

Impact of Demographic Diversities on Individual Investment Behaviour: A Study of Delhi-NCR

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Abstract

The purpose of the present study is to investigate whether there is any association between demographic characteristics such as age, gender, occupation, and income level of individual investors with their investment preferences during COVID-19. In this study, we used survey research methods and collected data from November 2022 to March 2023 of 354 respondents by using a structured questionnaire. We analyzed it with the help of the SPSS 29.0 version. We used the descriptive analysis and Chi-square test to test the hypothesis. From the data analysis, it can be concluded that there is no significant association between the age of the respondents and the investment preference. Further, this study reveals that, although age has no impact on investment preferences, there is a significant association between gender, income level, and occupation of the respondents with their investment preferences in Delhi-NCR.

Keywords: Covid-19, Demographic Diversities, Investment preferences, Stock market, SPSS.

JEL Classification: G11, G41

1. Introduction

Covid-19 has influenced the perception of people towards various investment avenues in India. It has affected almost all aspects of the investment pattern of an individual investor. People have seen the calamitous effect of Covid-19 on the various investment avenues, whether risky investment avenues like the stock market and mutual funds or fixed return investment avenues like bank fixed deposits and bonds. If we talk about the impact of Covid-19 on the stock market, it has seen huge volatility. The stock market has seen its worst and best times during this pandemic. On 2nd March 2020, the BSE SENSEX witnessed a flash crash due to the Union Health Ministry's declaration of two new confirmed cases (Khan et al., 2020). Then, on 12th March 2020, after WHO announced the outbreak as a pandemic, Indian stock markets encountered their worst crash since June 2017 (Khan et al., 2020). After that, the stock market has shown a drastic recovery by the end of December 2020 from the dip in March 2020. S&P BSE Sensex stock market index reached an all-time high of 67,000 points on 19th July 2023, and NSE Nifty crossed 19,800. There has been more than 10% growth in NSE Nifty 50 and BSE Sensex. But, of course, there has been a hesitation in retail investors' minds. The interest rate of other investment avenues like Fixed deposit receipts, Bank deposits, insurance schemes, and postal savings got reduced (Anuradha & Verma, 2021). The covid-19 pandemic has not

only influenced the investment portfolio or investment pattern but also the overall financial plan of human beings towards life.

There are many factors that influence investors in making their investment decisions. Investors' demographic factors such as gender, age, education, family size, annual income, and savings are of great importance in the investment decision-making process, especially in the times of Covid-19. Based on the literature review, demographic variables like age, gender, income level, occupation, marital status, and Family size, most of the researchers concluded that female investors are conservative while investing, whereas males are aggressive, and female investors do not like to take the risk (Jain & Ranawat, 2012; (Mehta & Aggarwal, 2011); Chakraborty & Digal, 2011). Men invest more than females. Females do not invest significant amounts; fixed deposits are the highest investment and married people invest more than single people (Rajesh, 2021). Male investors like to invest more in equity than female investors. Moreover, concerning occupation, private job holders and business people like to invest more than other categories (Das & Mahapatra, 2020). Full-time employed people have invested more than self-employed people (Rajesh, 2021).

Furthermore, if we talk about the impact of income variables on investor behavior and perception, the researcher concluded that the investors' monthly family savings positively influence the overall perception of the investors towards the mutual fund investment (Pandian S. K., 2018). Monthly income and savings impact the individual's willingness to invest in gold (Muralidharan & Nagabhushanam, 2020). During Covid-19, the researcher concluded a 43% drop in SIP investment (Gurbaxani & Gupte, 2021). Moreover, if we talk about age and family members' role in investor behavior, the researcher concluded that younger investors like to take risks and invest in equity shares. In contrast, investors in the older age group favor the post office (risk-free) as an investment opportunity, and most investors, before investing their funds, prefer to consult with family members (Mehta & Aggarwal, 2011).

So, most researchers have studied investor behavior before the Covid-19 period and in other states of India but not in the Delhi NCR region. The present study bridges this gap and will provide helpful insight into Investor behavior during Covid-19 in the Delhi NCR region. Therefore, this paper aims to identify the association of the demographic characteristics of individual investors with investment preferences during Covid-19 in Delhi-NCR.

2. Review of literature

Author & Year	Methodology	Statistical Tools and Techniques	Findings
(Shah & Verma, 2011)	A survey method has been used and 400 investors were targeted from Delhi, Mumbai, Hyderabad, and Bangalore.	The data was collected from primary sources by using a structured questionnaire. Convenience and systematic sampling techniques were used.	The study found no effect of gender on sector preference.
(Jain & Mandot, 2012)	This study explores the connection among the level of risk and demographic variables of investors in	Data have been collected from primary sources through questionnaire from 200 investors between the	The study discovered that there is a unassertive correlation among demographic variables such as Marital Status, Gender,

	relation to the Rajasthan state.	period from April 2011 to January 2012.	Age, Educational Qualification, and Occupation of the investors.
(Pandian & Thangadurai, 2013)	The study is conducted in the Dehradun district. Data were collected from 120 individual investors.	The respondents are selected by using a convenient sampling technique. Researchers used the chi-square test to test the hypothesis.	The study found no significant relationship between gender and level of awareness, educational level and awareness level, and income level and awareness level of the investor in the Dehradun district.
(Arora & Marwaha, 2014)	A well-structured questionnaire was administered personally and the data have been collected from 241 respondents in Punjab.	The responses have been analyzed with the help of the weighted average scores method used to identify the most and least influencing variables.	The study found that high returns were the most crucial variable while investing in stocks, and income stability was the most critical variable while investing in fixed deposits.
(Prabhu & Vechalekar, 2014)	A survey was conducted in Pune City during the period June 2013 to September 2013.	The judgemental sampling technique was used in this study.	The study found that portfolio diversification and tax benefit are mutual funds' main factors that inveigle investors. And, consistent returns are preferred reasons for investing in MIP funds.
(Velmurugan, et al., 2015)	Primary data have been collected by using a convenient Sampling technique through a questionnaire and interview method.	Frequency distribution, percentage analysis, Mann Whitney, and Kruskal-Wallis Test were used to test the objectives of the study.	The study revealed that the order of preference is identical across the gender except for gold and post office. The order of preference towards real estate and insurance is the same across the age group although it varies concerning the stock market, gold, bank savings, and post office.
(Kaur & Kaushik, 2016)	The researcher used the chi-square, T, and Mann-Whitney tests for hypothesis testing.	Primary Data have been collected by using a structured questionnaire from 450 respondents in Delhi.	The researcher suggested that age, income, gender, occupation, and education had an impact on awareness about mutual funds.
(Lall & Gupta, 2017)	This study aims to find out the relationship between age, gender, and income with investment preferences toward fixed deposits in Uttarakhand.	A survey research design has been employed. Researchers used descriptive and chi-square tests to test the hypothesis.	The researchers revealed that there is a significant impact of gender on investment preferences. This study also discovered that age does not affect investment preferences.
(Raut, 2020)	This study aims to explore the importance of past behaviour and financial literacy in the investment decision-making of individual investors.	Collected data were analyzed on AMOS 20.0 using two-step structural equation modeling (SEM).	The findings of this study indicated that past behavior had no significant direct impact on investor's intention; however, it had an indirect significant relationship while mediated by the attitude of investors.

(Sabir et al., 2019)	This study aims to investigate the influence of overconfidence and past investment experience on the herding behavior of individual investors participating in the Pakistan stock exchange.	The researcher used a quantitative research method and a cross-sectional research design. Data was collected from 352 individual investors participating in the Pakistan stock exchange via survey questionnaires.	This study provided strong evidence that both overconfidence and past investment experience motivate investors toward herding behavior. Further, the study found that financial literacy has a moderate impact on the relationship between the cognitive profile and herding behavior.
(Devi & DV, 2020)	This paper aims to study the performance of gold and its impact on the economy during covid-19.	This study is based on secondary data collected from the World Gold Council, Reserve Bank of India (database). The period of study was the first quarter of 2017-2018 to the first quarter of 2020-21.	This study revealed that Covid -19 pandemic temporarily reduced the gold demand in the market. Moreover, this study discovered that its supply and actual prices are more than demand and assessed gold prices. Further, Covid -19 pandemic makes a positive impact on investment decisions and negatively influences gold buying behavior.
(Kanagasa bai & Aggarwal a, 2020)	This paper aims to study the effect of financial literacy on investment performance.	Data were collected from 203 respondents in Chennai.	This study found a positive relationship between financial literacy and investment performance. Higher financial literacy higher the risk tolerance power of investors.
(Khan et al., 2020)	Data were collected from 100 respondents across different Mumbai age/income and qualification groups.	Paired t-tests and ANOVA were applied to test the hypotheses and analyze the collected data.	The study revealed that covid-19 had a significant impact on investor preferences towards real estate, however, the impact on investor preferences towards Gold and Equity has not been significant. Qualification and Income too had a significant impact on specific investment avenues.
(Ortmann et al., 2020)	The researchers investigated trading patterns and financial risk-taking behavior of a large sample of retail investors during the outbreak of COVID-19.	Researchers used transactional-level brokerage data from a discount broker that offers an online trading platform to retail investors. They studied the relationship between the outbreak of COVID-19 and investors' trading activities using an OLS regression analysis.	Researchers found that investors increase their average weekly trading intensity by 13.9% as the number of COVID-19 cases doubles. The increase in trading is especially pronounced for male and older investors. Further, they found that investors, on average, add funds to their accounts, open more new accounts, and establish more new positions.

(Anuradha & Verma, 2021)	This study aims to determine the deriving forces that affect investment decisions in the banking sector in India. Data have been collected from 174 respondents.	An experimental research design has been used in this study. Correlation and regression were used for the data analysis.	The study found that interest rates had impacted the investment pattern of investors because, before COVID-19, people used to invest monthly, but during COVID-19, they were investing yearly. Further, most investors preferred gold and the stock market as their investment options.
(Djalilov & Ülkü, 2021)	The researchers studied Russian individual investors' aggregate equity trading behavior during Covid-19.	Researchers used secondary data and derived it from Moscow exchange.	The study found contrarian traits in Russian individual investors that led them to buy the dip during the March–April 2020 COVID crash. Further study found evidence of a sophisticated motivation to exploit the negative bubble.
(Gurbaxni and Gupte, 2021)	This study has been conducted in a small town in Madhya Pradesh. The researcher studied the impact of covid-19 on the amount invested in SIP.	The researchers used a convenience sampling technique and collected data from 100 respondents. Further, the used pair sample t-test and one-way ANOVA for data analysis.	The study revealed that the monthly investment amount in SIP was reduced by 43% during covid-19. Further, this study found that there was no significant association between age and difference in the invested amount in SIP. Also, no significant association was found between gender and reduction in invested amount in SIP.
(Josea & Varghesea , 2021)	This study examined the risk mitigation ability with respect to near-month call and put option.	In this study, the author used secondary data downloaded from the National stock exchange. The daily closing price of NSE Nifty 50 has been taken.	The results of this study demonstrated that ATM, ITM, and DITM call options and ATM, OTM, DOT,M and DITM put options provide effective risk mitigation which can be used efficiently by existing and potential investors in the equity market.
(Riyazah med, 2021)	Data has been collected from 753 Indian respondents by using a structured questionnaire.	The author analyzed the impact of investor motives and awareness on investor preferences. The author used a regression model and convenience sampling technique.	The author postulated that Investment factors like the Nature of investments, Investor personal characteristics, Investor behavior, Investor options, Awareness of mutual funds, and shares had a significant impact on investor preferences. Further, the study revealed that Investors' characteristics like knowledge, confidence, ability, responsibility, and belief negatively influence investor preferences.

(Vanitha et al., 2021)	A descriptive research design has been used in this study. Data have been collected from 110 investors by using a well-structured questionnaire.	The researcher used T-test and Garnett's ranking for the data analysis.	The study discovered that most respondents preferred gold & silver and the stock market, but they have not preferred mutual funds, which are the most significant investment scheme.
(Chawla et al., 2022)	This paper aims to test the perceived parental influence on financial literacy. Additionally, the direct and indirect influence of financial literacy on the investment behavior of young adults is examined.	This paper used survey-based cross-sectional data. The partial least squares-structure equation model has been used to estimate and test the hypothesized relationships.	The researcher postulated that parental financial behavior had a significant impact on young adults' financial literacy levels. Further, financial literacy positively influences the investment behavior of young adults.
(Manocha et al., 2023)	This study examines the moderation effect of socio-traits in the association between investment behavior and its determined factors in rural areas of Punjab.	This study used a cross-sectional research design to gather information. The information for this research survey was gathered using a structured questionnaire from 400 individual investors in the rural area of Punjab. To evaluate the hypothesis, structural equation modeling has been used in the research process.	The results of this study reveal that attitude, financial risk inclination, financial planning, and investment intention determine the investment behavior of the rural people of Punjab. The results for the interaction effect of socio traits with investment intention, financial risk propensity, and investment attitude were found statistically significant amongst rural people.

2.1 Research Gap

Although plenty of research work has been done on the topics like “Investment Behavior, Investment Pattern, and Impact of demographic on investment behavior such as “A Study on the Relevance of Demographic Factors in Investment Decisions” (Geetha & Ramesh, 2012), “An Empirical Analysis of Perception of Investors’ Towards Various Investment Avenues” (Velmurugan et al., 2015), “A Study of Investors Preference towards Various Investments Avenues in Dehradun District” (Pandian & Thangadurai, 2013), “An Analytical Study on Relationship of Age Gender and Income with the Investment Preference towards Fixed Deposits: A Study in Uttarakhand” (Lall & Gupta, 2017), “Impact of Demographic Factors on Investment Decision of Investors in Rajasthan” (Jain & Mandot, 2012), and “An Analysis of Socio-Economic and Demographic Factors on the Risk taking Preferences of Personal Investors” (Gumus & Dayioglu, 2015) and many others through numerous research papers, articles, and journals presented by several researchers in the field of finance. Most of them studied individual investors’ investment behavior in the Indian financial market before the pandemic and in other states of India. No study studied investor behavior during the pandemic in Delhi NCR. Individual investors are the backbone of the capital market. The development of the capital market during the last few years has significantly increased the investor population in our country. There has been a sea change in the investment scene. In this context, investors need to understand the demographic characteristics of their investments, strategies, expectations, etc. This paper presents some interesting information based on the

information collected from more than 354 individual investors from Delhi-NCR, and at the same time, there is always scope for investor behavior as it is constantly changing according to the state of the financial market and economy. So, there is a need for further exploration in relation to the investment behavior of individual investors during the pandemic.

3. Research Methodology

3.1 Research Question

As a researcher in the finance field, many questions are encountered in the researcher's mind during this pandemic. Some of them are listed below:

1. Have individual investors made gender-based investments during Covid-19?
2. Is there an association between their income level and investment preference?
3. Is there any relation between their age and investment preference?
4. Has his occupation affected his investment preferences?

3.2 Objectives of the Study

1. To understand the effect of demographic factors affecting the choice of investment during the period of COVID-19.
2. To identify the investment decision towards various investment avenues taken by investors across gender during the period of COVID-19.
3. To study the association between investment preference towards various investment avenues and income level during the period of COVID-19.
4. To examine the relationship between investment preference towards various investment avenues with occupation during COVID-19.

3.3 Hypothesis Formulation

3.3.1 Association between investment preference and Gender

We have reviewed the available plethora of literature based on the impact of gender and investment preferences. Some of them are as follows: (Karpova & Panova, 2018) studied the effect of gender on the investment preferences of Russian individual investors. Their study discovered that there is a negative correlation between gender and annual return expectations. It means that male investors require higher returns as compared to female investors. (Cooper et al., 2014) surveyed 180 people and found that men have a lower preference for investment than women and the financial knowledge level of women is lower than that of men. (Neelakantan, 2010) in his study noted that women have a lower risk tolerance than men, and are often less likely to prefer risky assets when investing. (Patel & Modi, 2017) discovered in their study that Gender has little effect on investment decision-making. Based on the available literature related to gender and investment preferences the hypothesis has been drawn as follows:

H0_a: There are no significant associations between investment preferences and gender during covid-19.

H1_a: There are significant associations between investment preferences and gender during covid-19.

3.3.2 Association between investment preference and Age

Similarly, we have identified and reviewed available literature based on investment preferences and age factors. Some of them are as follows: (Karpova & Panova, 2018) studied the impact of major sociodemographic factors on Russian individuals' investment preferences. Their study reveals that an investor's age does not significantly influence investment preference. Similarly, the findings of (Lall & Gupta, 2017) stated that age has no significant impact on an individual investor's investment preference in Uttarakhand. (Sireesha & Laxmi, 2013) conducted a study on "The impact of demography on chosen investment avenues" in the twin cities of Hyderabad and Secunderabad, India. They concluded that age and friends significantly affect the investment decisions of most of the respondents. (Samanez-Larkin et al., 2010) demonstrated that in risky asset selection, older people make more volatile choices than younger investors. From this point of view, it was concluded that the nervous system affected by aging has a negative impact on rational financial priorities. Based on the available literature the second Hypotheses has been drawn as follows:

H0_b: There are no significant associations between investment preferences and age during covid-19.

H1_b: There are significant associations between investment preferences and age during covid-19.

3.3.3 Association between investment preference and Income

We identified four researchers who have studied the association between income and investment preference. (Ramanujam & Devi, 2012) identified that the level of income affects investment decisions. They found that the high-income group shows a relatively high preference for investing in the stock market, in contrast, the low- and middle-income group prefer insurance and banks as the most preferred investment avenues. In the same line, (Gumus & Dayioglu, 2015) revealed in their study that Investors with higher levels of income make risky investments more often and with higher income ratios than those with lower levels of income. It means that people with a higher level of income have a lower risk perception. (Shinde & Zanvar, 2015) revealed in their study that income level affects investor preferences and risk tolerance level. Based on the available literature the hypothesis is drawn:

H0_c: There are no significant associations between investment preferences and income during covid-19.

H1_c: There are significant associations between investment preferences and income during covid-19.

3.3.4 Association between investment preference and Occupation

Every occupation has a different income therefore, individuals belonging to different occupations exhibit varying investment preferences. (Shinde & Zanvar, 2015). We have identified available literature based on investment preference and occupation. In their study, (Mishra & Mittal, 2019) concluded that there is a strong correlation between socioeconomic variables (occupation, marital status, and age) with the financial risk tolerance of Indian

investors. The study concluded that the average risk tolerance varies by occupation of individual investors. On the other hand, (Sutejo et al., 2018) stated in their study that there was no significant influence of demographic factors (for example occupation) on investment preference and financial risk tolerance. Based on the available literature the Hypotheses have been drawn as follows:

H0a: There are no significant associations between investment preferences and occupation during covid-19.

H1a: There are significant associations between investment preferences and occupation during covid-19.

3.4 Research Design and Sampling Technique

A descriptive research design has been employed after thoroughly doing a literature review related to the present study. A structured questionnaire has been framed and data has been collected using online and offline survey techniques. In the online survey, the questionnaire has been distributed by e-mail and whatsapp and a direct interview method has been used for the offline survey. As the target populations are the individual who is involved in saving and investment activities in Delhi-NCR. Therefore, the judgemental sampling technique has been deployed in the present study for the collection of data in Delhi-NCR. A sample of 384 samples from the target population has been collected prima facie. After screening the data, 30 responses from the samples have not been considered as those were incomplete responses. Finally, only 354 responses were found suitable for the present study. IBM SPSS 29.0 statistical software has been used for the data analysis. Descriptive statistics and a Chi-square test have been performed for the data analysis in the present study.

Although the present research paper is aimed to achieve the above-mentioned objective in full earnestness and accuracy, still there are certain limitations. The time factor was the main limitation for the completion of the research, as the survey has been conducted during the period of covid-19 and the study has been done targeting the investors in Delhi-NCR only. The primary data has been collected through a structured questionnaire from a sample of only 354 investors in Delhi-NCR, which may not reflect the opinion of the entire population. The study period is restricted to 6 months only i.e., from Nov 2022 to April 2023. As the non-probability sampling technique has been employed in the present study, thus, findings of the study cannot be generalized.

4. Data analysis and Interpretation

4.1 Demographic profile of the respondents

Table 1: Demographic profile

Variable	Category	Frequency	Percentage
Gender	Male	175	49.4
	Female	179	50.6
	Total	354	100.0
	18-30	248	70.1
	30-40	62	17.5

Age	40-50	25	7.1
	50-60	10	2.8
	above 60 years	9	2.5
	Total	354	100.0
Highest Educational Qualification	10th	6	1.7
	12th	9	2.5
	Graduate	64	18.1
	Postgraduate	203	57.3
	Higher education (M.Phil., Ph.D.)	69	19.5
	Illiterate	3	.8
	Total	354	100.0
Occupation	Self-employed/Businessman	51	14.4
	Salaried Person	200	56.5
	Student/dependent	82	23.2
	Retired	4	1.1
	Unemployed	17	4.8
	Total	354	100.0
Annual Income	Below 2 Lakh	112	31.6
	2 to 5 Lakh	111	31.4
	5 to 10 Lakh	76	21.5
	More than 10 lakhs	55	15.5
	Total	354	100.0
Investment decision	Yes	267	75.4
	No	87	24.6
	Total	354	100.0
Investment Experience	Beginner	113	31.9
	Moderate	132	37.3
	Knowledgeable	84	23.7
	Experienced	25	7.1
	Total	354	100.0
Investment Duration	Short-term	168	47.5
	Medium-term	131	37.0
	Long-term	55	15.5
	Total	354	100.0

Source: Author's calculation

It is inferred from above table 1 that 49.4% of the respondents are male and 50.6% of the respondents are female respectively. The largest group of the respondents (70.1%) are in the age group of 18-30 years whereas 17.5% of the respondents are in the age group of 30-40 and 7.1% of the respondents are in the age group of 40-50 years. 2.8% of the respondents are in the age group of 50-60 years. 2.5% of the respondents are above 60 years of age. The analysis further shows that 1.7% of the respondents are 10th pass, 2.5% of the respondents are 12th pass, 18.1% of the respondents are graduates, 57.3% of the respondents are Postgraduates, 19.5% of the respondents are M.Phil. Ph.D. and 0.8% of the respondents are illiterate.

Further, 14.4% of the respondents are Self-employed, and 56.5% of the respondents are Salaried person. 23.2% of the respondents are students/dependent, 1.1% of the respondents are retired, and 4.8% of the respondents are unemployed. Moreover, with regard to annual income, 31.6% of the respondents have an annual income below 2 lakhs. 31.4% of the respondents are in the annual income bracket of 2 to 5 lakh, 21.5% of the respondents have an annual income of 5 to 10 lakh, and 15.5% of the respondents are in the annual income bracket of more than 10 lakhs.

The majority (75.4%) of the respondents do investments on their own whereas 24.6% of the respondents will depend on others to take investment decisions. 31.9% of the respondents are beginners who have only saving bank account, 37.3 % of the respondents are moderate investors who are comfortable with Bank fixed deposit, LIC, PO savings, PPF, Gold, and 23.7% of the respondents are knowledgeable investors who have sold and bought shares, bonds, Mutual funds, etc., and 7.1% of the respondents are experienced investors who have done frequently trade in stocks, commodities, Equity shares, option and future, and real estate, etc. Further, 47.8% of the respondents invest in short-term (less than 1 year), 37% of the respondents invest in the medium-term (2 to 5 years), and 15.5% of the respondents invest in long-term investment avenues (more than 5 years).

4.2 Statistical Tools Applied for Analysis

The chi-Square test is used to test the hypothesis of the significant relationships between the two variables. The chi-square test assumes that both variables should be categorical in nature, all observations should be independent of each other, cells in the contingency table should be mutually exclusive, and the expected value of a cell should be 5 or more in at least 80% of cells. So, we investigate, whether any association between investment preference and gender in the first hypothesis. Both variables are categorical. So, the first assumption is met. Then, we surveyed each investor independently and included them in the dataset. So, the second assumption is met and the other two assumption is also met. Since the opinions towards investors' preferences were collected as frequencies on a nominal scale. So, the non-parametric Chi-square technique was used through SPSS 29.0 to analyze the data. The chi-Square test is used to test the association of one variable with the other, the test has been administered to study the association of the socio-demographics with investment preferences.

4.3 Hypothesis Testing

Based on the opinion provided by the respondent in the questionnaire we were successfully able to fulfil the objectives of the study i.e., to find out the association of demographic profile with investment preference. We used IBM SPSS 29.0 software to process the data. Chi-square has been employed to test the hypothesis.

4.3.1 Gender and investment preference

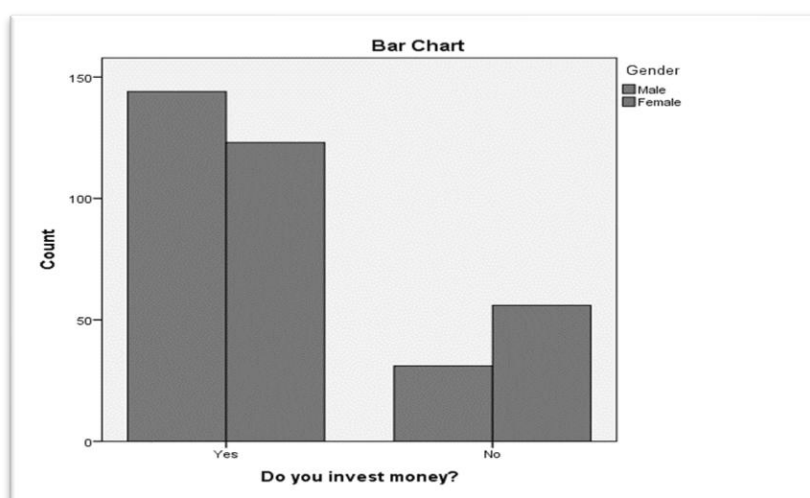
H0a: There are no significant associations between investment preferences and gender during covid-19.

H1_a: There are significant associations between investment preferences and gender during covid-19.

Table: 2 Association of respondents based on gender with investment

Gender * Do you invest money? Crosstabulation					
			Do you invest money?		Total
			Yes	No	
Gender	Male	Count	144	31	175
		Expected Count	132.0	43.0	175.0
		Residual	12.0	-12.0	
	Female	Count	123	56	179
		Expected Count	135.0	44.0	179.0
		Residual	-12.0	12.0	
Total		Count	267	87	354
		Expected Count	267.0	87.0	354.0

Chi-Square Test					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.792 ^a	1	.003		
Continuity Correction	8.075	1	.004		
Likelihood Ratio	8.894	1	.003		
Fisher's Exact Test				.003	.002
Linear-by-Linear Association	8.767	1	.003		
N of Valid Cases	354				
0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 43.01.					



Graph 1: Association of Respondents based on Gender with Investment Preferences

As per Table 2 and Graph 1 given above it is clear that Gender has a significant association with investment, it is found that investment preferences get affected by Gender. The Chi-Square test was conducted for testing the statistical significance of the association

between the Gender of the respondent and investment preferences at a 5% level of significance, the Asymptotic (2-sided) Significance is 0.002. Since the p-value is less than our chosen significance level ($\alpha = 0.05$), the null hypothesis is rejected and we can conclude that there is enough evidence to suggest an association between gender and investment preferences. Thus, gender has a significant association with investment, and investment preferences get affected by gender which is similar with the findings of (Lall & Gupta, 2017). The strength of this association is further confirmed by the Contingency Co-efficient, which has a value of 0.156 and shows a very low association between Gender and Investment Preferences.

4.3.2 Age and Investment Preference

H_{0b}: There is no significant association between investment preference and age during covid-19.

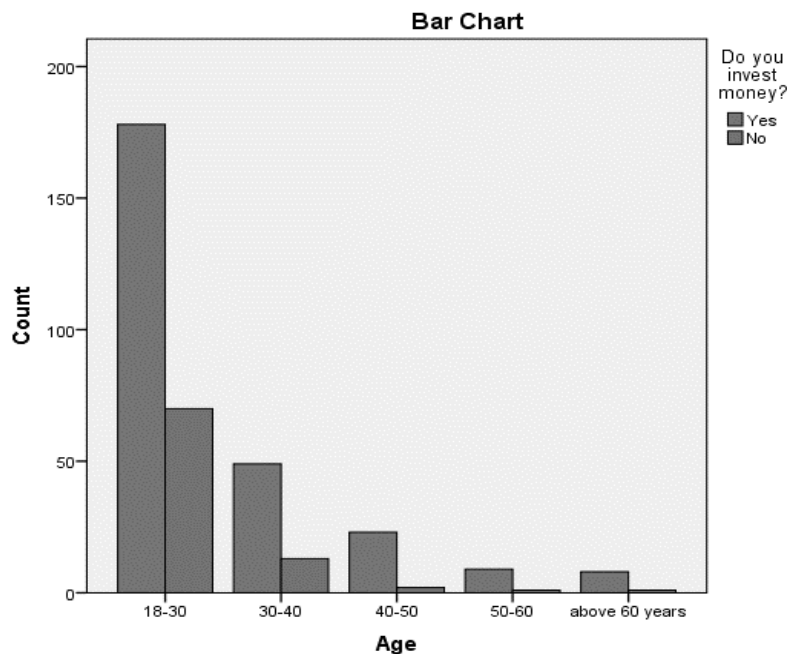
H_{1b}: There is a significant association between investment preference and age during covid-19.

Table: 3 Association of respondents based on Age with investment preference

Age * Do you invest money? Crosstabulation				
Count				
		Do you invest money?		Total
		Yes	No	
Age	18-30 years	178	70	248
	30-40 years	49	13	62
	40-50 years	23	2	25
	50-60 years	9	1	10
	above 60 years	8	1	9
Total		267	87	354

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.950 ^a	4	.093
Likelihood Ratio	9.250	4	.055
Linear-by-Linear Association	6.843	1	.009
N of Valid Cases	354		

a. 2 cells (20.0%) have an expected count of less than 5. The minimum expected count is 2.21.



Graph 2: Association of Respondents Based on Age with Investment Preferences

As per table 3 and Graph 2 given above the value of the test statistic i.e., Pearson chi-square value is 7.950. The corresponding p-value of the test statistics is 0.093 which is greater than the significance level of 0.05. Therefore, we fail to reject the null hypotheses.

Since the p-value is greater than our chosen significance level ($\alpha = 0.05$), we conclude that there is no enough evidence to suggest an association between age and investment preference which is similar to the findings of (Lall & Gupta, 2017). Based on the results, we can state that no association was found between age and investment preference ($X^2 (4) = 7.950$, $p = 0.093$). Thus, investment preferences have not been affected by age during covid-19.

4.3.3 Income and Investment Preference

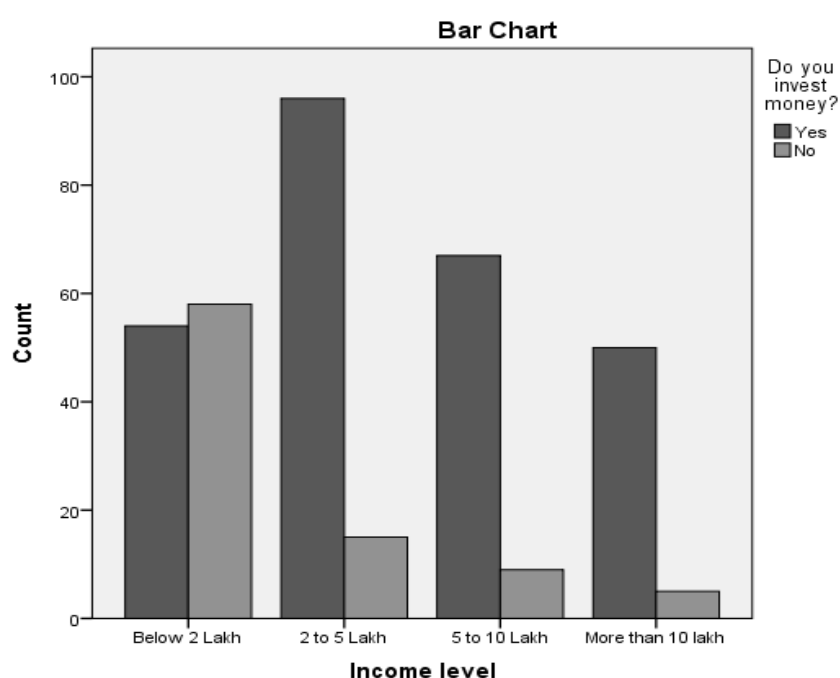
H0c: There are no significant associations between investment preference and income during covid-19.

H1c: There are significant associations between investment preference and income during covid-19.

Table: 4 Association of Respondents Based on Income and Investment Preference

Income level * Do you invest money? Crosstabulation				
Count				
		Do you invest money?		Total
		Yes	No	
Income level	Below 2 Lakh	54	58	112
	2 to 5 Lakh	96	15	111
	5 to 10 Lakh	67	9	76

	More than 10 lakh	50	5	55
Total		267	87	354
Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square	65.826 ^a	3	.001	
Likelihood Ratio	62.959	3	.000	
Linear-by-Linear Association	44.819	1	.000	
N of Valid Cases	354			
a. 0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 13.52.				



Graph 3: Association of Respondents Based on Income with Investment Preferences

Table 4 and Graph 3, depict that income has a significant relationship with investment preferences. We found that income affects investment preferences and different occupation has different preferences for investments. We conducted Chi-Square Test for testing the statistical significance of the association between Income and investment preferences at a 5% level of significance. We found that the Asymptotic (2-sided) Significance value is 0.001, which is less than the significance level of 0.05. Therefore, we rejected the Null Hypothesis, which means that there is a significant impact of income on investment preferences which is in line with the findings of (Khan et al., 2020). The strength of this association is further confirmed by the Contingency Co-efficient, which has a value of 0.396 and shows a moderate association between Income and Investment Preferences.

4.3.4 Association of Respondents based on Occupation with investment preference

(Ramanujam & Devi, 2012) found that there was no significant association between occupation and the frequency of making investments. The researcher concluded that there is no significant difference between the attitude of the government, public and private classes of salaried investors towards investments. Based on the available literature the hypotheses have been drawn as follows:

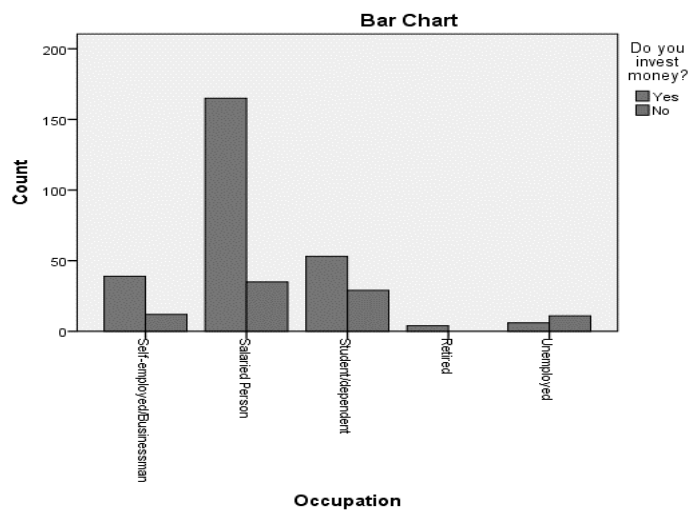
H0a: There is no significant association between investment preference and occupation during covid-19.

H1a: There is significant association between investment preference and occupation during covid-19.

Table: 5 Association of Respondents based on Occupation with investment preference

Occupation * Do you invest money? Crosstabulation				
Count				
		Do you invest money?		Total
		Yes	No	
Occupation	Self-employed/Businessman	39	12	51
	Salaried Person	165	35	200
	Student/dependent	53	29	82
	Retired	4	0	4
	Unemployed	6	11	17
Total		267	87	354

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.655 ^a	4	.001
Likelihood Ratio	25.040	4	.000
Linear-by-Linear Association	14.983	1	.000
N of Valid Cases	354		
3 cells (30.0%) have an expected count of less than 5. The minimum expected count is .98.			



Graph 4: Association of Respondents Based on Occupation with Investment Preferences

Table 5 and Graph 4 reveal that occupation has a significant association with investment preferences. We conducted the Chi-Square Test for testing the statistical significance of the association between the occupation of the Respondent and investment preference at a 5% level of significance. We found that the Asymptotic (2-sided) Significance value is 0.001 which is less than the significance level of 0.05. Therefore, the Null Hypothesis is rejected. The strength of this association is further confirmed by the Contingency Co-efficient, which has a value of 0.265 and shows a moderate association between Occupation and Investment Preference.

1.3.5 Result of Hypotheses Testing

Table 6: Hypotheses Testing Results

Hypotheses	Significance Level (α)	P-Value	Accepted/Rejected
H0a: No significant associations between investment preference and gender.	0.05	0.002	Reject
H0b: No significant associations between investment preference and Age.	0.05	0.093	Accept
H0c: No significant associations between investment preference and income	0.05	0.001	Reject
H0d: No significant associations between investment preference and occupation	0.05	0.001	Reject

4.3.6 Conclusion

The reverberations of the pandemic are enormous and the Indian economy is slowly and steadily coming out of the clutches of the covid -19 which was highly disrupted. The Government of India, RBI has taken several steps to boost the morale of the people and to continue their confidence in the financial instruments. The households should continue showing their faith and belief in the market which is moving uptrend. The time ahead is looking

very propitious and investors should continue investing keeping in mind the balance of risk and returns.

The purpose of the present study was to investigate whether any association of demographic characteristics such as age, gender, occupation, and income level of individual investors with their investment preference. For this, we adopted survey research methods and collected data from 354 respondents, and analyzed it with the help of the SPSS 29.0 version. We used the descriptive analysis and Chi-square test for testing the hypothesis. From the data analysis, it can be concluded that there is no significant association between the age of the respondents with the investment preference. This means that Investment preferences were not affected by age during the period of Covid-19. Further, this study reveals that, although age has no impact on investment preferences, there is a significant association between gender, income level, and occupation of the respondents with their investment preferences. This means that investment preferences are affected by occupation, gender, and income level during the period of covid-19.

This study will help portfolio managers in understanding the needs and characteristics of different segments of investors. Marketers of investment products can tailor different instruments specifically for different segments based on demographic profiles, to meet their needs. The results highlight the socioeconomic effects of the COVID-19 outbreak at a micro level and may enable financial institutions and individuals to better handle such situations in the future.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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