



Literature review of Behavioral Finance: Then and Now

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Abstract

Purpose- The paper aims to organize and take a supply from past to present research on Behavioral finance by reviewing available literature to provide quick and easy access for future researchers. The present study also emphasizes the classification of literature and provides a comprehensive view of Behavioral finance, and analyzes the studies' findings and results for review.

Design/methodology/approach- A range of sources were searched to review the existing literature on Behavioral finance, and out of thousands of papers, 44 papers are based on the impact of behavioral biases on individual investors decisions and impact of demographical factors on behavioral biases(research papers and Literature Review)form the sample for the present study. To know the status of research on the topic, these 44 papers are classified based onvarious variables,like behavioral biases, investors' investment decisions and demographical factors, etc.

Findings- This paper classifies the past literature on Behavioral finance and finds that the research work on behavioral financeis still in demand in developed countries, and behavioral finance coverage across emerging economies has increased in recent years. The study revealed many other findings also.

Originality/value- The present paper provides the collection, classification, and comprehensive literature on behavioral finance, which will help academicians, professionals, and future researchers study the current research work and consider future research in the same area.

JEL CLASSIFICATION: G4, G40, G41,

Keywords- Behavioral biases, Demographical factors, Investor's decisions, Market anomalies, and Behavioral finance

I. INTRODUCTION

Theories in traditional finance such as Capital Asset Pricing Model (CAPM), Efficient Market hypothesis (EMH), Arbitrage Pricing Theory (APT), and Black-Scholes Options Pricing Model, among others, were considered as an adequate explanation of the behavior of financial markets. However, in the last few decades, these theories have failed to explain markets' behavior fully. One of the reasons for the inability of these traditional theories to explain finance is faulty assumptions on which they are based. The assumptions of conventional finance and investor rationality and market efficiency are challenged by psychologists (Khaneman&Tversky, 1979) and economists(Thaler, 1985; Shefrin and Statman, 1985; Shiller, 2003; Statman, 1995, 2008, 2014). Moreover, in the last few decades, many anomalies have been identified, questioning the validity of traditional theories in finance. Behavioral finance has emerged as an alternative explanation of these anomalies. Although behavioral finance's validity and acceptability is increasing, there is still disagreement between the scholars of the accepted, traditional finance and the academicians of the upcoming behavioral finance. Discussion on behavioral finance appears in different literature in various forms and viewpoints.

Behavioral finance and economics are based on three main themes.

1. **Heuristics:** People often make decisions based on approximate thumb rules, not strictly rational analyses.
2. **Framing:** The way a problem or decision is presented to the decision-maker will affect their action.
3. **Market inefficiencies:** There are explanations for observed market outcomes contrary to rational expectations and market efficiency. These include mispricing, non-rational decision-making, and return anomalies.

In particular, Richard Thaler has written a long series of papers describing specific market anomalies from a behavioral perspective. Market-wide anomalies cannot generally be explained by individuals suffering from cognitive biases, as individual biases often do not have a large enough effect to change market prices and returns. Also, individual biases could potentially cancel each other out. Cognitive biases have real anomalous effects if social contamination with solid emotional content (collective greed or fear) leads to more widespread phenomena such as herding and groupthink. Behavioral finance and economics rest as much on social psychology as on individual psychology. Behavioral finance is the study of the influence of psychology on financial practitioners' behavior and the subsequent effect on markets. It is a sub-field of behavioral economics, proposes psychology-based theories to explain stock market anomalies. Behavioral finance is of interest because it explains why and how markets might be inefficient. Behavioral finance is the study of investors' psychology while making financial decisions.

It applies scientific research on human and social cognitive and emotional biases to better understand economic decisions and how they affect market prices, returns, and resource allocation. Behavioral finance is primarily concerned with the rationality, or lack thereof, of economic agents. Investors fall prey to their own and sometimes other's mistakes due to the use of emotions in financial decision-making. Behavioral finance tries to understand how people forget fundamentals and make investment decisions based on sentiments and emotions. Behavioral finance should be an integral part of the decision-making process since it directly affects investor decisions and performance.

I.1 Key figures in the field of Behavioral finance. There are many authors in the field of Behavioral finance who have a significant contribution. However, out of that, eminent professors are Robert J. Shiller (Yale University), Professor Richard H. Thaler (the University of Chicago, Graduate School of Business), Professor Hersh Shefrin (Leavey School of Business, Santa Clara University), Andrei Shleifer (Harvard University), Meir Statman (Leavey School of Business, Santa Clara University), Daniel Kahneman (father of behavioral finance, Princeton University), Vernon Smith (Chapman University), Amos Tversky (Died in 1996) and Barber and Odean. All of the above authors are either economists or specialized in finance, but Daniel Kahneman and Amos Tversky both are psychologists.

I.2 Nobel Prize in the field of behavioral finance. In behavioral finance, the noble prize has been awarded three times out of that first was awarded to Daniel Kahneman and Vernon Smith in (2002) for their notable work psychology of judgment and decision making and behavioral economics. Kahneman had done much work with Amos Tversky; one of them developed the Prospect theory, which aims to explain irrational human economic choices and is considered one of behavioral economics seminal works. Six years after Tversky's death, Kahneman received a noble prize in (2002) for his work with Tversky; at that time, Kahneman told New York Times. I feel it is a joint prize. The second noble prize was awarded to Robert J. Shiller and Eugene Fama (2013). They were awarded for their empirical analysis of asset prices. For this decision of noble prize committee, confused many "Both were in the opposite direction according to Shiller markets are often irrational and therefore beatable and at the other corner is Fama the father of the view that market is efficient" (Statman, 2014). Based on Rattner's evidence, the noble prize committee concluded that Warren Buffet and his peers could beat the market time after time, but ordinary investors cannot. It turns out that Fama and Shiller agree more than they disagree. Both accept that markets are not always rational, and both accept that markets are hard to beat by ordinary investors (Statman, 2014).

Third Nobel prize awarded to Richard H. Thaler in (2017) for his contributions to behavioral economics; his "contributions have built a bridge between the economic and psychological analyses of individual decision-making" (Royal Swedish academic of sciences).

I.3 Why Behavioral finance superior to standard finance?

Standard finance depends on the theories which are bounded by assumptions, and these theories are challenged from time to time by the economists Shiller (2003, 2013), Statman (1985, 1999 & 2008), and Thales (1985, 1999 & 2016) etc. Statman (2014) expressively put it that Standard finance is the body of knowledge built on the pillars of the Arbitrage principles of Miller and Modigliani (1950), the portfolio principles of Markowitz (1952), the efficient market hypothesis of Fama (1970), the capital asset pricing theory of Sharpe, Lintner and Black (1964, 1965 & 1972), the option-pricing theory of Black, Scholes, and Merton (1973). The standard finance approach relies on a set of assumptions that oversimplify reality. Standard finance is built on rules about how investors "should" behave rather than on principles describing how they behave (Pompian, 2011). Statman (2017) wisely described in his book "Finance for Normal People" that Standard finance is built on the four foundation blocks: (1) people are rational, (2) markets are efficient, (3) People should design portfolios by the rules of

mean-variance portfolio theory and do so, (4) Expected returns of investments are described by standard asset pricing theory, where differences in expected returns are determined only by differences in risk. But according to behavioral finance. (1) People are normal (2) Markets are not efficient, even if they are difficult to beat (3) People design their portfolios by the rules of behavioral portfolio theory and, (4) Expected returns of investments are described by behavioral asset pricing theory, where differences in expected returns are determined by more than differences in risk.

Much work has been done in behavioral finance in developed countries like US, UK, and European countries. However, behavioral finance is so reaching different dimensions, and this paper aims to evaluate the current status of research in the area of behavioral finance in developed countries and the growing stage of behavioral finance in an emerging economy. Through this paper, we are trying to arrange the systematically past existing literature of Nobel laureate, economist, and eminent authors in the field of behavioral finance. The rest of this paper is structured as follows: next section discusses the rationale of the study, section III describe the objectives of the study, section IV presents the data and methodology adopted for attaining the objectives, section V explains the literature on behavioral finance, and section VI provides some concluding remarks for future research implications.

II. RATIONALE OF THE STUDY.

Many studies have been conducted on behavioral finance. However, the field of behavioral finance is so rich that it still has several dimensions to be studied in different contexts. Studies on Behavioral biases and their impact have been investigated in developed as well as developing countries. Some studies like (Sahi and Arora, 2012; Kumar and Goyal, 2015; Prosad, Kapoor and Sengupta, 2015; Kourtidis, Service and Chatzoglou, 2015; Feldman and Lepori, 2016; Zahera and Bansal, 2018). However, most of the research studies are concentrated in the developed economies like U.S (Khaneman and Tversky, 1979; Thaler, 1985; 1999&2016; Gervais and Odean, 2001; Shiller, 2003 & 2013; DeBondt et al., 2010; Alghalith, Floros and Dukharan, 2012; Daniel and Hirshleifer, 2015; Feldman and Lepori, 2016) and U.K. (Bruce and Southampton, 1994; Sewell, 2010; DeBondt, 2010; Duxbury, 2015). The developing economies like India and others are still not fully tapped, where the research is still at a nascent stage. Besides, most of the studies in India and other developing economies are survey-based. Although there is a need to understand investors' psyche through surveys, it is also essential to understand the influence of behavioral biases on markets.

The present study attempts to contribute to the body of knowledge in behavioral finance by understanding behavioral finance based on the literature review of 44 articles. These articles are also based on behavioral finance-micro (through a survey) and behavioral-finance-macro (through secondary data analysis). The findings of the study will be specifically beneficial for portfolio managers, investment advisors, and investors. By understanding investors' decision-making process and behavioral biases, Portfolio managers and investment advisors will better serve their clientele. Similarly, the knowledge of the impact of behavioral biases on decisions and performance will help investors make better investment decisions.

III. OBJECTIVE OF THE STUDY

This paper's primary objective is to study behavioral finance's present status and organize the available literature by reviewing the past and existing published research work in the same theme in a well-ordered manner to provide quick and easy access to future researchers from the same field.

The effort represents an attempt to understand behavioral finance research better. Another objective of the present study is to classify the preceding literature and provide a comprehensive bibliography on behavioral finance and analyze the studies' findings and results for review, which will help researchers and practitioners alike. Furthermore, we have also tried to comment on the present status of the research on the same subject matter and suggest future research prospects on the same topic.

IV. DATA AND METHODOLOGY

A. Data

This paper is based on the review of 44 articles which are research papers and review papers on behavioral finance. These are published in Scopus indexed journals in various developed and developing countries around the world.

B. Methodology

This paper will present a review of behavioral finance research published in A*, A, B, and C category journals, ranked by the Australian business deans council and Scopus indexed. Books are based on behavioral finance and websites. It is an excellent contribution to the practitioner's publications, working papers, and papers presented in the conference and books. So not together from the research papers from a refereed or Scopus indexed journals. This study also includes a research paper presented in conferences at the international level which are related to the emerging economy (India), published or unpublished working papers and masters or doctoral thesis based on behavioral finance, books of Pompian (2006), Statman (2017) and Shleifer (2000) as they provide beneficial information to the researchers or practitioners for collecting information and publicize the new findings. However, the refereed academic research journals represent top category-level journals in this paper. Literature for this paper was searched based on the keyword descriptor "behavioral finance biases" on Scopus.com. Database selected based on the study of behavioral finance from developed countries to developing countries or India. Data also searched for the keyword in the titles, abstracts, keywords list, and full text. This way produced thousands of research papers but selected only those relevant for behavioral finance study. Based on the relevance and consideration of Nobel laureate, economist, and eminent professors, we finally obtained 44 research papers related to behavioral finance. We found thousands of research papers on behavioral finance but reduce to forty-four because most of the papers were irrelevant or out of the list of suitable journals, based on ABDC ranking.

Therefore, this final sample set of 44 research papers represents the selected databases' actual behavioral finance literature population. The full texts of these 44 papers were carefully studied, and based on review, the entire literature on behavioral finance was classified using a systematic review matrix. Based on the literature, we found that the study's objective can be achieved by classifying whole behavioral finance literature data based on this literature review matrix. As shown in the review matrix, the entire behavioral finance literature can be classified into the following categories:

- . Year-wise classification of study.
- . Countries wise classification of the studies.
- . Type of study.
- . Econometric/methodology tools used for data analysis.
- . Findings/Conclusions of the study.

S.No	Author(s), Year and Countries of Study	Title of the Study	Journal	Primary or Secondary Study	Methodology/tools adopted for data analysis	Findings and Conclusions
1	Thaler (1985), USA	"Mental Accounting and Consumer Choice".	Marketing Science	Secondary	Theoretical concept	This paper has developed new concepts in three distinct areas: coding, gains, and losses, evaluating purchases, and budgetary rules.
2	Shefrin and Statman (1985), USA	"The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence".	The journal of finance	Secondary	t-statistic	"To sell winners too early and hold losers too long." This paper includes other elements, namely mental accounting, regret aversion, self-control, and tax considerations.
3	Trueman (1988), USA	"A theory of noise trading in security market."	The journal of finance	Secondary	Event study	Why would any investors rationally want to engage in noise trading?
4	Thaler (1999), USA	"The end of behavioral finance."	Financial analysts journal	Secondary	Theoretical concept	He predicted that behavioral finance would be correctly viewed as a redundant phrase in the not-too-distant future.
5	Barber and Odean (2001), USA	"Boys Will be Boys: Gender, Overconfidence, and Common Stock Investment."	The Quarterly Journal of Economics	Secondary	Monthly time series regression	The document that men trade 45 percent more than Women. Trading reduces men's net returns by 2.65 percentage points a year instead of 1.72 percentage points for women.
6	Gervais and Odean (2001), USA	"Learning to be overconfident."	The Review of financial studies	Secondary	Multiperiod market model	Their expected overconfidence increases over his first several trading periods and then declines. Overconfidence doesn't make traders wealthy, but the process of becoming wealthy can make traders overconfident.
7	Shiller (2003), USA	"From efficient markets theory to behavioral finance."	The journal of economic perspectives	Secondary	Theoretical Concept	The Paper of Eugene Fama, based on the literature review of behavioral finance (1998), found fault for two primary reasons. The first was that anomalies that were discovered tended to appear to be as often under reaction by investors as an overreaction. The second was that the anomalies tended to disappear, either as time passed or as the studies' methodology improved.
8	Dhar and Zhu (2006), USA	"Up close and personal: investor sophistication and the disposition effect".	Management Science	Secondary	Descriptive Statistic and Regression	The differences in trading frequency and demographic characteristics that proxy for knowledge about investment products are responsible for the disposition effect's variation. Individuals who are low income and work in

						nonprofessional occupations show the highest disposition effect among all investors
9	Sewell (2010), England	“Behavioural Finance.”	University of Cambridge	Secondary	Literature Review	Behavioral finance not only explain about the investors it also explains why and how markets might be inefficient.
10	Hoppe and Kusterer(2010), Germany	“Behavioral biases and cognitive reflection”.	Economics letters	Primary	cognitive reflection test	Their results suggest that the CRT has solid predictive power only for biases that may arise in problems for which there is a correct solution and where analytical skills help derive this solution.
11	DeBondt et al. (2010), UK	“What can behavioral financeteach us about finance?”.	Qualitative Research in Financial Markets	Secondary	Table discussion	The paper highlights numerous benefits that behavioral finance research can contribute to the financial industry, but at the same time, there is an evident discrepancy between the academic and the professional world when it comes to utilizing behavioral finance research.
12	Bhandari and Deaves (2010), Canada	“The Demographics of Overconfidence”	Journal of Behavioral Finance	Primary	Standard deviation	The highly educated males do not have a higher level of knowledge, and they are more subject to overconfidence.
13	Sahi and Arora (2012), India	“Individual investor biases: A segmentation analysis”	Qualitative research in financial markets	Primary	Cluster analysis	Four main segments of individual investor’s biases, which have been termed as the Novice Learner. The Competent Confirmer, the Cautious Anticipator, and the Efficient Planner. This typology has predictive validity about financial satisfaction and perceived financial market knowledge.
14	Alghalith, Floros, and Dukharan (2012), USA	“Testing dominant theories and assumptions in Behavioral Finance”.	The Journal of risk finance	Secondary	An alternative model to test prospect theory is introduced	Empirical results show that: investors are risk-seeking; optimal portfolio not depend on preferences, and there is no positive impact of preferences on wealth/return.
15	Sahi (2013), India	“Demographic and socio-economic determinants of financial satisfaction A study of SEC- A segment of Individual investors in India.”	International Journal of Social Economics	Primary	One-way ANOVA, t-test, and Correlation	Empirical results show that: investors are risk-seeking, the optimal portfolio does not depend on preferences, and there is no positive impact of preferences on wealth/return.
16	Bashir et al. (2013), Pakistan	“Impact of Behavioral Biases on Investors Decision Making: Male Vs. Female”.	Journal of business and management	Primary	Correlation and chi-square	This study reports a weak negative correlation between overconfidence bias and other behavioral biases. This study concludes there is no significant difference between male and female

						Decision-making regarding overconfidence bias.
17	Spyrou (2013), Greece	“Herding in financial markets: a review of the literature.”	Review of Behavioral Finance	Secondary	LSV, CSSD, ECSAD	Based on more than two decades of empirical and theoretical research has provided significant insight into investor herding behavior.
18	Statman (2014), USA	“Behavioral finance: finance with normal people.”	Borsa Istanbul Review	Secondary	Theoretical Concept	Standard finance is limited to the portfolios theory, asset pricing model, and efficient market hypothesis. However, Behavioral finance expands the finance domain beyond it.
19	Lodhi (2014), Pakistan	“Factors Influencing Individual Investor Behavior: An Empirical Study of City Karachi.”	Journal of business and management	Primary	Correlation and Regression	His finding shows that financial literacy and accounting information helps investors lower information asymmetry and allow investors to invest in risky instruments. However, as age and experience increase, preference changes to less risky investments; it does not mean investors do not prefer to invest in shares, but they will pay a dividend returns rather than capital gain.
20	Kumar and Goyal (2015), India	“Behavioral Biases in Investment decision making-A Systematic Literature Review.”	Qualitative Research in Financial Markets	Secondary	Literature Review	The dominance of secondary data-based empirical research, the lack of empirical research on individuals who exhibit herd behavior, the focus on equity in home bias, and indecisive empirical findings on herding bias
21	Prosad, Kapoor and Sengupta (2015), India	“Behavioral biases of Indian investors: A survey of Delhi-NCR region.”	Qualitative Research in Financial Market	Secondary	Chi-square test and t-test	It is observed that behavioral biases are dependent on investors’ demographics as well as their trading sophistication. The highest influencing factors amongst these variables are age, profession, and trading frequency. Another interesting observation is that respondents with the highest trading experience (more than seven years) and highest trading frequency (intraday traders) are prone to all the biases.
22	kourtidis, sevic and chatzoglou (2015), Greece	“Overconfidence and stock returns: A behavioral perspective.”	International Journal of Behavioral Accounting and Finance	Primary	Cronbach alpha, total variance extracted, and KMO (Kaiser-Meyer-Olkin) and SEM	An investor with a high level of overconfidence seems to perform better than an investor with low confidence. Overconfidence bias is positively related to stock performance and stock frequency, and stock volume.
23	Duxbury (2015), UK	“Behavioral finance: insights from experiments II: biases, moods	Review of Behavioral Finance	Secondary	Literature Review	In this paper, he examined the contribution of experimental studies to his understanding of heuristics and biases at the heart of behavioral

		and emotions”.				models in finance (e.g., under/overreaction, overconfidence) and observed investor behavior (e.g., the impact of primary outcomes), along with the influence of moods and emotions on financial behavior.
24	Prosad, Kapoor, and Sengupta (2015), India	“Exploring optimism and pessimism in the Indian equity market.”	Review of Behavioral Finance	Secondary	Time series regression	The study's conclusion shows that the Indian equity market has been predominantly pessimistic from the period 2006 to 2011. The interaction of this bias with market indicators also unveils some exciting insights. Pessimism bias is significantly associated with high past volatility and vice versa in the Indian equity market. High risk and high return relation for rational investors tend to be harmful to irrational investors. The impact of investors' irrationalities on asset valuation has also been accounted for by Brown and Cliff (2005).
25	Mishra and Metilda (2015), India	“A study on the impact of investment experience, gender, and level of education on overconfidence and self-attribution bias.”	IIMB management review	Primary	ANOVA, Correlation, and regression	Findings of the study show that(1) the level of overconfidence increases with investor's experience and within increase in the level of education;(2) self-attribution bias increases with the level of education;(3) men are more overconfident than women; (4) there is an association between overconfidence bias and self-attribution bias, and self-attribution is a significant predictor of overconfidence bias. This study confirms that investor experience, level of education, and gender impact investor bias. This study contributes to the existing literature on bias, especially the influence of demographic variables on overconfidence and self-attribution bias.
26	Daniel and Hirshleifer (2015), USA	“Overconfident Investors, Predictable Returns, and Excessive Trading.”	Journal of economic perspectives	Secondary	Basic One-Signal Model Timeline Separate Public and Private Signals– Timeline Dynamic Overconfidence Model– Timeline	Mistake in valuation and belief in it shows overconfidence, which means having mistaken valuations and believing in them too firmly; experts and professionals, including those in the finance profession, are overconfident. Overconfidence promises to help integrate other elements of behavioral finance theory. Overconfidence also explains that without critical information, investors would nevertheless trade

						aggressively.
27	Rzeszutek, Szyszka and Czerwonka (2015), Poland	“Investors’ Expertise, Personality Traits, and Susceptibility to Behavioral Biases in the Decision-Making Process.”	Contemporary economics	Primary	Chi-square, mean, std deviation, logistic regression analyses	Age and other demographics (gender, education) were not statistically significant variables in this model; There was, however, a significant relationship between venture sameness and susceptibility to the certainty effect ($p < .05$). There was a significant relationship between venture sameness ($p < .05$) and susceptibility to the sunk cost fallacy interaction between the group, and venture sameness was not significant.
28	Feldman and Lepori (2016), USA	“Asset price formation and behavioral biases.”	Review of Behavioral Finance	Secondary	Three regimes	Results suggest that the type of irrationality affects return properties in different ways. Irrational investors, who are thoughtful in their irrationality, only examining their performance and deficiencies, do not have much of a systematic effect on stock returns when combined with rational investors. However, irrational investors that aggregate information in an irrational manner have a systematic effect when combined with rational investors.
29	Kumar and Goyal (2016), India	“Evidence on Rationality and Behavioural Biases in Investment Decision Making”.	Qualitative Research in Financial Markets	Primary	t-test, ANOVA, LSD, and SEM	At the time of investment, investors follow a rational decision-making process. It further explores that gender and income have a significant difference concerning the rational decision-making process. Information search has a positive relation with overconfidence bias. Overconfidence is positively and significantly associated with the disposition effect— additionally, a significant difference between overconfidence bias and individual investors' income. The conclusion of this study shows that age is significantly indifferent concerning the rational decision-making process.
30	Prosad et al (2017), India	“Overconfidence and Disposition Effect in Indian Equity Market: An Empirical Evidence”.	Global business review	Secondary	Bivariate and trivariate vector autoregression (VAR)	There are three findings based on this study. First is the presence of the biases, overconfidence, and disposition effect is detected in the Indian equity market; for their sample period, second, the impact of these two biases can be distinctly segregated for 20 companies. Among the companies in the index and third, the overconfidence bias is predominant;

						They also found that other developing and Indian markets are not so efficient concerning overconfidence and the disposition effect.
31	Zahara and Bansal (2018), India	“Do investors exhibit behavioral biases in investment decision making? A systematic review”.	Qualitative Research in Financial Markets	Secondary	Literature Review	The study is more inclined toward the study of individual and institutional investors and financial advisors’ investors but the behavior of intermediaries through which some invest.
32	Kansal and Singh (2018), India	“Determinants of overconfidence bias in Indian stock market.”	Qualitative Research in Financial Markets	Secondary	t-test, ANOVA, standard ordinary least square regression	As the experience in trading increases, the age also increases. And investors seem to disappear from the market in the late 50s because of their reduced risk appetite.
33	Chaffai and Medhioub (2018), Tunisia	“Herding behavior in Islamic GCC stock market: a daily analysis.”	International Journal of Islamic and Middle Eastern Finance and Management	Secondary	(GARCH) and quantile regression analysis	Find evidence of herding behavior during rising markets only for GCC markets. Stock returns perform more similarly when the market is down in the Islamic GCC stock market.
34	Shah, Ahmad and Mahmood (2018), Pakistan	“Heuristic biases in investment decision-making and perceived market efficiency: A survey at the Pakistan stock exchange”.	Qualitative Research in Financial Markets	Primary	Correlation, regression	Their finding heuristic biases (overconfidence, representativeness, availability, and anchoring) harm investment decisions made by individual investors actively trading on the PSX.
35	Baker et al. (2018), India	“How financial literacy and demographic variables relate to behavioral biases”	Managerial Finance	Primary	One-way ANOVA. Factor analysis and multiple regression analysis.	The results also show that financial literacy negatively correlates with the disposition effect and herding bias, positive relation with mental accounting bias, but no significant relation with overconfidence and emotional biases. Age, occupation, and investment experience are the most important demographic variables related to the behavioral biases of individual investors in the sample. Regarding gender, males are more overconfident than are females about their knowledge of the stock market.
36	Metawa et al. (2018), Egypt	“Impact of behavioral factors on investors’ financial decisions: case of the Egyptian stock market”.	International Journal of Islamic and Middle Eastern Finance and Management	Primary	Partial multiple regression	Investment decisions are significantly affected by Investor sentiment, overreaction, and underreaction, overconfidence, and herd behavior. Also, age, gender, and education level have significant positive effects on investors' investment decisions. There is nothing role of experience in investment decisions, but as investors gain experience, they overlook emotional factors.

37	Rasheed et al (2018), Pakistan	“Factors influencing investor’s decision making in Pakistan: moderating the role of locus of control”.	Review of Behavioral Finance	Primary	SEM and Correlation	Investors mostly prefer to those stocks which have more information to them instead of doing a complete analysis of all the available and relevant information.
38	Raut, Das, and Kumar (2018), India	“Extending the Theory of Planned behavior: Impact of Past behavioral Biases on the Investment Decision of Indian Investors”.	Asian Journal of Business and Accounting	Primary	SEM	This study indicates that attitude toward behavior, subjective norms, and perceived behavioral control are significantly associated with behavioral intentions.
39	Baker, Kumar and Goyal (2018), India	“Personality traits and investor sentiment.”	Review of Behavioral Finance	Primary	SEM	According to the results, having an extrovert personality trait positively correlates with all the behavioral biases studied. Neuroticism trait is emotionally unstable and is likely to be depressed, anxious, and have higher risk tolerance. Openness trait has a statistically significant link with only mental accounting. Agreeableness is unrelated to overconfidence, the disposition effect, and herding bias. The conscientious trait has a statistically significant relation with overconfidence bias but not with herding bias.
40	Mushinada and Veluri(2019), India	“Elucidating investors rationality and behavioural biases in Indian stock market.”	Review of Behavioral Finance	Primary	SEM	A statistically significant positive covariance between self-attribution and overconfidence involves an increase/decrease in self-attribution, increasing/decreasing in overconfidence, and vice versa. It also observed that an investor's personal or demographic features such as gender, age, occupation, annual income, and trading experience impact behavioral biases.
41	Sharma and Kumar (2019), India	“A review paper on behavioral finance: a study of emerging trends”.	Qualitative Research in Financial Markets	Secondary	Literature Review	The literature review from both points of view has helped understand the market efficiency issue and the changing dynamics of the asset pricing approach. This is achieved by highlighting the gaps in market efficiency and suggesting how these gaps can be bridged with a superior approach such as behavioral finance. By further discussing emerging trends in

						behavioral finance, the paper also points out gaps and how these can be abridged, for behavioral finance to be accepted as a mainstream alternative approach to EMH.
42	Mittal (2019), India	“Behavior biases and investment decision: theoretical and research framework”.	Qualitative Research in Financial Markets	Secondary	Literature Review	Based on the literature, behavioral finance is an emerging area in finance. This indicates the limited valuable research in developing the economy in this area's behavior biases and their impact on individual investors' investment decisions in India.
43	Sabir, Mohammad and Shahar (2019), Pakistan	“The role of overconfidence and past investment experience in herding behavior with a moderating effect of financial literacy: evidence from Pakistan stock exchange.”	Asian Economic and Financial Review	Primary	PLS and SEM	This paper's findings show a positive relationship between the overconfident and herding behavior of stock market investors. Herd behavior was positively affected due to the past investment experience of investors. Knowledge of finance has a moderating effect on the relationship between overconfidence and stock market investors' herding behavior. financial literacy has a moderating role in the relationship of past investment experience and investors' herding behavior
44	Zahera and Bansal (2019), India	“A study of prominence for disposition effect: a systematic review.”	Qualitative Research in Financial Markets	Secondary	Literature Review	Individual investors, institutional investors, and mutual funds behave differently in response to the disposition effect. Mutual funds are less affected by the disposition effect than other categories of investors. Demographic variables like age, gender and experience, and investor sophistication also impact the disposition effect's occurrence. The great majority of the study was based on the developed markets, especially those of the USA and Europe, and a little concern was given to the less developed nations.

Many studies have been conducted on behavioral finance. However, the field of behavioral finance is so rich that it still has various dimensions to be explored in different contexts. Behavioral biases and their impact have been investigated in developed as well as developing countries. However, most of the research studies are concentrated in the developed economies like the U.S, U.K, and Europe. The developing economies like India are still not fully tapped where the research is still growing. Most of the studies in India are also survey-based. Although there is a need to understand investors' psyche through surveys, it is also essential to understand the influence of behavioral biases on markets as a whole. The present study attempts to contribute to the body of knowledge in behavioral finance by understanding behavioral-finance-macro (through analysis of secondary data or Literature review). This study will be specifically beneficial for portfolio managers, investment advisors, and investors. By understanding investors' decision-making process and behavioral biases, Portfolio managers and investment advisors will be able to serve their clientele better.

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