CHAPTER III

RESEARCH METHODOLOGY

This Chapter gives a detailed description of the methodology adopted to study the effect of financial literacy on personal financial management in India. The research methodology followed for the present investigation is discussed in detail.

1. The Study:

The study explains research methodology for the study undertaken. It enlightens the methodologies to accomplish the research objectives. The chapter subsequently discussed the various options available at each stage and established the logic of underlying the selection of alternatives that were considered most suitable for the study. The key objective of this study was to find out the impact of financial literacy on personal financial management in India.

The research involved the extensive study of financial literacy and how it created impact on personal financial management. The research study conducted was divided into two parts; the first part was related to financial literacy which analyzed that an individual have knowledge of various personal financial management tools and second part dealt with their management strategies that if they have or don't have financial literacy then how did they managed their personal financial management. And then, the impact of financial literacy on personal financial management was analyzed.

Statistical techniques were applied like Factor analysis, ANOVA, Regression analysis was applied which resulted into justification for approach that was adopted. The choice of the method and instrument used for assessment of financial literacy and personal financial management is justified in the chapter. The design of the study and the methods of primary and secondary data collection are also discussed.

2. Research Problem

The identification of the problem area is an essential step in formulating a good question for better understanding of the problem. Financial literacy does not guarantee proper personal financial management. Impact of financial literacy on personal financial management can be either positive or negative. So the research problem was to find the impact of financial literacy on personal financial management and to observe some demographic correlates.

3. Objectives: The objective of the study are:

1. To study the factors which affect personal financial management in India.
2. To study the impact of financial literacy on personal financial management on different income groups.
3. To study the impact of financial literacy on personal financial management in different regions of India.
4. To study the impact of financial literacy on personal financial management based on interactive effect of different regions of India and different income group.

4. Hypothesis- There are 31 hypothesis, which were formulated by the researcher for the study. These hypotheses are as follows:

Hypotheses related to Income:

Ho 1 "There is no significant difference among various income groups with respect to financial literacy in India"

Ho 1.1"There is no significant difference between lower income group and middle income groups with respect to financial literacy in India"

Ho 1.2"There is no significant difference between middle income group and higher income groups with respect to financial literacy in India"

Ho 1.3 "There is no significant difference between lower income group and higher income groups with respect to financial literacy in India"

Ho 2 "There is no significant difference among various income groups with respect to personal financial management in India"

Ho 2.1 "There is no significant difference between lower income group and middle income groups with respect to personal financial management in India"

Ho 2.2 "There is no significant difference between middle income group and higher income groups with respect to personal financial management in India"

Ho 2.3 "There is no significant difference between lower income group and higher income groups with respect to personal financial management in India"

Ho 3 "There is no significant difference among various income groups with respect to impact of financial literacy on personal financial management in India"

Ho 3.1 "There is no significant difference between lower income group and middle income groups with respect to impact of financial literacy on personal financial management in India"

Ho 3.2 "There is no significant difference between middle income group and higher income groups with respect to impact of financial literacy on personal financial management in India"

Ho 3.3 "There is no significant difference between lower income group and higher income groups with respect to impact of financial literacy on personal financial management in India"

Hypotheses related to Region:

Ho 4   "There is no significant difference among various regions with respect to financial literacy in India"

Ho 4.1 "There is no significant difference between north region and east region with respect to financial literacy in India"

 Ho 4.2"There is no significant difference between east region and west region with respect to financial literacy in India"

Ho 4.3 "There is no significant difference between west region and south region with respect to financial literacy in India"

Ho 4.4 "There is no significant difference between north region and south region with respect to financial literacy in India"

Ho 4.5 "There is no significant difference between difference between north region and west region with respect to financial literacy in India"

Ho 4.6 "There is no significant difference between difference between east region and south region with respect to financial literacy in India

Ho 5   "There is no significant difference among various regions with respect to personal financial management in India"

Ho 6   "There is no significant difference between various regions with respect to impact of financial literacy on personal financial management in India"

Ho 6.1 "There is no significant difference between north region and east region with   respect to personal financial management in India"

Ho 6.2 "There is no significant difference between east region and west region with respect to impact of financial literacy on personal financial management in India"

Ho 6.3"There is no significant difference between west region and south region with respect to impact of financial literacy on personal financial management in India"

Ho 6.4"There is no significant difference between north region and south region with respect to impact of financial literacy on personal financial management in India"

Ho 6.5"There is no significant difference between difference between north region and west region with respect to impact of financial literacy on personal financial management in India"

Ho 6.6"There is no significant difference between difference between east region and south region with respect to impact of financial literacy on personal financial management in India"

Ho 7.1"There is no significant interaction between income and regions with respect to financial literacy in India"

Ho 7.2"There is no significant interaction between income and regions with respect to personal financial management in India"

H 7.3 "There is no significant interaction between income and regions with respect to impact of financial literacy on personal financial management in India"

Ho 8 "There is no significant relationship between financial literacy and personal financial management in India"

5. **Research Design:** The research design constitutes the blueprint for the collection, measurement, and analysis of data. It is the plan and structure of investigation so conceived as to obtain answer the research question. The preparation of such a design facilitates research to be as efficient as possible yielding maximal information. This study is descriptive in nature as it is conclusion oriented. The main purpose of such study is to state something

about existence of variables. In this study, two types of variables were considered; dependent and independent variables.

(a) The following three **Independent Variables** were considered: -

(i)   **Levels of financial literacy:** This study analyzed the different levels of financial literacy in India.

(ii)   **Different regions of India (4 Levels):** It had four levels:

- North
- East
- West
- South

(iii)   **Income (Monthly):It has three levels:**

a. Lower Income Group: Upto Rs 50000 per month

b. Middle Income Group: Between Rs 50000-100000 per month

c. Higher Income Group: Above Rs 100000 per month

(b) **Personal Financial Management** was taken as **Dependent variable. Personal Financial Management** includes insurance, retirement planning, house planning, mutual funds, PPF, savings bank account, real estate, stock and gold investments.

Research Technique: The technique used by the researcher for data collection was survey, wherein a well-devised closed ended questionnaire was given to the respondents and their opinions were taken. Thus, such a comprehensive survey enabled the researcher to define the problem more precisely and also helped to formulate the hypothesis.

6. The Sample:

Sampling Plan - The sample for the study was taken in the following manner:-

a) **Universe -** This is the first step in developing any sample design, where the researcher clearly defined the set of objectives. In the proposed study, the set of objects defined, i.e. the universe is infinite. The data was collected from various individuals, who were managing their own finances and were above 20 years of age, from various parts of India.

b) **Sampling Unit -** A sampling unit is one, which signifies the area where the unit for the study is situated. In this study, the researcher had taken the sampling unit as an individual who was above 20 years of age and manages his own finance from various parts of India. The reason for choosing India as a whole was desirability to get clearer picture of status of financial literacy of individuals and their personal financial management skills in various parts of India. Leading cities were taken from various states of India. The whole India was divided taking base as IST 82.5 degree east. They are as follows:

North region: Various cities were taken from various states like Agra, Meerut, Chamoli, Ghaziabad, Hapur, Kanpur, Lucknow, Noida, Varanasi from Uttar Pradesh, Chandigarh, Amritsar, Ludhiana from

Punjab, Dehradun, Haridwar, Nanital, Roorke, Musoorie from Uttrakhand, Katra from Jammu and Kashmir, Faridabad, Gurgaon, Hissar,Mohali, Pachkula, Rohtak from Haryana, New Delhi and NCR.

South region: Various cities covered from various states are Allapuzza, Kayamkulam, Kochi from Kerela, Chennai from Tamilnadu, Hyderabad from Andhra Pradesh, Bangalore, and Gadag from Karnataka.

West region: Various cities were covered from different states are Ahmedabad, Surat, Rajkot, Vadodara from Gujrat, Jaipur, jodhpur, Bikaner, Kota , Udaipur, Pratapgarh, Bhilwara from Rajasthan, Mumbai, Jhalna, Aurangabad, Nasik, Pune, Jalgoan from Maharashtra, Bhopal, Indore, Neemuch, Ratlam, Sagar, Dhar, Ujjain, Gwalior, Hoshangabad, Manasa, Mandsaur, Neemuch, Khargone, Khandwa, Sagar, Jhabua, Raisen, Shivpuri, Meghnagar from Madhya Pradesh.

East region: Various cities from various states are Bongaigaon, Guwahati, Abhaypura from Assam, Patna, Chapra from Bihar, Baksar, Kolkata from West Bengal, Bhubaneshwar from Odisa, Agartala from Tripura, Ranchi from Jharkhand, Bilaspur, Raipur from Chattishgarh, Shahdol, Balaghat, Jabalpur from MP eastern part.

Further, to obtain a better representation of the population, the selected sample consisted of respondents from different genders, age groups, income levels and educational background.

c) **Size of the sample -** This refers to the number of items to be selected from the universe to constitute a sample. The size of the sample should neither be excessively large nor too small. Hence the researcher considered total sample size of 650 individuals from different

demographic segments. To collect the sample, the researcher has approached more than 1000 individuals and received proper response from 650 customers. Demographic segmentation of these individuals are as follows:

Regions of India→ / Income groups ↓	North	East	West	South	Overall total
Lower Income Group	48	50	92	59	**249**
Middle Income Group	34	50	65	50	**199**
Higher Income Group	52	50	50	50	**202**
Total	**134**	**150**	**207**	**159**	**650**

d) **Parameters of Interest -** In determining the sample design, the researcher had to consider the question of the specific population parameter. This had a strong impact on the sample design which the researcher would accept. In this study, the researcher tried to find the impact level of financial literacy on personal financial management in India. The researcher tried to measure the impact by their level of financial literacy and knowledge regarding various investment options and application of that knowledge in their personal financial management.

7. Sampling Technique –

A sample design is a definite plan for obtaining a sample from a given population. It also refers to the technique or the procedure that the researcher adopts in selecting a sample. This is generally done before data collection. Selection of sample is an important part of the research work.

For this study, the researcher adopted a Non-probability Quota Sampling Method. In all there were 740 respondents, after scrutiny of responses, 90 inadequate responses were rejected, reducing the Sample Size to 650 respondents. The population of 650 individuals was divided into 3X4 bivariate factorial design i.e. Sample was divided into four regions North, East West and South and from each region and data was collected from all three income groups namely Lower Income group, Middle income group, Higher Income Group. The following factorial design was used for the present study.

Regions of India → / Income groups ↓	North	East	West	South
Lower Income Group	a	d	g	j
Middle Income Group	b	e	h	k
Higher Income Group	c	f	i	l

The factorial has two factors, i.e. Income groups and regions of India. The Personal Financial Management was taken as a dependent factor. Details of 12 strata are as under:

    a.   North lower income group.

    b.   North middle income group.

    c.   North higher income group.

    d.   East lower income group.

    e.   East middle income group.

    f.   East higher income group.

    g.   West lower income group.

    h.   West middle income group.

    i.   West higher income group.

    j.   South lower income group.

    k.   South middle income group.

    l.   South higher income group.

8. Data Collection Methods –

Pilot study:

The research methodology needs to be accurate to diminish errors in data collection and data analysis. Owing to this, a pilot study was done prior to the final survey. The purpose of the pilot test was to evaluate clarity and appropriateness of the questions contained in the questionnaire. Moreover, the pilot study allowed the researcher to identify more relevant questions for the instrument.

To use this survey method effectively, questionnaire was developed on seven point Likert Scale and this questionnaire was compiled on the basis of various instruments used in various surveys related to variables considered in the study for financial literacy. The pilot study was conducted in Indore city of Madhya Pradesh (India) based on convenience. The Pilot study was beginning of floating the questionnaire to respondents. It was floated among various corporate professionals from Banks, insurance companies, mutual funds companies, charted accountants, academicians for expert opinion. At initial stage there were 50 items in the study. A survey of 31 judges revealed that 40 out 50 questions were related to financial literacy.

Scale Administration and Questionnaire Development

Details of the instrument:

A standardized scale was devised specially for the purpose of this study. After conducting pilot survey, the questionnaire demanded certain modifications. These modifications were incorporated and final questionnaire was designed. Subsequent to pilot survey, answers of questions were made limited to seven options only , indicating least to most favorable on scale of 1-7; one as strongly disagree and seven as strongly agree. Thereafter, questions were classified under most suitable captions of variables considered in the study. Based on this, the final instrument has total of 40 questions in addition to the

demographic details of respondents. Furthermore, a likewise questionnaire was constructed for personal financial management to know the impact of financial literacy on personal financial management in India. Once the instrument got finalized, it was made online also for the ease of respondents.

Questionnaire Design:

The questionnaire was divided into three categories:

Part A: This was to know the demographic details of respondents. This part includes questions on Name (Optional), City, Age, Gender, Occupation and Monthly income. The demographic details were obtained in order to elucidate the sample and its interpretation.

Part B: It contained questions regarding their financial literacy. It tried to found out the present level of financial literacy in various regions of India regarding various investment tools. Various investment alternatives were taken into consideration like insurance, mutual funds, pension plans, housing loans, savings accounts, fixed deposits, Post Office schemes, investments in gold and real estate.

Part C: Thereafter to get to know their personal financial management various questions regarding acquisition of various investment options were asked in this section. This section analyzed that how an individual managed their own finances and also tried to found out that did individuals used their literacy skills while financial planning. It involved tax planning, retirement planning, investment planning, real estate or housing, emergency funding, debt extinguishment, insurance planning.

Circulation of instrument:

The set of questionnaires were floated both in personal and online. Individuals participating in survey were made comprehended that the data will be used for research purpose and will be reported anonymously. Name of the individuals were kept optional to enable the individuals to provide information without any inhibition. Some individuals from different regions of India were very helpful

and got the questionnaire filled promptly. However, to few various reminders were sent and constant follow-ups were done through emails, what's app and telephones.

Thus, the tool for data collection was on standardized scale, which had questions relating to financial literacy and personal financial management in India. The scale was divided into two parts. Part one indicates items of financial literacy and part two indicates items of personal financial management. However, both the parts consist of the same number of questions. A reliability test was applied on SPSS 20.0 Version. This scale is reported to have high reliability (.961) using Cronbach alpha method which shows good correlation among items, (.697) using Guttmann spilt half method and high validity (0.836) which was calculated on the basis on Garret formula which is square root of reliability and was found be good. The details of scale and its administration are given in Appendix no. I and II.

Generally there is use of already available scales but as there was non-availability of proper scales, a scale was built to measure financial literacy and personal financial management India.

9. Sources of Data –

The data was collected from primary as well as secondary sources.

Primary Sources –

For recent and better data interpretation primary research was conducted through questionnaire survey in various parts of India. The data was collected with the help of standardized scale from various individuals to check their level of financial literacy and personal financial management skills. Thus, this technique has been used to gain the most relevant information and better analysis of data.

Secondary Sources –

The secondary sources, which were used for data collection, were existing literature relevant to the study, journals, magazines, books and various web sites. They provided information about the different facets of level of financial literacy and various personal financial management tools preferred in different parts of India and other countries. They also gave insight into present level of literacy levels and disclosed various factors which affect individuals in managing their finances.
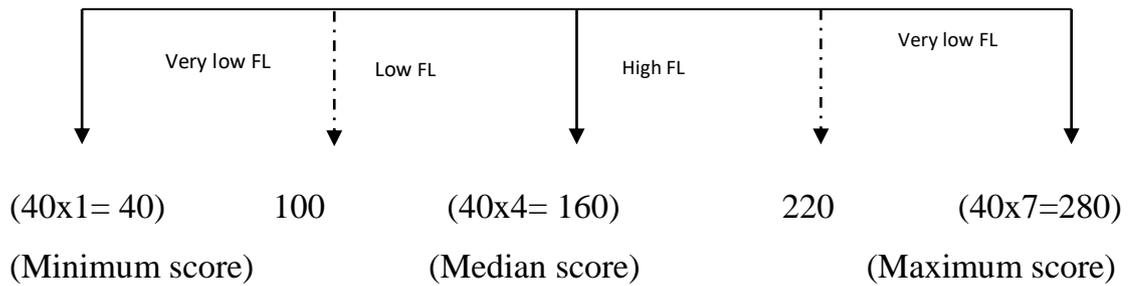
10. Data Analysis
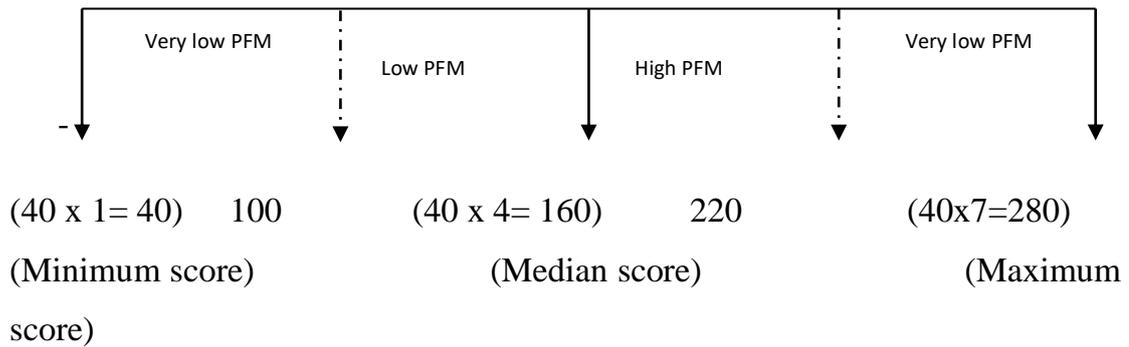
The data was analyzed in the following manner:-

The opinion of the respondents was received through scale and sums of the responses were calculated. The seven point Likert Type Scale contained responses ranging from strongly agree, which carried a score of 7 to strongly disagree, which had a score of 1.

The sum score of the responses of financial literacy and personal financial management was taken into consideration, which represent total financial literacy(FL)score and total personal financial management (PFM) score. Then impact score was calculated as difference between financial literacy scores and PFM scores. In this calculation –6 considered as a high satisfaction score and 6 considered as high dissatisfaction score for each item. Afterwards, the frequency of occurrence of each particular score was calculated for all three elements i.e. financial literacy, personal financial management and impact score. For the analysis of data, the researcher has applied necessary statistical tools on total FL score, total PFM score and total impact score. The middle point or the median of these frequencies was calculated and all responses were considered in following manner.
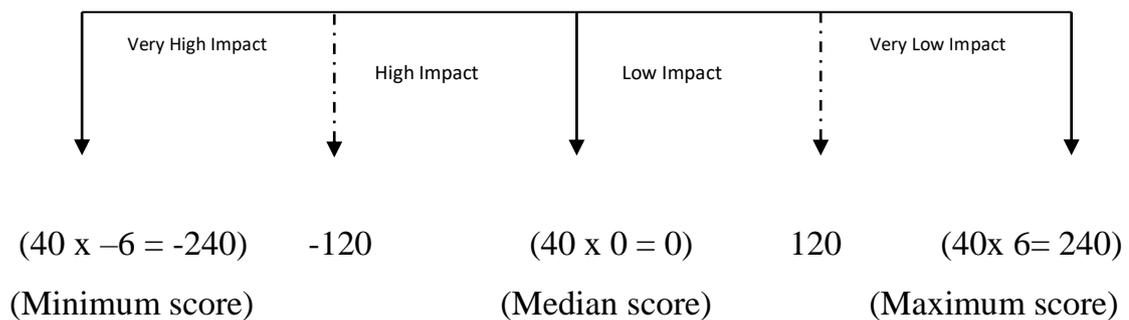
Total Financial Literacy(FL) Score

Very low FL	Low FL	High FL	Very low FL

(40x1= 40)   100   (40x4= 160)   220   (40x7=280)

(Minimum score)   (Median score)   (Maximum score)

Total Personal Financial Management (PFM) Score

Very low PFM	Low PFM	High PFM	Very low PFM

(40 x 1= 40)   100   (40 x 4= 160)   220   (40x7=280)

(Minimum score)   (Median score)   (Maximum score)

Total Financial Literacy – Total PFM = Total Impact Score

Total Impact Score

Very High Impact	High Impact	Low Impact	Very Low Impact

(40 x –6 = -240)   -120   (40 x 0 = 0)   120   (40x 6= 240)

(Minimum score)   (Median score)   (Maximum score)

In Financial Literacy and Personal Financial Management score greater than or equal to median value were taken as high financial literacy and high personal financial management. If the score was less than median, value was taken as low financial literacy and low personal financial management. In impact score,

score less than median value was taken as high impact score and if the score greater than or equal to median value were taken as low impact score.

Similarly, on the basis of income groups and regions, the population was divided into 12 categories as explained in sampling technique and the literacy, PFM and impact score was also made, and analyzed. The data was analyzed using Factor analysis, ANOVA and Regression analysis.

11. Scope of the study:

As per a global survey in June 2017 by Standard and Poor's Financial Services LLC (S & P) indicated that "less than 25% of adults are financially literate in South Asian countries. For an average Indian, financial literacy is yet to become a priority. India is home to 17.5% of the world's population but nearly 76% of its adult population does not understand even the basic financial concepts". The survey revealed that financial literacy in India is poor as compared to other countries of the world. This burdens an economy with higher cost of financial security and low financial prosperity. There is myth in minds of individuals of India that amount of money or wealth has direct relation with literacy and they also believed the financial literacy is required when individual grows up i.e. after certain age as attainment of knowledge before certain age may mislead them from education. These wrong perceptions act as a hindrance in development of level of financial literacy and also personal financial management as they don't have awareness regarding how much to save, how much to invest, what amount should be kept as contingencies i.e. what exactly is appropriate for them. Financial regulators in India—Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), Insurance Regulatory and Development Authority of India (IRDAI) and Pension Fund Regulatory and Development Authority (PFRDA)— have signed a joint charter called 'National Strategy for Financial Education', which took into account all initiatives taken by banks, stock exchanges, broking houses, mutual funds, insurance companies. It keeps an eye on them and their joint efforts to promote financial literacy in India.

Various other efforts have been taken by government through medium of digital India. Government aimed to increase the digital fluency of individuals so that they may be able to increase financial literacy through videos and short films etc. All information regarding every product was available online and even one can find reviews against them to match their priorities and can also approach them easily if they want to invest. The recent giant action of demonetization will bring more individuals under organized sector net which increases the chances of more penetration under financial inclusion and so the financial literacy. As per World Bank Gallup Global Findex Survey 2014, "only 53% of Indians had bank accounts against 79% in China till 2014 and the gap has narrowed significantly after the launch of Pradhan Mantri Jan Dhan Yojana, which has led to over 280 million new accounts being added to the financial system (as of 5 April 2017, according to government data)".Recently government has launched the digital wallets i.e. Universal Payments Interface (UPI) and new payment ways for cashless economy. This is also again a part of digital move by government. According to RBI, online transactions had increased from 419 million in November 2015 to 692 billion in March 2017. It was seen that Nigeria showed 910 million transactions in 2017 and has one fourth economy as compared to India. There is an effort made by government to increase mobile payments as India constitutes second biggest smart phone market with over 220 million users and it is expected to grow by 50 million till 2020. So individuals need to increase their financial knowledge and mental acumen for adopting the changes. These changes will also bring change in their personal financial management techniques as their literacy skills will give them good opportunities to earn and even good knowledge to invest hard earned money. With such brilliant moves they will start proper planning of investments then they will have secured financial future. They will have insurance for retirement planning and they will also, they will also diversify themselves between FDs , mutual funds, savings accounts and other investment options. This will give acquire more opportunities to plan for a house , plan for a car and fulfill their dreams.

Hence, it can be stated that overall financial literacy and personal financial management acts key pillars for well-developed economy. This combination ensures financial security and makes individual more fragile to deal with their personal finances. Government needs to create awareness and as well customized financial products for all income groups of different regions of India, which enhances individual's possibility of financial solutions. Though government is planning for digital India and has created enormous possibilities for development but, still adequate financial literacy and balanced personal financial management is distant dream as even educated masses are not able to manage their finances themselves. Thus, it to fulfill the dream of financial literacy and personal financial management requires lots of efforts so that it doesn't appear to be a question mark for future.

Thus, this study gains a lot of importance and it concentrates on the following facets of Financial literacy and Personal Financial Management in India: -

1. Current level of financial literacy in India.
2. Ways for more penetration of financial literacy in India.
3. Reasons responsible for low financial literacy among various income groups in various regions of India.
4. Personal Financial management techniques adopted by of individuals of India.
5. Factors which affects personal financial management
6. Impact of financial literacy on personal financial management in India.
7. Gains its importance by the concept of balanced financial planning according to various demographics.

12. Limitations of the study:

(a) This study had three independent variables i.e. Monthly Income, Regions and Financial Literacy of India. Income was limited to three levels i.e. Lower Income Group(LIG), Middle income group (MIG), Higher income

group (HIG). Monthly Income with less than 50,000 was considered to be the Lower Income Group, those whose income lies between 50000-100000 were considered to be as Middle income group , and those whose income is above 100000 was considered to be as Higher income group .

Region had four levels i.e. north, east, west and south. Under north we have covered some cities of various states had been covered like Uttar Pradesh, Uttarakhand, Punjab, Jammuand Kashmir, Haryana which were above the line of equator; in east region some cities were covered from of various states had been covered like Assam, Bihar, West Bengal, Odisha, Tripura, Jharkhand, Chhattisgarh, Madhya Pradesh eastern part. In west region some cities were covered from states like Gujrat Rajasthan, Maharashtra, and Madhya Pradesh. In south region some cities were covered from states like Kerela, Andhra Pradesh, and Tamil Nadu. In another study a researcher can divide regions of India into north, east, west, south and center.

(b) This study was restricted to only those individuals who manage their own finances. The study does not incorporate home makers and other individuals.

(c) This study restricted itself to limited investments among all option which were available in the market and has not covered all. Under this study the researcher had covered financial literacy only related to certain investments.

(d) Limited questions pertaining to various features of particular investment had been asked and covered, various other features had been ignored.

(e) In the course of study, respondents above 40 years of age were very less as compared to other respondents.

(f) Personal financial management was checked with limited questions which were based on financial literacy. They can be increased for more accuracy.

(g) The study covered only individual's level of financial literacy and its impact on personal financial management; moreover households and

firm's responses regarding financial literacy and its impact on personal financial management was not studied.

(h) In this study while data collection all cities of states had been compared on same level, which seems to be bias sometimes. Various classifications of cities had kept in various states on same level and had been compared.

(i) Though the time taken for the entire study was more than two years, the personal interaction with individual's was limited to 6 to 9 months. As a result, time was a major constraint. Studying the impact of financial literacy for a longer period would help to do an even more detailed and elaborate research on this subject.

(j) The study is subject to common limitations of sample survey.

(k) The study suffers from loopholes of secondary information available as many sources published online are not necessarily correct.

13. Relevance of the study-

In last decade the importance of level of financial literacy and personal financial management has increased to a greater extent. Financial literacy, financial inclusion and role of technology are on the main agenda of the government. Stressing on financial literacy is very important as it plays crucial role in enabling individuals with development of personal financial management skills with powerful grasp on financial concepts and also about financial perils linked with investments. Financial literacy should be to be made an integral part of every individual lives so that they negotiate properly in their financial landscape and do proper risk management. Today, government has taking initiatives with various schemes like financial inclusion, digital India, demonetization, GST reforms etc. Thus, this creates dire need in improvement of financial literacy which will make individual more financially responsible and secured. Financial literacy and so forth appropriate personal financial management has direct impact on economic health of the country which would make the economy more competitive and strong.