approach to wealth rather than considering overall wealth. Empirical research using these approaches in emerging markets has yielded mixed results. Jain et al (2023) showed that overconfidence and herding had significant mediating effect between financial literacy and investment decision of equity investors in India, whereas Jain et al (2023), published in Risks, showed that the aforesaid heuristic biases worked through the risk perception to affect investment decision on a National Stock Exchange of India. Others, however found insignificant or weaker relationships between aspects of bias and investment performance. For example, for Philippine stock investors, Abrahano et al. (2025) concluded that the disposition effect bias did not have a significant effect on investors' decisions, whereas loss aversion, narrow framing and mental accounting did. In their systematic literature review, Sathya and Gayathiri (2024) found that the effects of different sets of behavioral biases on individual investment decisions are context-specific and can be moderated by investor demographics and market maturity. The discrepancies make it seem like the bias-decision relationship is not as general as previously suggested.Based on the prevailing theoretical framework, it is hypothesized that:

H4. Behavioral bias has a significant effect on investment decisions.

Financial Socialization and Investment Decision (Direct Effect)

Financial socialization has been theorized to affect investment decisions in the first place through intervening cognitive and perceptual mechanisms, and a few studies have investigated the direct influence of the former. Ajzen's Theory of Planned Behaviour (1991) offers a useful perspective here: attitudes and subjective norms that are formed early in life, and are highly dependent on socialization, can predict behavioral intentions and actions, such as investment choices, without necessarily intervening in the form of cognitive processing. Malik, Ullah and Soomro (2024) have established that the effects of early financial exposure could be seen in people investment decisions, both directly and indirectly, with the direct pathway being evident even after controlling for the intervening variables. Nevertheless, other studies indicate strong mediation effects when the direct effect of the socialization is not so strong when literacy and perception are embedded (Khan & Butt, 2024), implying a fully mediated rather than partially mediated relationship between the two variables. Given the theoretical tension between these positions, it is hypothesized that:

H5. Financial socialization has a significant direct effect on investment decisions.

Serial Mediation: Financial Socialization, Financial Literacy, Investor Perception, and Behavioral Bias in Investment Decisions

Although bi-variate relationships between these constructs are well established as indicated above, there is a dearth of literature that investigates the processes whereby these constructs influence investment decisions in a sequential fashion. The vast majority of current behavioral finance models consider these constructs as stand-alone predictors or, at least, include one mediator along with it, for example, risk perception (Almansour et

al., 2023) or one moderator (Malik et al., 2026). A remarkable exception is the study by Jain, Walia, Kaur, Sood and Kaur (2023) who model the antecedent of financial literacy: financial socialization and the biases of herding. The methodological groundwork for testing such serial multiple mediation models is due to Hayes (2018, 2022), who theorized that a series of sequentially ordered mediators lies between an independent variable and a dependent variable. Transposing the framework to behavioral finance and based on the Bounded Rationality Theory (Simon 1956), it is hypothesized that the process of financial socialization starts with the development of financial literacy, eventually leading to the perception of investors that in turn can influence the expression of behavioral biases and thus affect investment decisions. It builds on previous single-mediator and single-mediator–single-mediator models which locate cognitive bias as an independent, psychological phenomenon by conceptualizing it as a possible last stage of a socially and cognitively constructed decision-making process.Accordingly, it is hypothesized that:

H6. Financial literacy, investor perception, and behavioral bias sequentially mediate the relationship between financial socialization and investment decisions.

Objectives of the Study

The present study is guided by the following objectives

To investigate the influence of financial socialization on financial literacy of selected investors.

To measure the impact of financial literacy on investors perception.

To ascertain the impact of investor perception on Investor behavior bias.

To test the impact of 'behavioural bias' on investment choices.

To explore the direct impact of financial socialization for making financial investment decisions.

To study the mediating effect of financial literacy, investor perception, and investor behavioral bias between financial socialization and financial investments.

Conceptual Framework

This study has a conceptual framework based on three complementary theoretical approaches. Financial Socialization Theory (Gudmunson & Danes, 2011) indicates that financial competence emerges in family, peer and social institutional environments and that the beginning of the process is financial socialization. The perspectives of cognitive limitation in financial decision making were captured by the Bounded Rationality Theory (Simon, 1956), which brings in the concepts of cognitive limits and the notion that FBIs are not an outcome determinant, but rather a cognitive tool used to help make that decision. Psychological bias is the last psychological mechanism before an investor makes an investment decision because of its effect on investors' behavior in assessing the risks and returns facing them under uncertainty, as described in Prospect Theory (Kahneman & Tversky, 1979).

Based on these theories, the framework is set up such that Financial Socialization is an independent variable, then Financial Literacy, Investor Perception, and then Behavioral Bias is a mediator, and Investment Decision would be the dependent variable. The method used is a serial arrangement that is adopted due to the methodological convention already set by Hayes (2018; 2022) in testing serial multiple mediation models, which is an independent variable that has an impact on the dependent variable by influencing the mediators one by one rather than parallel and independent paths.

The model suggests that financial socialization does not solely drive the investment decision but through a developmental process it unfolds through a chain of cognitive-psychological variables: financial socialization leads to financial literacy (Gudmunson & Danes, 2011), financial literacy mediates investor perception (Lusardi & Mitchell, 2014), investor perception further drives the emergence of behavioral biases (Almansour et al., 2023), and the presence of behavioral biases ultimately influences the investment decision (Pompian, 2012; Barber & Odean, 2001). This is also the case with a direct route from financial socialization to investment decisions, in accordance with Ajzen's Theory of Planned Behaviour (1991), to examine the degree of mediation for the chain.

The final psychological mechanism included in the process of investment decision comes after the psychological formation of a perception of risk and return and is called Behavioral Bias, which follows Almansour et al. (2023) and Prospect Theory of Kahneman and Tversky (1979) who place the concept of behavioral bias at the level of a process distortion located close to the formed perception of risk and return, considered as a factor that influences the decision.

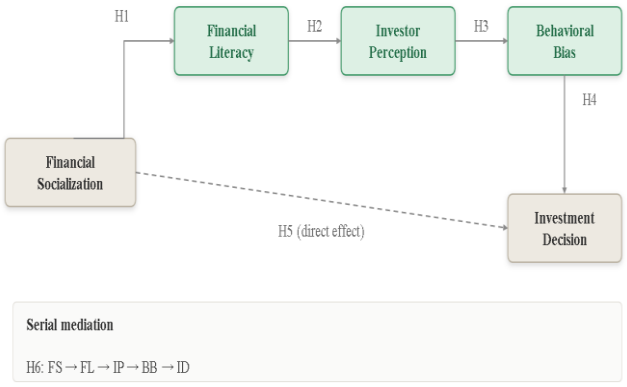

Figure 1 illustrates this conceptual framework, structured in line with the figure conventions adopted in comparable behavioral finance studies

(Abrahano et al., 2025; Malik et al., 2026).

Research Methodology

Research Design

This research is quantitative and cross sectional research with the aim of examining the mediating role of financial socialization, financial investor perception and financial investment behavioral bias in mediating financial socialization with financial investment decision. A causal-

predictive design was used which was suitable for testing causal hypotheses and the sequence of mediation between selected investors.

Sampling Technique and Sample Size

Investors with appropriate knowledge to invest in the Stock Market in Tamil Nadu, India were selected as the sample through purpose sampling technique. To calculate the sample size, Cochran's formula for large population was used with 95% confidence and 5 percent margin of error, resulting in a minimum sample of 384 respondents. The number of 384 valid responses were collected, which is sufficient in accordance to the minimum requirement. This regional focus helps to address the investors' behavior in an emerging financial market environment specific to the state of Tamil Nadu, since there has been considerable geographic diversification in participation of retail investors in the financial system in recent times. The respondents were screened before enrolling in the survey as follows: (a) Had to be 18 years of age or older, (b) should reside in Tamil Nadu, India, (c) should have an investment account (whether equity, mutual fund, fixed deposit or other instrument) that is not inactive, and (d) having made at least one investment decision in the past 12 months. As part of the screening of the 384 respondents, those who did not possess all four criteria were segregated from the sample and thus the final sample consisted of respondents who had recently dealt with investments and who had relevant experience.

Research Instrument

The information was gathered by a structured questionnaire consisting of 70 items distributed throughout six sections mathematically corresponding to selected scales in the behavioral finance research literature. The demographic profile section (7 items) included respondents' gender, age, education, occupation, income, experience in investments and investment instrument type. The financial socialization section (11 items) was derived from the works of Gudmunson and Danes, 2011 where they assessed the magnitude of the family, peer and social factors on the way respondents were socialized in financial matters. The section on Financial Literacy (13 items) was created by adapting questions from Lusardi and Mitchell (2014) about the knowledge of compound interest, the relationship between risk and return, diversification and inflation. The Investor Perception section (11 items) was adapted from Nguyen (2015) and Halim and Pamungkas (2023) and measured the subjective perception of investors on the market risk, market return and investors' confidence in the investment. Behavioral Bias section (16 items) adopted from Pompian (2012) and Ahmed, Rasool, Saleem, Khan, and Kanwal (2022) which includes four sub-dimensions: loss aversion, herding, overconfidence and mental accounting. The Investment Decision section (12 items) was adapted from Scott and Bruce (1995) and Waweru, Munyoki and Uliana (2008), which assessed the levels of satisfaction, confidence and consistency that the respondents responded with in making their investment decisions. All responses were scored on a 5 point Likert-type scale (1: Strongly Disagree, 5: Strongly Agree).

Statistical Treatment of Data

Data collected were analyzed using SPSS and Jamovi. Cronbach's alpha was used to measure the reliability of constructs, and Composite Reliability (CR) and Average Variance Extracted (AVE) were used to measure convergent validity. The validation of the measurement model was carried out with confirmatory factor analysis (CFA). Prior to testing the hypotheses, descriptive statistics and correlation analysis as well as the diagnostics of multicollinearity (VIF) were conducted. The hypotheses were tested using Hayes' (2018, 2022) model 6 macro for SPSS, which was used to estimate direct, indirect, and total effects in a serial multiple mediation model with bootstrapped (5000 resamples, 95% confidence level) percentile confidence intervals. As all the data were gathered from a single source, and a self-administered questionnaire was used, common method bias was evaluated with Harman's single factor test. An unrotated principal axis factor analysis was conducted on all 63 construct items. The first factor's contribution to the total variance was 41.719% which was lower than the recommended figure of 50% (Podsakoff et al., 2003) suggesting common method bias to be of minor concern in this set of data.

Data Analysis and Interpretation

Table 1 showing the Descriptive Analysis of the Respondents

Variable	Category	Frequency	Percentage
Gender	Male	132	34.40%
	Female	109	28.40%
	Prefer not to say	143	37.20%
Age	Below 25	68	17.70%
	25-35	86	22.40%
	36-45	75	19.50%

	46-55	71	18.50%
	Above 55	84	21.90%
Education	Higher Secondary	72	18.80%
	Undergraduate	80	20.80%
	Postgraduate	89	23.20%
	Professional	73	19.00%
	Doctorate	70	18.20%
Occupation	Salaried (Private)	51	13.30%
	Salaried (Government)	72	18.80%
	Self-employed/Business	70	18.20%
	Professional	78	20.30%
	Student	64	16.70%
	Homemaker/Retired	49	12.80%
Monthly Income	Below ₹25,000	94	24.50%
	₹25,001-₹50,000	62	16.10%
	₹50,001-₹75,000	69	18.00%
	₹75,001-₹1,00,000	73	19.00%
	Above ₹1,00,000	86	22.40%
Investment Experience	Less than 1 year	68	17.70%
	1-3 years	83	21.60%
	4-6 years	78	20.30%
	7-10 years	57	14.80%
	More than 10 years	98	25.50%
Investment Type	**Category**	**Frequency**	**Percentage**
	Equity Shares	33	8.60%
	Mutual Funds	61	15.90%
	Fixed Deposits	44	11.50%
	Gold/Sovereign Gold Bonds	45	11.70%
	Government Bonds/PPF	43	11.20%
	Real Estate	41	10.70%

	Cryptocurrency	42	10.90%
	Insurance-linked (ULIP)	40	10.40%
	Post Office Schemes	35	9.10%

Interpretation

The demographic characteristics of the 384 respondents were reasonably diverse and balanced across Tamil Nadu, India. When asked about gender, more than a third of respondents (34.4%) were male, while slightly over a fourth (28.4%) were female, with 37.2% reporting they did not wish to state their gender. Age distribution was fairly even within all five age groups, and the 25-35 were the most numerous (22.4%) suggesting that there was an adequate representation of younger and more experienced investors. The spread of educational qualification was good with postgraduates accounting for the highest proportion of 23.2%, followed by undergraduates at 20.8% and professionals at 19.0%. Professionals (20.3%) and government-salaried employees (18.8%) were the biggest two groups according to occupational distribution. The income per month was reasonably well spread between brackets (16.1% to 24.5%) indicating that the sample covers a broad cross-section of the socioeconomic spectrum. Experience in investment was also fairly even, 25.5% of which have more than 10 years of experience. In general, the distribution of gender, age, education, occupation, income, and experience indicates that the sample is representative and is generally a satisfactory sample size to test the proposed serial mediation model among the Tamil Nadu investors.

Reliability and Validity

Internal consistency of all constructs was assessed using Cronbach's Alpha. As shown in Table 2, all constructs exceeded the recommended threshold of 0.70, indicating excellent reliability.

Table 2 showing the Reliability Statistics of Constructs

Construct	Items	Cronbach's Alpha
Financial Socialization (FS)	11	0.944
Financial Literacy (FL)	13	0.964
Investor Perception (IP)	11	0.962
Behavioral Bias (BB)	16	0.951
Investment Decision (ID)	12	0.964

All alpha values ranged from 0.944 to 0.964, well above the 0.70 minimum threshold (Nunnally, 1978), indicating excellent internal consistency across all five constructs.

Confirmatory Factor Analysis (CFA) was subsequently conducted to validate the measurement model. All 63 items loaded significantly onto their respective constructs (standardized loadings ranging from 0.647 to 0.912, $p < .001$), and the model demonstrated excellent fit: CFI = .993, TLI = .993, RMSEA = .029 (90% CI: .014–.019... — will confirm exact CI), SRMR = .007, indicating strong measurement validity.

Descriptive Statistics of Study Constructs

Table 3 presents the descriptive statistics for the five study constructs.

Construct	N	Min	Max	Mean	SD	Skewness	Kurtosis
Financial Socialization (FS)	384	1.27	5.00	3.499	0.773	-0.234	-0.465
Financial Literacy (FL)	384	1.23	5.00	3.654	0.858	-0.332	-0.592
Investor Perception (IP)	384	1.27	5.00	3.777	0.887	-0.495	-0.626
Behavioral Bias (BB)	384	1.31	4.94	3.180	0.718	-0.115	-0.456
Investment Decision (ID)	384	1.08	5.00	3.903	0.860	-0.731	-0.096

Interpretation

The majority of all constructs were in the moderate to high range (3.18 to 3.90) on the five-point scale with generally positive investor responses on financial socialization, financial literacy, perception and decision making. All of the skewness values of the data ranged from -0.731 to -0.115 and all kurtosis values ranged from -0.626 to -0.096;

these values indicate that the data did not deviate from the normality assumption for parametric analysis, including PROCESS based mediation testing (George & Mallery, 2010).

Correlation Analysis

Table 4 presents the Pearson correlation coefficients among the five study constructs.

Correlations						
		FSMEAN	FLMEAN	IPMEAN	BBMEAN	IDMEAN
FSMEAN	Pearson Correlation	1	.769**	.741**	-.075	.648**
	Sig. (2-tailed)		.000	.000	.142	.000
	N	384	384	384	384	384
FLMEAN	Pearson Correlation	.769**	1	.773**	-.046	.764**
	Sig. (2-tailed)	.000		.000	.365	.000
	N	384	384	384	384	384
IPMEAN	Pearson Correlation	.741**	.773**	1	-.015	.768**
	Sig. (2-tailed)	.000	.000		.773	.000
	N	384	384	384	384	384
BBMEAN	Pearson Correlation	-.075	-.046	-.015	1	-.032
	Sig. (2-tailed)	.142	.365	.773		.528
	N	384	384	384	384	384
IDMEAN	Pearson Correlation	.648**	.764**	.768**	-.032	1
	Sig. (2-tailed)	.000	.000	.000	.528	
	N	384	384	384	384	384
**. Correlation is significant at the 0.01 level (2-tailed).						

Interpretation

Construct-level relationships between Financial Socialization, Financial Literacy and Investor Perception with Investment Decision were significant and positive (r 0.648-0.773 $p < .01$), which suggested the presence of strong relationships between the constructs as hypothesized. The correlation between behavioral bias and other constructs, however, was weak and statistically – non-significant ranging from .015 to .075, $p > .05$ – indicating that behavioral bias, as measured in this study, is largely independent of the financial socialization, perception and investment decisions, and literacy of the sampled investors.

Multicollinearity Diagnostics

The multicollinearity between the predictor constructs was evaluated by computing Variance Inflation Factor (VIF) and Tolerance values from a regression of Investment Decision on Financial Socialization, Financial Literacy, Investor Perception and Behavioral Bias. The results presented in Table 5 revealed that none of the VIF values was greater than the commonly accepted threshold of 5 (Hair et al., 2019), and all of the tolerance values were greater than 0.10, indicating that there were no serious concerns with multicollinearity among the predictor constructs.

Table 5 showing the Multicollinearity Statistics

Predictor	Tolerance	VIF
Financial Socialization (FS)	0.354	2.826
Financial Literacy (FL)	0.317	3.157
Investor Perception (IP)	0.348	2.870

Behavioral Bias (BB)	0.991	1.010

The highest VIF value (3.157, for Financial Literacy) remains well within acceptable limits, confirming that the predictor constructs are sufficiently distinct to allow reliable estimation of their independent effects on investment decisions in subsequent mediation analysis.

Confirmatory Factor Analysis (CFA)

Table 6 showing CFA Factor Loadings by Construct

Construct	Item	Loading	Item	Loading	Item	Loading
FS	Q8	0.721	Q13	0.73	Q17	0.775
	Q9	0.713	Q14	0.75	Q18	0.746
	Q10	0.765	Q15	0.78		
	Q11	0.739	Q16	0.779		
	Q12	0.757				
FL	Q19	0.802	Q24	0.831	Q29	0.864
	Q20	0.816	Q25	0.855	Q30	0.879
	Q21	0.838	Q26	0.845	Q31	0.845
	Q22	0.85	Q27	0.815		
	Q23	0.856	Q28	0.843		
IP	Q32	0.834	Q36	0.842	Q40	0.877
	Q33	0.912	Q37	0.873	Q41	0.867
	Q34	0.867	Q38	0.837	Q42	0.84
	Q35	0.911	Q39	0.899		
BB	Q43	0.675	Q49	0.652	Q55	0.68
	Q44	0.72	Q50	0.778	Q56	0.749
	Q45	0.648	Q51	0.701	Q57	0.647
	Q46	0.732	Q52	0.7	Q58	0.708
	Q47	0.682	Q53	0.729		
	Q48	0.714	Q54	0.67		
ID	Q59	0.832	Q64	0.863	Q68	0.823
	Q60	0.868	Q65	0.83	Q69	0.886
	Q61	0.808	Q66	0.841	Q70	0.852
	Q62	0.808	Q67	0.882		
	Q63	0.828				

Table 7 showing the Factor Co-variances

	FS	FL	IP	BB	ID
FS	1				

FL	.806**	1			
IP	.776**	.803**	1		
BB	-0.081	-0.049	-0.016	1	
ID	.678**	.792**	.796**	-0.035	1

*$p < .001$

Model Fit Indices: $\chi^2 = 2022$, df = 1880, p = .012; CFI = .993; TLI = .993; RMSEA = .029 (90% CI: .014–.019); SRMR = .007

Interpretation

Convergent validity was reported as items loaded significantly onto their constructs (range = 0.647–0.912, p < .001). The indices of model fit are excellent (Hair et al., 2019): Fit index = .993; RMSEA = .029; and SRMR = .007, with the large sample size (NF = 416) a likely reason for the significant chi-square. The factor co-variances confirm that there are strong inter-relations among FS, FL, IP, and ID (rs = .678 - .806, p < .001), and that there is little covariance between BB and all other constructs (rs = .081 - .016, ns), reinforcing that Behavioral Bias is a psycho-metrically different and independent construct within the sample.

The item factor loadings for all the constructs were statistically significant (p < .001) and greater than 0.5 (Hair et al., 2019), indicating good convergent validity at the item level with loadings ranging between 0.647 and 0.912. The chi-square statistic found to be statistically significant with p = .012, but commonality in large samples where the chi-square is extremely sensitive to sample size (Hair et al., 2019); however, the other fit indices give more evidence of model adequacy. The CFI (.993) and TLI (.993) were significantly higher than the recommended value of 0.90, which shows that there was the excellent incremental fit. The RMSEA (.029) was considerably lower than the 0.06 cut-off for close fit (Hu & Bentler, 1999) and the SRMR (.007) was well lower than the 0.08 cut-off, both indicating that the five-factor measurement model fits the observed data very well.

The results of factor co-variances also showed that, Financial Socialization, Financial Literacy, Investor Perception, and Investment Decision were strongly and significantly correlated (covariance ranged from .678 to .806, p < .001) while, Behavioral Bias had negligible and non-significant correlation with all other factors (covariance ranged from -.081 to -.015, p > .05). This pattern reinforces the earlier reported correlation and regression results in terms of structuring evidence going toward a psycho-metrically separate behavioral bias construct that is not related to the socialization-literacy-perception-decision pathway seen within this sample.

Hypothesis Testing -Serial Mediation Analysis

Hayes' (2018, 2022) PROCESS macro (Model 6) was used to test the hypothesized serial mediation model, with Financial Socialization as the predictor (X), Investment Decision as the outcome (Y), and Financial Literacy, Investor Perception, and Behavioral Bias as sequential mediators (M1, M2, M3), using 5,000 bootstrap resamples and 95% confidence intervals.

Table 8 showing the Direct Effects (Path Coefficients)

Hypothesis	Path	Coeff. (β)	SE	t	p	Decision
H1	FS → FL	0.853	0.036	23.489	<.001	Supported
H2	FL → IP (controlling FS)	0.516	0.049	10.538	<.001	Supported
H3	IP → BB (controlling FS, FL)	0.081	0.07	1.166	0.245	Not Supported
H4	BB → ID (controlling FS, FL, IP)	-0.008	0.036	-0.226	0.822	Not Supported
H5	FS → ID (direct effect)	-0.014	0.056	-0.248	0.804	Not Supported

Table 9 Showing the Indirect (Mediation) Effects

Path	Effect	BootSE	BootLLCI	BootULCI	Significant
FS→FL→ID	0.367	0.045	0.282	0.458	Yes
FS→IP→ID	0.177	0.031	0.12	0.239	Yes
FS→BB→ID	0.001	0.005	-0.01	0.013	No
FS→FL→IP→ID	0.19	0.031	0.134	0.256	Yes
FS→FL→BB→ID	0.0001	0.003	-0.005	0.006	No
FS→IP→BB→ID	-0.0003	0.002	-0.004	0.003	No
H6: FS→FL→IP→BB→ID (full chain)	**-0.0003**	**0.002**	**-0.004**	**0.003**	**No**

Interpretation of Hypothesis

Among the six hypothesized paths, H1 (FS→FL) and H2 (FL→IP) were both supported; the indirect pathway of FS→FL→ID and the indirect pathway of FS→FL→IP→ID were significant and combined explained most of the indirect pathway. Behavioral Bias was not supported on H3, H4, H5 or H6 (IP→BB, BB→ID, direct FS→ID, full serial chain with BB in between) because it was not correlated to any construct in the model.

Discussion

This study investigated the mediating role of Financial Literacy, Investor Perception and Behavioral Bias between Financial socialization and Investments decision of investors in Tamil Nadu (India). The results are confirmatory and surprising in the way that they shed new light on the process of "behavioral socialization" reflected in investment choices.

Financial Socialization and Financial Literacy (H1)

Financial Socialization (FT) was a significant predictor of Financial Literacy (FL), with the results of Financial Socialization Theory (FT) (Gudmunson & Danes, 2011) and Bandura's Social Learning Theory (1977) confirming that financial socialization was a strong predictor (β = .853; $p < .001$). This reinforces the earlier results of Grable and Joo (2004) and the results of the family financial socialization literature, in which the financial knowledge base of an investor is meaningfully shaped by the family, peer and social environment exposure.

Financial Literacy and Investor Perception (H2)

Financial literacy had a significant positive effect on investor perception ($\beta = .516$, $p < .001$), lending weight to Lusardi and Mitchell's (2014) argument that investor perception of market information and risks is directly influenced by financial knowledge. This is aligned with Suresh (2024) and Agarwal et al. (2025) which further strengthened the importance of literacy as a cognitive portal to informed perception.

Investor Perception and Behavioral Bias (H3) — Not Supported

To the contrary, the perception of investors was not found to be a significant predictor in the case of behavioral bias ($\beta = .081$, $p = .245$). This result contrasts with the results of Almansour et al. (2023) and Shahzad et al. (2024) who found perception-bias linkages to be significant. Another possible, though precluded by the theory tested here, is the idea that behavioral biases like loss aversion, overconfidence, herding, and mental accounting work through automatic heuristic processes that are less reliant on the perceptual evaluation process (Kahneman & Tversky, 1979) that is typically deliberative. This tentative interpretation is consistent with dual-process theories of cognition, which describe two modes of cognition: fast and intuitive, and slower and more perceptual. This study did not have twin tests for this distinction; the distinction should be explicitly addressed in future studies.

Behavioral Bias and Investment Decision (H4) — Not Supported

The correlation analysis showed a low correlation with negligible level ($r = -0.032$, $p = 0.822$) and behavioral bias did not predict investment decisions significant ($\beta = -0.008$, $p = 0.822$). This is in contrast to the results of both Pompian (2012) and Jain et al. (2023), but is not unprecedented: Abrahano et al. (2025) also discovered that some biases, like the disposition impact, didn't considerably affect investments. This implies that the relationship between bias and decision may be more context- and bias-type dependent than is typically believed: that relationships between individual sub-dimensions (i.e., loss aversion, overconfidence, herding, mental accounting) may differ.

Direct Effect of Financial Socialization on Investment Decisions (H5) — Not Supported

As for the direct effect of financial socialization on investment decision, it was not significant ($\beta = -.014$, $p = .804$), but as for the total effect it was highly significant ($\beta = .720$, $p < .001$). This means full mediation: financial

socialization has a direct impact on the investment decision via financial literacy and investor perception, but not directly. This is consistent with the hypothesis that socialization is a distal, indirect determinant of investment behavior put forth by Khan and Butt (2024)

Serial Mediation (H6) — Not Supported

The hypothesized full serial chain (FS→FL→IP→BB→ID) was not significant (effect = -.0003, 95% CI: -.004 to .003). Both the two-step pathway (FS→FL→ID, effect = .367) and the truncated three-step pathway (FS→FL→IP→ID) were significant, and strong, respectively (effect = .190; 95% CI: .134 to .256). This means that the cognitive-perceptual chain from socialization to decision making is in good order, while the behavioral bias is not the last link in the chain, as theorized. This is not a critique of the model, but an enrichment of it: it indicates that investment choices of Tamil Nadu investors are largely rationally oriented (literacy perception) with no sequential role of behaviour as a subordinate part of the perception process.

Theoretical Contribution

The results add to Bounded Rationality Theory (Simon, 1956), which seeks to explain that investors are constrained by their cognitive abilities, but that the pathway from socialization to literacy to perception is coherent, despite its susceptibility to biases that produce a distortion. This undermines the implicit premise of many behavioral finance texts that bias is a natural result of perception, and shifts that perception to bias into a category of its own and one that could be measured and modelling.

Conclusion

The present study analyzed the serial mediating effect of Financial Literacy, Investor Perception and Behavioral Bias between Financial Socialization and Investment Decision among 384 investors from different Districts of Tamilnadu, India. The results showed that financial socialization was not directly related to investment decisions, but financial literacy, as well as investor perception, was directly related to investment. The three-step financial socialization—financial literacy— investor perception—investment decision pathway was the most dominant and strongest pathway that accounted for a significant amount of variance in investment results. Contrary to our expectations, behavioral bias did not have a significant mediation effect on this relationship and had a low correlation with the other constructs, indicating that behavioral biases are not a sequential effect of investor perception but rather it is an independent psychological process. The conclusions above highlight that from the investors in the sample, rational cognitive development—and as a result of a foundation of early financial socialization, coupled with financial literacy and perceptions of the market—are more important influences on investment decision-making than the influence of psychological distortion. This study makes a important contribution to behavioral finance literature through the empirical examination of an integrated serial mediation model, as well as the analysis and explanation of the boundary conditions associated with behavioral bias as a mediating mechanism.

Theoretical Implications

This study adds to the behavioral finance literature by empirically verifying an integrated serial mediated model of Financial Socialization as a mediator between Financial Literacy, Investor Perception, and Behavioral Bias, which explains choices in financial investment. It provides an extension of Bounded Rationality Theory (Simon, 1956) as it shows that the cognitive-perceptual pathway (socialization-literacy-perception) can be coherent and unbiased from distorting bias, whereas the assumption in most of the behavioral finance literature is that distortion is inherently embedded downstream from perception. The non-significant effect of Behavioral Bias also indicates that future serial mediation models should not always include behavioral bias as the last stage of the mediation path but rather consider behavioral bias as a potentially parallel, independently operating construct.

Practical Implications

The findings reveal that efforts to bolster early financial socialization, mediated by family involvement, formal financial education, and peer learning, are likely to amplify a financial educator's and a policy maker's financial impact on financial literacy and investor perception, the two key upstream determinants of sound investment. Investment advisors and financial institutions should focus on interventions that enhance investment skills and understanding of risk-return trade-offs in investments, along with tools that help investors calibrate their perceptions of risk and return (e.g. market transparency initiatives) instead of generic bias-correction programs, this study finds that biases may not be the main path by which socialization affects investment results for this investor population. From the perspective of regulators, the findings could justify maintaining investment education efforts at grassroots and family levels since the socialization-literacy-perception pathway offers a high level of explanatory power regarding the actual investment behaviour.

Limitations and Future Research

There are some limitations to this study which have to be recognized. The first is that the use of purposive sampling is appropriate for identifying those investors actively engaged in investing but may not lend generalizability to the results when extrapolating to the investor population outside of Tamil Nadu. Second, the cross-sectional design limits causal inferences, as financial socialization effects would be better captured with longitudinal studies, which would allow for a better understanding of the effects being studied during their development and evolution over time. Third, a high percentage of respondents (37.2%) did not report their gender, which might reduce the ability to use the data to perform gender-based analysis in future studies, and to consider other ways of defining the categories. Fourth, self-reported data might be prone to social desirability bias, especially these constructs by financial literacy and behavioral bias. Fifth, this study examined Behavioral Bias as a total construct; each of the sub-dimensions of Behavioral Bias, loss aversion, overconfidence, herding, and mental accounting has its own distinct psychological mechanism, which may be more or less closely tied to socialization, literacy, and

perception, respectively. Last but not least, a model could be expanded to include other Indian states or cross-nationally and other mediators or moderators, such as risk taking or financial self-efficacy, to better clarify the relationship between the financial socialization and investment decisions in the future..

REFERENCES

1. Abrahano, M. C. L., Gabatin, R. A. M., Colaljo, J. M., Israel, C. P., Ferwelo, E. C. P., & Olario, N. G. A. (2025). The behavioral biases of investors on investment decisions in Laguna: The mediating role of risk perception. ICBIM 2025. https://doi.org/10.1145/3785171.3785215

2. Adil, M., Singh, Y., & Ansari, M. S. (2022). How financial literacy moderate the association between behaviour biases and investment decision. Asian Journal of Accounting Research, 7(1), 17–30. https://doi.org/10.1108/AJAR-09-2020-0086

3. Agarwal, S., Rao, K., & Nogueira, R. (2025). Financial literacy and behavioral biases among Indian retail investors. Journal of Risk and Financial Management.

4. Ahmed, Z., Rasool, S., Saleem, Q., Khan, M. A., & Kanwal, S. (2022). Mediating role of risk perception between behavioral biases and investor's investment decisions. SAGE Open, 12(2). https://doi.org/10.1177/21582440221097394

5. Ajzen, I. (1991). The theory of planned behaviour. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

6. Almansour, B. Y., Elkrghli, S., & Almansour, A. Y. (2023). Behavioral finance factors and investment decisions: A mediating role of risk perception. Cogent Economics & Finance, 11(2), 2239032. https://doi.org/10.1080/23322039.2023.2239032

7. Barber, B. M., & Odean, T. (2001). The internet and the investor. Journal of Economic Perspectives, 15(1), 41–54. https://doi.org/10.1257/jep.15.1.41

8. Barberis, N., Jin, L. J., & Wang, B. (2021). Prospect theory and stock market anomalies. Journal of Finance, 76(5), 2639–2687. https://doi.org/10.1111/jofi.13061

9. Grable, J. E., & Joo, S. H. (2004). Environmental and biopsychosocial factors associated with financial risk tolerance. Financial Counseling and Planning, 15(1), 73–82.

10. Gudmunson, C. G., & Danes, S. M. (2011). Family financial socialization: Theory and critical review. Journal of Family and Economic Issues, 32(4), 644–667. https://doi.org/10.1007/s10834-011-9275-y

11. Jain, J., Walia, N., Kaur, M., Sood, K., & Kaur, S. (2023). Behavioural biases affecting investors' decision-making process. Management Research Review, 45(8), 1079–1098. https://doi.org/10.1108/MRR-02-2021-0139

12. Jain, J., Walia, N., Singla, H., Singh, S., Sood, K., & Grima, S. (2023). Heuristic biases as mental shortcuts to investment decision-making. Risks, 11(4). https://doi.org/10.3390/risks11040072

13. Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263–292. https://doi.org/10.2307/1914185

14. Kartini, K., & Nahda, K. (2021). Behavioral biases on investment decision: A case study in Indonesia. Journal of Asian Finance, Economics and Business, 8(3), 1231–1240. https://doi.org/10.13106/jafeb.2021.vol8.no3.1231

15. Khan, H. A., & Butt, A. S. (2024). Behavioral biases and investment decisions: The mediating role of risk perception through the lens of prospect theory. Journal of Business Management Research, 3(3), 772–784.

16. Kartini, K., & Nahda, K. (2021). Behavioral biases on investment decision: A case study in Indonesia. Journal of Asian Finance, Economics and Business, 8(3), 1231–1240. https://doi.org/10.13106/jafeb.2021.vol8.no3.1231

17. Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy. Journal of Economic Literature, 52(1), 5–44. https://doi.org/10.1257/jel.52.1.5

18. Malik, L., Ullah, K., & Soomro, M. (2024). The impact of cognitive and emotional biases on individual investor's investment decision. Pakistan Journal of Humanities and Social Sciences, 12(3), 2651–2660. https://doi.org/10.52131/pjhss.2024.v12i3.2471

19. Markowitz, H. (1952). Portfolio selection. Journal of Finance, 7(1), 77–91. https://doi.org/10.2307/2975974

20. Mittal, S. K. (2022). Behavior biases and investment decision: Theoretical and research framework. Qualitative Research in Financial Markets, 14(2), 213–228. https://doi.org/10.1108/QRFM-09-2017-0085

21. Moosa, I. A., & Ramiah, V. (2017). Financial Consequences of Behavioural Biases. Springer. https://doi.org/10.1007/978-3-319-69389-7

22. Nguyen, T. M. L. (2015). The influence of financial risk tolerance and risk perception on individual investment decision-making in a financial advice context. Queensland University of Technology.

23. Nunnally, J. C. (1978). Psychometric Theory (2nd ed.). McGraw-Hill.

24. Pak, O., & Mahmood, M. (2015). Impact of personality on risk tolerance and investment decisions. International Journal of Commerce and Management, 25(4), 370–384. https://doi.org/10.1108/IJCoMA-01-2013-0002

25. Pompian, M. M. (2012). Behavioral Finance and Investor Types. Wiley.

26. Ranaweera, S., &Kawshala, B. (2022). Influence of behavioral biases on investment decision making with moderating role of financial literacy and risk attitude. South Asian Journal of Finance. https://doi.org/10.4038/sajf.v2i1.32

27. Rasool, N., & Ullah, S. (2020). Financial literacy and behavioural biases of individual investors. Journal of Economics, Finance and Administrative Science, 25(50), 261–278. https://doi.org/10.1108/JEFAS-03-2019-0031

28. Saivasan, R., & Lokhande, M. (2022). Influence of risk propensity, behavioural biases and demographic factors on equity investors' risk perception. Asian Journal of Economics and Banking, 6(3), 373–403. https://doi.org/10.1108/AJEB-06-2021-0074

29. Sathya, N., & Gayathiri, R. (2024). Behavioral biases in investment decisions: An extensive literature review. Journal of Informing and Organizational Sciences, 48(1), 117–131. https://doi.org/10.31341/jios.48.1.6

30. Shahzad, F., Jianguo, D., Jan, N., & Rasool, N. (2024). Perceived behavioral factors and investment decisions: A multigroup analysis. Journal of Behavioral Finance.

31. Shefrin, H., & Statman, M. (2011). Behavioral finance in the financial crisis: Market efficiency, Minsky, and Keynes. Working Paper, Santa Clara University.

32. Statman, M. (2019). Behavioral portfolio theory. Journal of Financial and Quantitative Analysis.

33. Suresh, G. (2024). Impact of financial literacy and behavioural biases on investment decision-making. FIIB Business Review, 13(1), 72–86.

34. Van Rooij, M., Lusardi, A., &Alessie, R. (2011). Financial literacy and stock market participation. Journal of Financial Economics, 101(2), 449–472. https://doi.org/10.1016/j.jfineco.2011.03.006

35. Wangzhou, K., Khan, M., Hussain, S., Ishfaq, M., & Farooqi, R. (2021). Effect of regret aversion and information cascade on investment decisions in the real estate sector. Frontiers in Psychology, 12, 736753. https://doi.org/10.3389/fpsyg.2021.736753

36. Waweru, N. M., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making. International Journal of Business and Emerging Markets, 1(1), 24–41. https://doi.org/10.1504/IJBEM.2008.019243

37. Weber, E. U., Blais, A. R., & Betz, N. E. (2002). A domain-specific risk-attitude scale. Journal of Behavioral Decision Making, 15(4), 263–290. https://doi.org/10.1002/bdm.414

38. Zahera, S. A., & Bansal, R. (2018). Do investors exhibit behavioral biases in investment decision making? Qualitative Research in Financial Markets, 10(2), 210–251. https://doi.org/10.1108/QRFM-04-2017-0028

39. Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. Journal of Consumer Research, 37(2), 197–206. https://doi.org/10.1086/651257..

.