Relationship between demographic variables, behavioral biases, and risk-tolerance of Individual investors: A literature review

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Abstract

Purpose- This paper intends to study behavioral biases' susceptibility due to demographic factors (gender, income, age, and education) through a review of available literature. As per the authors' understanding based on the literature review, behavioral biases are susceptible due to demographic factors, and each bias is susceptible due to the different demographic factors. Overconfidence comes out to be the highest susceptible bias. This paper also explains conventional finance and behavioral finance theories, which have evolved over the period. It includes the difference in the behavior of rational investors and irrational investors.

Design/methodology/approach- A range of sources were explored to review the existing literature on behavioral biases and their association with demographic factors. Besides that, literature available on conventional finance and behavioral finance has also been evaluated. Out of multiple existing papers, only relevant papers form the sample for the present study. These relevant papers are classified on behalf of various variables (Age, income, gender, education, and behavioral biases) to know the current status of research on the stated topic.

Findings- This paper classifies the existing literature on demographic factors and behavioral biases and finds that the same area's research output is at a nascent stage. It is recognized that gender, income, age, and education (demographic factors) influence behavioral biases. Overconfidence is the highest susceptible bias among all biases caused by demographic factors.

Research Limitations/Implications- The study has not focused on all demographic factors; it focuses on gender, age, income, education, and behavioral biases using secondary data. It is challenging to cover all biases in a single study through primary data, but authors have tried their best to cover most of the secondary data's biases.

Originality/value- This paper arranges the collection, codification, and comprehensive bibliography and influences demographic factors on behavioral biases. This will be helpful for investors, academicians, Mutual fund advisors, practitioners, and future researchers.

JEL CLASSIFICATION: G4, G40, G41

Keywords- Behavioral finance, Behavioral biases, Demographic factors, Overconfidence, Susceptibility.

I.   INTRODUCTION

Behavioral finance was identified as an area of study around four decades ago. Kahneman and Tversky have written a series of articles to describe behavioral finance in the framework of Psychology. In 1974 they worked on "Judgment under uncertainty: Heuristic and biases." In this article, they defined the main three heuristics that are used for the creation of "judgment under uncertainty": (1) representativeness, (2) availability of instances or scenarios, and (3) adjustment from an anchor. In 1979 they developed the Prospect theory, which is the extension of their work. Now prospect theory is working like a milestone. The work of Kahneman and Tversky is the milestone and backbone in the area of behavioral finance. Conventional finance is old finance, bounded by assumptions and treat the investors as rational. Rational investors prefer "high returns at a given level of risk or low risk at a given level of return" (Shah et al., 2018). In reality, behavioral finance is the class of psychological factors, and investors are irrational (Shiller, 2003). Statman, Fisher, and Anginer (2008) outlined "a behavioral asset-pricing model in which expected returns are high when objective risk is high and also when subjective risk is high. They found that the returns of admired stocks, those highly rated by the Fortune respondents, were lower than the returns of spurned stocks, those rated low". Statman compared conventional finance with behavioral finance and gave a unique argument stating. Investors are normal, like you and me (Statman, 2014). "Rational people populate standard finance" (Statman, 1999, 2005 & 2008), in support of Arbitrage principles of (Miller and Modigliani, 1950), the portfolio principles of (Markowitz, 1952), the EMH of (Fama, 1970), the CAPM of (Treynor, 1962; William, 1964; Lintner, 1965; Mossin, 1966). "Theory of Rational Option Pricing" (Merton, 1973). whereas "Behavioral finance is populated by normal people"(Statman, 2014). Statman (1999) states that "People are rational in standard finance; they are normal in behavioral finance. Rational people care about functional characteristics but not value-expressive ones, are never confused by cognitive errors, have perfect self-control, are always averse to risk, and are never averse to regret. Normal people do not obediently follow that pattern". Statman (2005) "Investors were normal before they were described as

rational in the early 1960s, and they remain normal today. Normal investors are affected by cognitive biases and emotions, whereas rational investors are not". In disparity, normal people grieved by cognitive biases are divided into two dimensions: first is belief perseverance (Conservatism, Hindsight, Illusion of Control and Representativeness and emotions biases), and second is Processing errors (Mental accounting, anchoring & adjustment, availability and framing biases) and emotional biases (Endowment, Illusion of knowledge, Loss aversion, Overconfidence, Status quo, Self-attribution, Self-control, and Regret aversion). Pompian (2011), in his book, defined the investor's behavior in support of twenty different biases. Investors are rationally based on the financial position, past performance, prospectuses, security valuation, risk-return trading, price changes, and market information, but they are irrational based on overconfidence, self-attribution, hindsight, illusion of control, self-control, representativeness, availability, anchoring, gamblers fallacy, mental accounting, loss aversion, regret aversion, framing, herding, optimistic, disposition effect, endowment effect, and status quo biases. Rational people continuously focus on wealth less and are never perturbed by the form of wealth. In dissimilarity, normal people, concerned by emotions and cognitive biases, are frequently disordered by the procedure of wealth, and while they too always prefer more to less, but not always they want more wealth. Sometimes normal people are willing to sacrifice wealth for more status or more social responsibility. Normal people trade excessively, buy stock without fundamental knowledge, buy those bought, bought by their friends on behalf of past performance, and sell winning stock quickly while retaining loss-making stocks. These are the systematic errors; using a behavioral heuristic, investors can simplify their investment but not maximize utility (Kahneman & Tversky, 1979). Aims of rational and irrational investors are the same expected return, relative return, and satisfactions. Authors of behavioral finance say that investors are not rational, and as explained by economists, their psychological feelings alter their decisions. According to scholars of behavioral finance, every investor is influenced by some behavioral biases.

1.1 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. In this paper, Studies on rational investors and irrational investors in the contexts of conventional and behavioral finance, anomalies, behavioral biases, and their impact and susceptibility of behavioral biases due to demographic factors have been investigated in developed and developing economies. Some studies in emerging economies like India and others are (Bashir et al., 2013; Mishra and Metilda, 2015; Kumar and Goyal, 2015; Prosad, Kapoor and Sengupta, 2015; Ali Shah, Ahmad and Mahmood, 2018; Baker et al., 2018; Zahera and Bansal, 2018; 2019). However, to date, most of the research studies are concentrated in the developed economies like the US (Thaler, 1985; 1999 & 2016; Bajtelsmit and Bernasek, 1996; Jinakoplos and Bernasek, 1998; Statman, 1999; 2005; 2008; 2014 & 2017; Schubert et al., 1999; Barber and Odean, 2001; Graham et al., 2002; Shiller, 2003; Dhar and Zhu, 2006; Bogan, Just, and Dev, 2013) and UK and others developed economies (Bruce and Southampton, 1994; Bhandari and Deaves, 2010; Hardies, Breesch, and Branson, 2011; Fernandes et al., 2012; Metawa et al., 2019; Tekçe, Yılmaz, and Bildik, 2015). The developing economies like India and others have still not fully tapped into the field of behavioral finance, where the research is still at a nascent stage. The present study attempts to contribute to the body of knowledge in behavioral finance by understanding behavioral-finance based on the literature review, not only in the Indian context but also in other countries. The conclusions of this study will be specifically beneficial for portfolio managers, investment advisors, and investors. By understanding investors' behavioral biases and decision-making processes, Portfolio managers and advisors of investment firms will better serve their clientele. Similarly, the knowledge of behavioral biases' susceptibility due to demographic factors on decisions and performance will help the investors make better investment decisions.

1.2 Research Problems.

- The authors desire to point out the susceptibility of different behavioral biases caused by demographic factors (Gender, Income, Age, and financial literacy/Level of education) that the investment advisors should consider while they serve their clientele.
- Explore different studies based on behavioral finance related to the US, UK, and other developed economies and India and other developing economies and find important differences.
- The authors have intended to highlight the crucial issues that are forming a base for the expansion of these demographic factors.
- Authors will inspect those papers which are based on behavioral biases and demographic factors and rational and irrational investors in the light of traditional and behavioral finance.

- To resolve the ways that may dispose of behavioral biases' susceptibility in the text of demographic factors.
- To suggest future research on secondary data and compare the US, Europe, India, and other developing economies' capital markets before and after the COVID-19.

II.   LITERATURE REVIEW

The meadow of behavioral finance is old but is dynamic as it covers many dimensions consisting of psychology, economics, finance, and sociology, etc. A lot of emerging literature is available on it, Including behavioral-finance-micro (through a survey) and behavioral-finance-macro (through analysis of secondary data). This section discusses some eminent researchers' work in the tex of both approaches and is divided into four parts. These are gender and behavioral biases, Income and behavioral biases, age, behavioral biases, financial literacy/ Level of education, and behavioral biases.

2.1 Gender and Behavioral Biases

Various kinds of literature are available on behavioral biases and gender, which are related to both developed economies and developing economies. In developed economies, most of the study is based on secondary data, but it is based on primary data in developing economies. In support of the literature review, the authors can analyze the susceptibility of behavioral biases caused by gender. Behavioral biases (Overconfidence, risk-averse, risk lovers, Disposition effect, and Familiarity bias) susceptibility caused by demographic factors and gender have been presented. Males are greater risk-takers in their betting decisions, whereas females are low risk-takers in betting decisions (Bruce and Johnson, 1994). Barber and Odean (2001) have written an article "Boys will be boys" and defined the susceptibility of overconfidence, due to the gender factor, this paper is based on microfinance data, and they have taken the data of 35 thousand households from a large discount brokerage. Duration of data from February 1991 to January 1997 and test two hypotheses and concluded that besides more trading by men than women, their returns are reduced. Bhandari and Deaves (2010) defined based on the standard deviation of 2000 pension plan members of contribution who are highly educated males, who are in retirement, received investment advice, and who have experience of investing themselves overconfident. Hardies, Breesch, and Branson (2011) defined that males are overconfident, based on primary data of 597 respondents by using the mean and standard deviation and within a population of auditors they do not found the evidence for a gender difference in overconfidence and document beside simplifying results from non-audit populations to auditors. Bashir et al. (2013) investigated the consequence of behavioral biases on investment decisions built by employees and students; they collected the data through a questionnaire to get their objectives. correlation method was used to evaluate the association among five biases (Overconfidence bias, the illusion of control bias, confirmation bias, familiarity bias, and loss aversion bias) and found that overconfidence bias has not a stronger correlation with other behavioral biases. And to conclude, there is an important difference between males and females' responses about the overconfidence bias for this chi-square technique was used, and it was found that there is no significant difference available. Mishra and Metilda (2015) based on primary data of 309 respondent, used the ANOVA technique to analyze the significant disparity between gender, investors experience, level of education (independent variables) with the dependent variable overconfidence and self-attribution bias and found positive relation. i.e., the level of overconfidence increases with the increase of investors' experience and education level, self-attribution bias has a positive relationship with the level of education, and men are more overconfident than women. To find the degree of association between two variables, correlation and regression techniques were used, and it was found that the self-attribution bias is a significant forecaster of overconfidence bias. Prosad, Kapoor, and Sengupta (2015) examined the four behavioral biases by using the questionnaire (overconfidence, herd behavior, disposition effect, and excessive optimism or pessimism) among Indian stockholders, and behavioral biases altered by demographics and investors sophistication. For this paper, primary data of 401 respondents was used, and chi-square test and t-test techniques were used. It is perceived that behavioral biases are susceptible to demographics factors and their trading occupation and trading occurrence. Men are more overconfident as compared to women based on knowledge of the Indian stock market. However, old age investors are prone to herding. Among young or middle-age investors, disposition effect bias trends to rise their trading based on their past success. Based on the ranking of four biases, overconfidence is the most significant bias in the Indian equity market. Metawa et al. (2018) investigated the association with their investment choice through behavioral factors and demographic factors in the Egyptian stock market. For this study, they collected the data by using the questionnaire of 384 respondents, and to find the result; they used the partial multiple regression. Final results were found

that all behavioral biases significantly affect investment decisions, and except experience, all demographic factors have a significantly constructive result on investment decisions, but there is no important role in investment decisions due to experience. Baker et al. (2018) state that individual investors don't act rationally and concluded that males are more aware of the stock market, and they are also more overconfident than female investors. Bajtelsmit and Bernasek (1996) described that men invest more percentage of their pension wealth in risky assets, and they hold more risky assets than single men or married couples; single women are more risk-averse. Jianakoplos and Bernasek (1998) examined that single women are more risk-averse, and they hold a smaller proportion of risky assets than single men and a married couple. And women are more risk-averse in financial decision making than men. Graham et al. (2002) described that women are more comprehensive information boners, and therefore trade less generally than their male counterparts.

2.2 Income and Behavioral biases

In this section, the authors have presented behavioral biases' susceptibility (Disposition effect, Overconfidence, and Familiarity) due to the demographic factor; Income. Dhar and zhu (2006) described the low-income group investors caused to disposition effect; their data period was 1991 to 1996. Data have been taken from a large discount brokerage firm of more than 50000 individual investors. For the result, they used the descriptive statistics and regression method and found out that individual investors who work in non-professional occupations and have low income show the highest disposition effect among all investors. Kumar and Goyal (2016) wrote this paper based on 117 papers; this paper is based on a systematic literature review and concluded that high-income group Investors are less confident than the investors belonging to the low-income group. Tekçe, Yılmaz, and Bildik (2015) analyzed based on techniques used by eminent authors in their papers, like disposition effect ratio, previous ownership ratio, portfolio percentage change ratio, and regression and based on secondary data they concluded that male investors show disposition effect less than female investors and are flatter to familiarity bias. In contrast, age and wealth decrease the familiarity bias, disposition effect has positively increased with age and negative relation with income.

2.3 Age and Behavioral biases

We assert that the aged investors have more trading experience, are more efficient in handling the risk than younger ones, and are more concerned about the market's ethics and concerned about their repute as being old players. Kumar and Goyal (2016) found more cases of disposition effect among young and middle-age investors than aged investors. Tekçe, Yılmaz, and Bildik (2015) investigated based on techniques used by eminent authors in their papers; like disposition effect ratio, previous ownership ratio, portfolio percentage change ratio, and regression and based on secondary data, they conclude that age and wealth decrease the familiarity bias, disposition effect has a significantly positive relation with age.

2.4 Financial Literacy/ Level of Education and Behavioral biases

Baker et al. (2018), using the primary data collected through a questionnaire of 516 respondents, examined these data through factor analysis, multiple regression analysis, and one way ANOVA and established that financial literacy has a negative relation with the disposition effect and herding bias, positive association with mental accounting bias, no significant association with overconfidence and emotional biases. Mishra and Metilda (2015) found a positive relation, i.e., the level of overconfidence raised with increased investors' experience and education level, self-attribution bias, and the level of education.

III.   RESEARCH GAPS BASED ON LITERATURE.

The susceptibility of behavioral biases caused by demographic factors is different for different demographic factors. Gender, age, income, and financial literature/level of education act distinctive in reaction to the behavioral biases. It is not so easy to know the distinct demographic factors that impact distinct biases. Male are more overconfident, a high-risk taker or loss averse, less prone to disposition effect than women, etc. Similarly, when we analyzed the studies of different countries, the gender effect shows different results, and so did the other factors such as; Age, income, and education. Kartasova (2013) recognized that women are more overconfident investors than men. As per his findings, education and experience give the background for overconfidence bias to appear; beginners and investors at the age of 30 to 45 are the riskiest investors. Single people are also more risky than married. Hardies, Breesch, and Branson (2011), by using the Calibration tests and based on psychological literature they set the standard of overconfidence of male and female auditors, and because of extensive self-selection and socialization,

based on the population of the auditor, the results do not indicate any gender difference with overconfidence. Bashir et al. (2013) examined behavioral biases' impact by using the well-framed questionnaire on employees' and students' investment decisions. This questionnaire was distributed among 100 students and employees to know their perceptions of biases.

To conclude the significance between the responses of males and females about overconfidence bias Chi-square technique was used. This study also concludes that there is no notable difference between the overconfidence bias and reaction of male and female decision-making. Castillo, Leo, and Petrie (2013), based on laboratory experiments they concluded that as compared to men, women become more risk-takers when their group is increased; their results imply that cooperative behavior is not only a simple calculation of individual choices and group discussion may have more positive behavior than the common individual. Kirchler and Maciejovsky (2002) investigated individual overconfidence within the framework of an experimental asset market, and based on 72 participants; their overall result indicates that traders on the experimental asset market are not usually prone to overconfidence. They also demonstrate that overconfidence increases with experience and is unenthusiastically correlated with individual earnings, and they also conclude that overconfident investors earn less based on their experimental assets' market. Cici (2012) analyzed the US equity mutual funds and concluded the disposition effect. Due to lower market betas, influencing investors' behavior is caused by the disposition effect, and there are no notable results on the disposition effect. Jr, Mineto, and Silva (2008) experimented on male and female investors and their selling behavior when the stock price is more (less) when the sale price is above (below) as compared to purchasing price and previous price and found that girls sell the winners and also sell the losing stock quickly. Kadous (2014) conducted two experiments to look at the potential causes of disposition effect. They concluded that with low self-regard, investors holding longer investment than high self-regard investors, and investors with higher confidence hold losing investment longer than investors with lower confidence.

IV.   RESEARCH METHODOLOGY

4.1 Research objectives.

Based on literature review gaps authors established various research objectives of this research paper, which are as follows:

- To review the available literature on the subject.
- To know how and why behavioral finance significantly differs from traditional finance based on literature.
- To explore the eminent authors who have written a series of papers in the meadow of behavioral finance.
- To understand the behavior of rational and irrational investors.
- To highlight the comparison of conventional finance and behavioral finance.
- To study/identify behavioral biases' susceptibility resulting from demographic factors (gender, age, income, and financial literacy/level of education).
- To identify the most susceptible bias due to demographic factors.

4.2 Research tools and techniques.

Secondary data has been collected through the systematic literature review, downloaded from the (Google Scholar, J-Store, Emerald, Elsevier, Tailor and Francis, Wiley and SSRN, etc.). The keywords used for searching the papers were behavioral biases and demographic factors, and papers were also searched based on single biases (Herding, disposition effect, overconfidence, status quo, loss aversion, mental accounting, representativeness, etc.). The search results included papers related to the impact of behavioral biases on investor's decision making. The result included not only behavioral biases but also a comparison of conventional finance and behavioral finance. The time frame of the study consists of the year 1950 (Miller and Modigliani, 1950; Markowitz, 1952; Fama, 1970; Kahneman and Tversky, 1979; Thaler, 1985; Shiller, 2003, Statman, 2017) onwards; these were the years of the extreme success in conventional finance and behavioral finance and the time frame take up to 2019. The outcome was summed up and examined to make use of a review matrix on excel. Books (Pompian, Kahneman, Statman, Thaler, and Shefrin). News, Magazine, and discussion with experts. As per the objectives, those research papers are shortlisted which describe the susceptibility of behavioral biases caused by demographic factors. Rationality or irrationality, comparison of conventional finance with behavioral finance, and behavioral biases, and out of hundreds of papers, some

papers are shortlisted, those papers are written by Nobel laureate, Economist, Psychologist, Eminent professor of conventional finance and behavioral finance and good research scholars of behavioral finance.

The criteria for selecting the papers are as follows.

- Papers should be based on demographic factors and explaining the susceptibility of behavioral biases.
- Papers should be based on the comparison of conventional finance and behavioral finance.
- Papers should be related to behavioral biases.
- Papers should be written by Nobel laureate, Economist, Psychologist, Eminent Professor, and good research scholar of behavioral finance.

Around eight hundred papers were searched; out of that, only relevant papers were shortlisted as per conditions. The papers are segregated based on demographic and behavioral biases. Several authors underline the importance of demographic factors like gender, income, age, and financial literacy/education level for behavioral biases in their papers (Jianakoplos & Bernasek, 1998; Bhandari & Deaves, 2010; Barber & Odean, 2001; Dhar & Zhu, 2006). Most of the studies conducted to find susceptibility of behavioral biases caused by demographic factors are based on primary data (micro study) and secondary data (macro study). The authors use regression analysis, that is Jianakoplos & Bernasek (1998); Schubert et al. (1999); Barber & Odean (2001); Dhar & Zhu (2006); Tekçe, Yılmaz, & Bildik (2015); Mishra & Metilda (2015); Metawa et al. (2018); Baker et al. (2018). Mean, Descriptive statistics is applied by Bruce & Southampton (1994); Barber & Odean (2001); Bhandari & Deaves (2010); Hardies, Breesch, & Branson (2011). Correlation, Chi-square or ANOVA applied by Bashir et al. (2013); Mishra & Metilda (2015); Prosad, Kapoor, and Sengupta (2015); Kumar & Goyal (2016); Baker et al. (2018); Theoretical Concept, Comprehensive Review of literature or experimental economics approach are used by Bajtelsmit & Bernasek (1996); Graham et al. (2002); Bogan, Just and Dev (2013); Matsumoto et al. (2013); and only one author has verified the susceptibility of behavioral finance through LSD and SEM, Kumar and Goyal (2016). To check the association of the susceptibility of behavioral biases with demographic factors, the coefficient of correlation technique was used, that is, Bashir et al. (2013); Mishra & Metilda (2015).

V.   FINDINGS AND RESULTS OF EXISTING LITERATURE.

The results spell that demographic factors (gender, age, income, and financial literacy/level of education) caused the susceptibility of behavioral biases. Overconfidence is the most susceptible bias in the literature after that disposition effect. Male are more overconfident than women (Bruce and Southampton, 1994; Barber & Odean, 2001; Bhandari & Deaves, 2010; Mishra & Metilda, 2015; Baker et al., 2018; Metawa et al., 2018). But some authors have different findings, such as they found the same reaction of male and female decision making concerning overconfidence bias (Hardies, Breesch, and Branson, 2011; Bashir et al., 2013). Women indicated greater overconfidence than men (Fernandes et al., 2013). Risk-averse is also susceptible due to gender; the male is notably more prone to hold risky assets; as to compared with single men or married couples, single women are more risk-averse in their assets holding, Women are considerably more risk-averse in financial decision making than men (Bajtelsmit and Bernasek, 1996; Jionakoplos and Bernasek, 1998; Graham et al., 2002; Bogan, Just and Dev, 2013). Behavioral biases are susceptible due to the income as well. Low-income groups, individual investors, and work in non-professional occupations show the highest disposition effect among all investors (Dhar & Zhu, 2006). High-income groups Investors are less confident than low-income groups investors (Kumar and Goyal, 2016). Young and middle-aged investors are more likely to disposition effect than older investors (Kumar &Goyal, 2016). There is a negative association of financial literacy with the disposition effect, herding bias, overconfidence, emotional bias, and positive relative with mental accounting bias (Baker et al., 2018). There is a positive relation between overconfidence and self-attribution bias with the increase in investors' experience and education level (Mishra and Metilda, 2015). The more educated males do not mean that they have a higher level of knowledge, so; they are more prone to overconfidence (Bhandari and Deaves, 2010).

VI.   CONCLUSION

It is concluded that the susceptibility of different behavioral biases is caused by demographic factors (gender, income, age, and financial literacy/level of education). In behavioral finance, investors are normal;

they are faced with different amounts of the susceptibility of behavioral biases due to demographic factors. A reduction in the susceptibility of behavioral biases caused by demographic factors is not possible, but to some extent, we can reduce it by increasing the sex ratio, literacy rate of females, and level of income. Women can be more overconfident than males if they are more educated, self-dependent, or single. Women have less trading experience than men because they are married and have children (Barber and Odean, 2001).
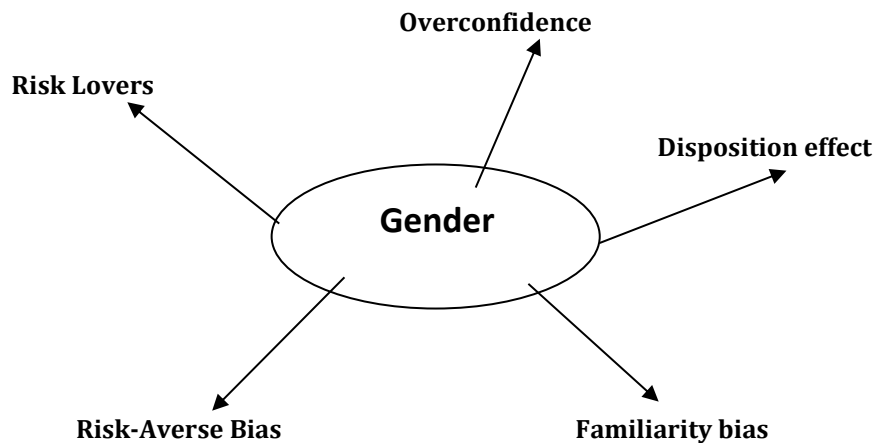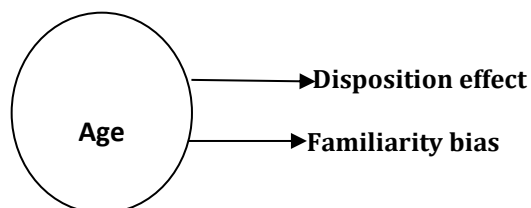

Susceptibility of different behavioral biases caused by gender.
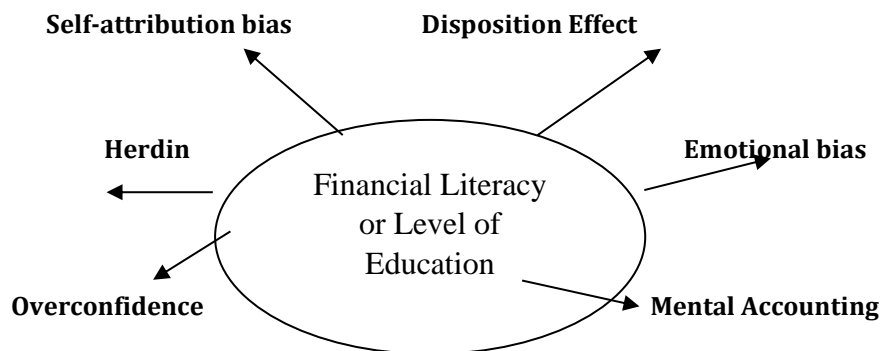
Source: Compiled by authors.
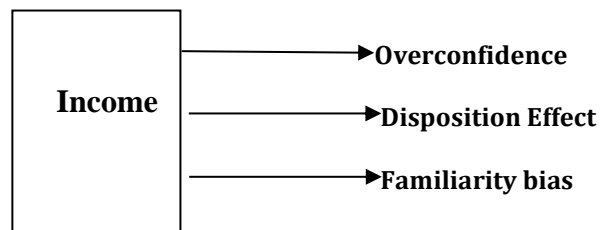
Susceptibility of different behavioral biases caused by income.
 Source: Compiled by authors.

Susceptibility of different behavioral biases caused by age.
Source: Compiled by authors

Self-attribution bias   Disposition Effect

Herdin   Emotional bias

Financial Literacy
or Level of
Education

Overconfidence   Mental Accounting

Susceptibility of different behavioral biases caused by financial literacy or level of education.
Source: Compiled by authors

Women will be indicating representative bias if they have proper knowledge about the market. It is a good sign for the investors to be well correlated and study before investing in any stocks. The necessary thought of the susceptibility of behavioral biases caused by demographic factors can make use at the time of investment decisions in the stock markets. Behavioral finance is an enhancement of conventional finance to better understand investors in light of psychology, cognitive biases, emotional biases, and the changes in the market based on different anomalies. 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 important to understand the significance of behavioral biases on markets as a whole. An empirical study in the literature shows that Individuals do not behave rationally (Tekçe, Yılmaz, & Bildik, 2015). Based on the review matrix, the authors found that females are more emotional (Loss aversion, illusion of knowledge, and self-attribution) than males are (Overconfidence, endowment, regret-aversion, status quo, and self-control). For private-client advisors, practitioners, and investors, behavioral finance can help identify their errors and the errors of others (Shefrin, 2002). "Behavioral finance teaches financial lessons to all-financial amateurs and professionals alike" (Statman, 2017)

VII. FUTURE IMPLICATIONS.

The field of behavioral finance is so rich that it can be studied in different dimensions. Researchers can study investors' behavior in the micro (primary data) and macro (through secondary data analysis) context. Authors can compare investors' rational and irrational behavior, traditional finance and behavioral finance, different behavioral biases, anomalies, demographic factors, etc. Behavioral biases influence the investors and society at a large scale. Investors are an essential part of demographic factors by gender, age, income, and financial literature\ level of educations, which are the cause of susceptibility. Financial advisors can guide their clients wisely and keep these factors in mind before advising any stock market stock. The differences in demographic factors, knowledge of capital market available through online, expert, friends, etc., the exposure of international market due to the globalization, increasing level of income and literacy rate should be well-considered as pre-requisite. The study also sums up the numerous methodologies used by several authors to understand the availability of different biases. The study becomes informative for academic purposes, investors' strategy, and research for a more inclusive study of behavioral biases and demographic factors. Different behavioral finance theories like prospect theory, behavioral assets price model and behavioral portfolio theory throughout the period assist in getting a comprehensible sketch of the incident of behavioral biases. This study will help the researchers who want to study and know about the susceptibility of behavioral biases resulting from demographic factors can take information from this work, as it gives a comparative framework of the availability of susceptibility of behavioral biases caused by demographic factors. This will help make policies about the return and investment patterns in the long run. Based on the author's literature review and knowledge, this is a unique work that has assembled the susceptible factors of behavioral biases. It will be more helpful for readers in elaborating their understanding of the susceptibility of behavioral biases due to demographic factors across developed

economies like the US and developing economies like India. A future study can be conducted on the susceptibility of particular behavioral biases caused due to different demographic factors. Future studies can be managed by proceeding with individual investors' performance as the dependent variable and behavioral biases as the independent variables. A study on secondary data can be conducted to compare the US market, European countries, India, and other developing countries to identify the volatility and compare the return pre and post the COVID-19 pandemic period.

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