

CHAPTER IV

RESULTS AND DISCUSSION

The chapter deals with the analysis of data and discussion of results related to financial literacy, personal financial management and impact of financial literacy on personal financial management.

1. Test of Reliability and Validity:

Data analysis has been carried out to derive something meaningful understanding of relationship between various variables and data collected. The goodness of analysis is evaluated mainly in terms of reliability and validity. Reliability is measure of stability and internal consistency. It shows how closely the set of items are related to each other and validity is ability of device to measure what it is intended to measure.

Reliability analysis:

In present study the reliability is linked with internal consistency which is generally used by researchers in various application areas. The most popular test which is used widely is Cronbach alpha co-efficient. The alpha coefficient a value varies from zero to one which indicates higher the value better will be the reliability.

The measure scales 80 items of attributes are reliable as Cronbach alpha coefficient is .962(**Table No. 2.1**). It showed that the scale items are consistent with each other and this could be used further for analysis.

The Guttman split half method was adopted to check reliability. The measure scales items of attributes are reliable as Guttman split half coefficient is .697. It shows that the scale items are consistent with each other and this could be used further for analysis

Validity of the study:

Merraim and Wenning 1988 argue that validity does not ensure reliability and reliability doesn't ensure validity. There is close connection between two concepts reliability and validity as lay stress on efficiency. Reliability is concerned with stability of test scores. Validity on other hand implies evaluation in terms of outside and independent criteria. "To be a valid a test must be reliable" Garret.

Validity can be calculated mathematically by taking square root of reliability

Validity = Square root of reliability coefficient value

Validity = Square root of .96 = .9797(Crobach Alpha)

Validity = Square root of .679= .834(Guttman Split half)

2. Demographic details of respondents:

Parameter	Level	No. of Respondents	Percentage
GENDER	Male	374	57.53%
	Female	276	42.46%
	Total	650	100%

Table 2.2 – Analysis of population on the basis on Gender.

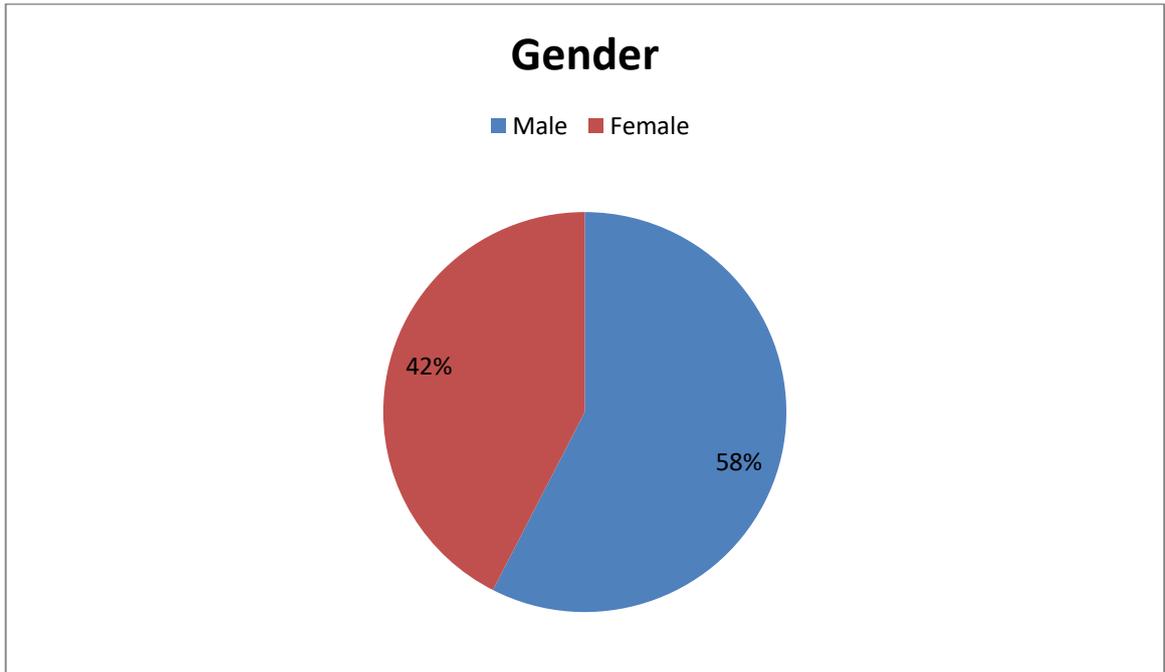


Figure 2.1 – Gender wise classification

It was seen from **the Table No. 2.2**, the first important demographic variable was gender and it was found that total number of respondents were 650 individuals. Among them 374 were found to be males which constitutes to 58 % and 276 were females which constituted to 42.46 %.

Parameter	Level	No. of Respondents	Percentage
AGE	Between 20-30	361	55.53%
	Between 31-40	242	37.23%
	Above 40	47	7.23%
	Total	650	100%

Table 2.3 – Analysis of population on the basis on Age.

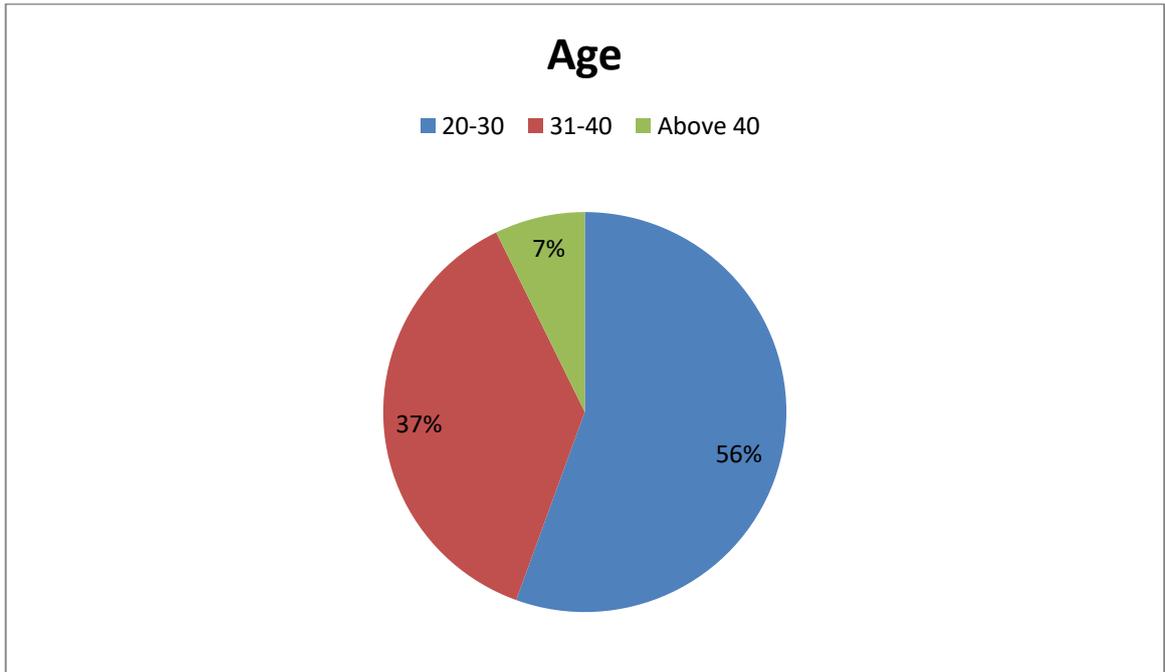


Figure 2.2 – Age wise classification

It was seen from **the Table No. 2.3**, The second demographic variable which was considered was age and it was divided into three parts i.e. from 20-30, 31-40 and above 40 as stated in the table and graph. Total number of respondents were 650, among them 361 were from age group 20-30 which constitutes to 56 %, 242 were from the 31-40 age group which constituted to 37 % and 47 were above 40 which constitutes to 7 %.

Parameter	Level	No. of Respondents	Percentage
OCCUPTION	Business Class	296	45.53%
	Service Class	216	33.23%
	Self -Occupied Professionals	138	21.23%
	Total	650	100%

Table 2.4 – Analysis of population on the basis on occupation.

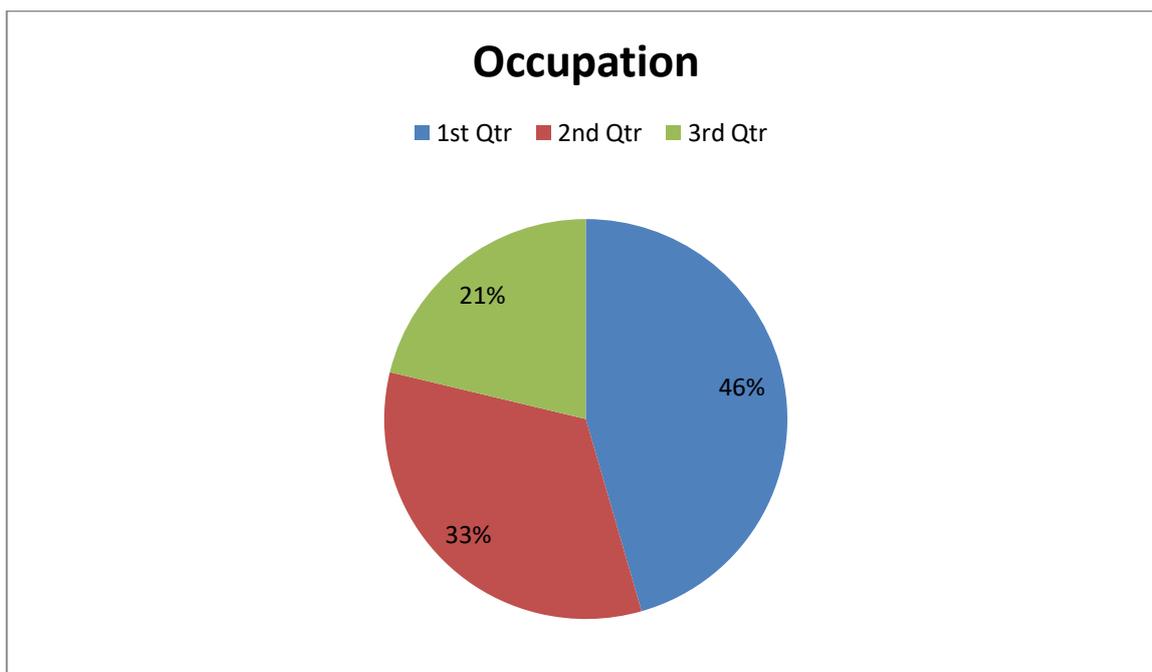


Figure 2.3 – Occupation wise classification

It was seen from **the Table No. 2.4**, The third demographic variable which was considered was occupation and it was again divided into three parts i.e. business class, services class and Self occupied Professionals as stated in the table and graph. Total number of respondents were 650, among them 296 were from business class which constitutes to 46 %, 216 were from the service class which constituted to 33 % and 138 were self occupied professionals which constitutes to 21 %

Parameter	Level	No. of Respondents	Percentage
MONTHLY INCOME	LIG	249	38.30%
	MIG	199	30.62%
	HIG	202	31.07%
	Total	650	100%

Table 2.5 – Analysis of population on the basis on Monthly Income.

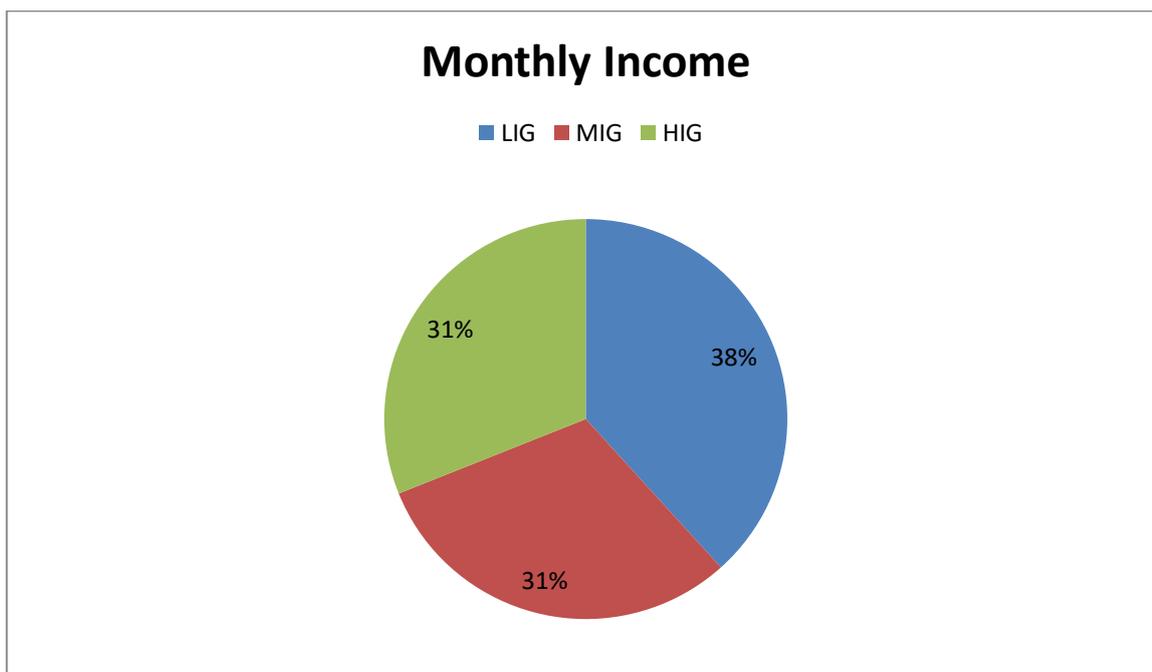


Figure 2.4 – Monthly Income wise classification

It was seen from **the Table No. 2.5**, The fourth demographic variable which was considered was monthly income and it was again divided into three parts i.e. Lower Income Group, Middle income group and Higher income group as stated in the table and graph. Total number of respondents were 650, among them 249 were from Lower Income Group which constitutes to 38 %, 199 were from the Middle income group which constituted to 31 % and 202 were Higher income group which constitutes to 31 %.

Parameter	Level	No. of Respondents	Percentage
REGION	North	134	20.62%
	East	150	23.08%
	West	207	31.85%
	South	159	24.46%
	Total	650	100%

Table 2.6 – Analysis of population on the basis on Region.

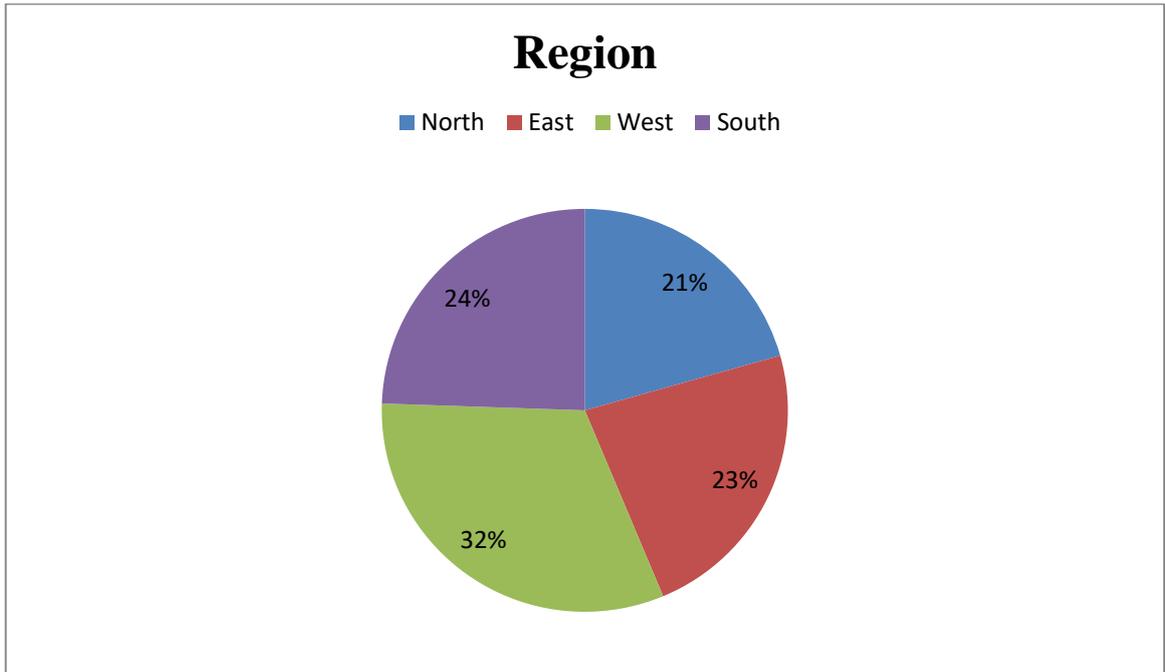


Figure 2.5 – Region wise classification

It was seen from **the Table No. 2.6**, The fifth demographic variable which was considered was regions and it was divided into four parts i.e. north, east, west and south as stated in the table and graph. Total number of respondents were 650, among them 134 were from north, which constitutes to 20 %, 150 were from the east which constituted to 23 %, 207 were from the west which constituted to 32 % and 159 were from south which constitutes to 25 %.

3.1 ANALYSIS RELATED TO OBJECTIVE 1

Factor Analysis of Personal Financial Management

The Kaiser-Meyer-Olkin KMO value of factor analysis (**Refer Table No. 3.1**) is 0.900, which indicates that factor analysis is reliable to be done for 40 variables related with Personal Financial Management. And also the value was significance, which also relates the same. As the first step in examining the validity of each measure along with descriptive statistics of different parameters of personal financial management, the exploratory factor analysis was employed using SPSS 20.0. All the items of all the measures were factor analyzed together to test the convergent and discriminate validity of the

measures. The items were subjected to Principal analysis (with Varimax Rotation). The factor loading represented the correlation between the items with the construct (Hair et al. 1992). In component analysis, only the factor having Eigen values greater than 1 was considered significant. A minimum value of 0.50 was used to indicate the loading of any factor. The results of Communalities are presented in **Table No. 3.2:**

From the **Table No.3.2** on Communalities, it has been revealed that out of 40 variables of personal financial management have minimum range of .514 to maximum range of .802. It means that these are all acceptable. For further analysis all 40 variables have been included.

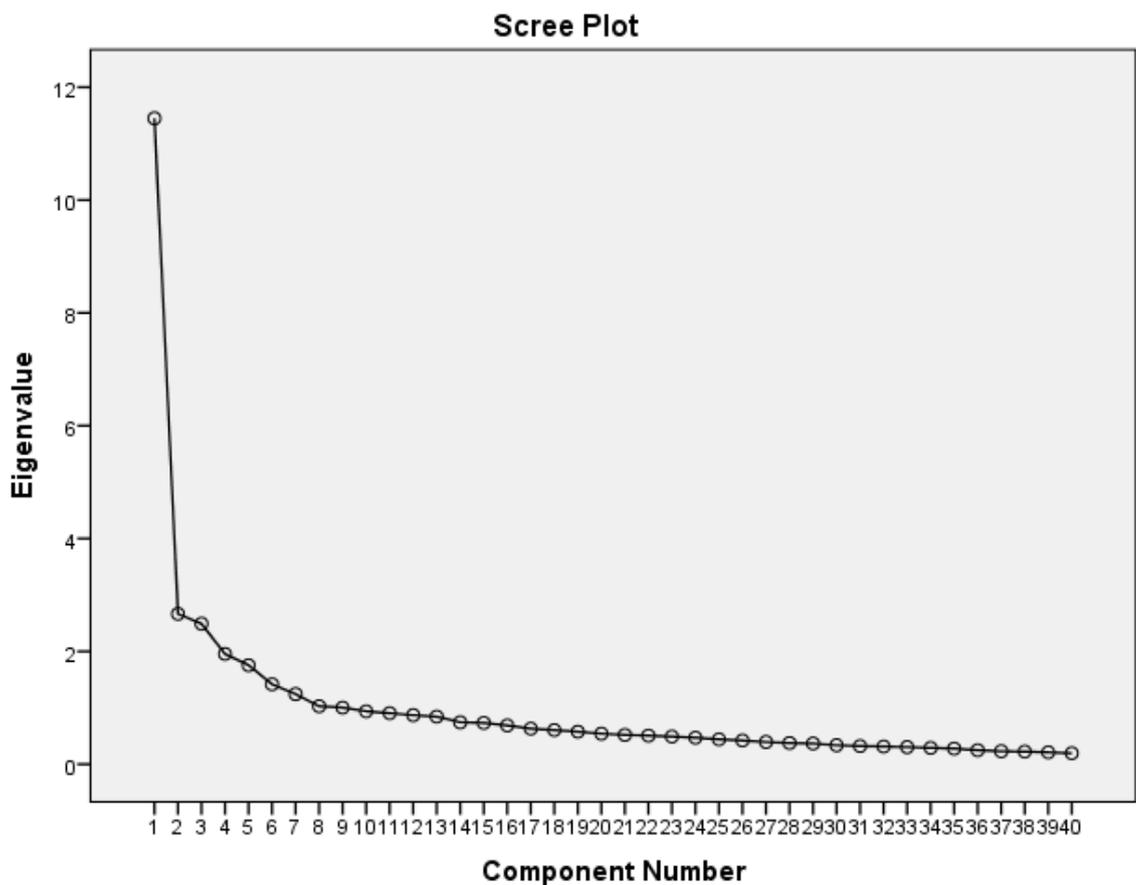


Figure 3.1 -Screen plot of Eigen values of Personal Financial Management.

The factor analysis was done for all the 40 variables. All these variables have reduced to 9 different factors, which explained around 62.499% of the total variance **Table No. 3.3**. The first factor with their loading pattern indicates that a general factor is running through out all the items explaining Eigen value 11.448, explaining 28.620 % of variance and cumulative about 28.620% the variance. The second factor explains the Eigen value 2.664, explaining 6.661 % of variance and cumulative about 35.281% of the variance, the third factor explains the Eigen value 2.490, explaining 6.224 % of variance and cumulative about 41.505% of the variance, the fourth factor explains the Eigen value 1.953, explaining 4.884 % of variance and cumulative about 46.388 % of the variance, the fifth factor explains the Eigen value 1.755, explaining 3.387 % of variance and cumulative about 50.755% of the variance, the sixth factor explains the Eigen value 1.416, explaining 3.540 % of variance and cumulative about 54.316 % of the variance, the seventh factor explains the Eigen value 1.243, explaining 3.107 % of variance and cumulative about 57.423 % of the variance, the eighth factor explains the Eigen value 1.208, explaining 2.569 % of variance and cumulative about 59.992 % of the variance and the last ninth factor explains the Eigen value 1.003, explaining 2.507 % of variance and cumulative about 62.499% of the variance. After the varimax rotation of 40 variables, all variables have been considered for the discussion of factors which contribute to the personal financial management.

The Eigen values associated with each factor represent the variance explained by that particular linear component and also displays the Eigen value in terms of the percentage of variance explained in **Table No. 3.4**. The Screen Plot reveals that there is no overlapping of the variables and every variable has an individual effect on the personal financial management. (**Figure No. 3.1**)

Table: 3.4 - LOADINGS WITH VARIABLES (Personal Financial Management)

Factors	Items	Eigen Values	% of Variance	Cum % of Variance
Factor 1 MARKET RISK	<p>P20 Mutual fund is professionally managed with expectation of high returns in future. (.811)</p> <p>P18 Mutual funds are subject to market risks and have no guaranteed returns. (.785)</p> <p>P22)facility of systematic investment plan (SIP) in mutual funds to invest regular residual income. (.741)</p> <p>P 38investments are properly balanced between debt and equity funds(.562)</p> <p>P19 have invested in mutual funds because of my inadequate knowledge about stock market. (.520)</p> <p>P36 have invested in stock market after analysing various risks related issues. (.516)</p>	11.488	28.620	28.620
Factor 2 SAFETY AND SECURITY	<p>P11 have taken life insurance because I am the earning member of my family. (.708)</p> <p>P5 have taken term life insurance policy mainly to financially support my dependent family members in case of my death. (.702)</p> <p>P10 have taken life insurance policy in my early age because I know that premium would be increased in proportionate ratio of my age. (.678)</p> <p>P1 health insurance scheme primarily to cover expenses related to hospitalization. (.629)</p> <p>P23 have taken housing loan to replace the house rent with instalments because it will fulfill my dream of owning the house. (.502)</p>	2.664	6.661	35.281

<p>Factor 3 REGULAR INCOME</p>	<p>P29 I have de-positd some part of my investment in fixed deposit (FD) schemes as it is not a risky investment. (.703) P30 I have invested some funds in regular income fixed deposit schemes because it provides regular interest income. (.687) P28 I have taken recurring deposit to invest my small regular residual income as part of personal financial management. (.636) P33 I maintain my three months' income in bank accounts to safeguard myself against the unforeseen contingencies. (.528) P32 I have taken post office schemes as an alternate to bank FDs. (.500)</p>	<p>2.490</p>	<p>6.224</p>	<p>41.505</p>
<p>Factor 4 TAX REBATE</p>	<p>P3 The main objective of health insurance policies is to avail tax benefits under Section 80D of Income Tax Act. (.774) P8 The main objective of taking life insurance is to avail tax benefits of life insurance premium under section 80C of Income Tax Act. (.722) P13 The main objective of contribution to pension plans is to avail benefit under section 80 CCC and 80 CCD of Income Tax Act. (.637) P24 The main objective of taking housing loan is to avail tax benefit on repayment of principal amount under section 80C of Income Tax Act up to certain limit. (.549) P25 The main objective of taking housing loan is to avail tax benefit on interest payments under section 24 of Income Tax Act. (.511)</p>	<p>1.953</p>	<p>4.884</p>	<p>46.388</p>
<p>Factor 5 FINANCIAL PLANNING</p>	<p>P16 have done partial withdrawals from PPF deposit funds after 7th year as part of my personal financial planning. (.725) P15 I purposely took loan against PPF deposits between 3rd financial year to 6th financial year as part of my personal financial planning. (.718) P14 I have taken property insurance which</p>	<p>1.755</p>	<p>3.3875</p>	<p>50.775</p>

	will cover risk of unforeseen events like fire accidents, theft etc. (.497)			
Factor 6 LOAN FACILITY	P31 I have taken loan facility against FD's as part of my personal financial management. (.639) P37 have invested in commodity market and stock market and yielded negative returns. (.633) P6 I have taken loan facility against security of life insurance policy. (.500)	1.416	3.540	54.316
Factor 7 HIGH LIQUIDITY	P34 I have invested in gold as it is considered as risk coverage against inflation in long term. (.788) P35 I have taken gold as part of my portfolio investment as it provides high liquidity. (.746)	1.243	3.107	57.423
Factor 8 TIME HORIZON	P40 I have invested lump sum residual income in real estate in spite of knowing that it will block my capital funds for long period. (.757) P39 have invested in real estate market because it generates high returns in long term. (.736)	1.028	2.569	59.992
FACTOR 9 HIGH RETURNS	P21 I have invested in open ended mutual funds as they provide more liquidity. (.620) P27 I rarely keep my surplus residual income in savings account as it gives only 4-6% return annually. (.591)	1.003	2.507	62.499

These 5 variables were eliminated from the study as they have less than .05 value.

These were: P4 (.443), P9 (.439), P26 (.377), P2 (.479) P17 (.464).

Various factors can be explained as:

Factor 1: Market Risk

Market Risk consist of six items they are :Mutual funds professionally managed with expectation of high returns in future, Mutual funds are subject to market risks and have no guaranteed returns, facility of systematic investment plan (SIP) in mutual funds to invest regular residual income, investments are properly balanced between debt and equity funds, have invested in mutual funds because of my inadequate knowledge about stock market, have invested in stock market after analyzing various risks related issues. Among all of them “Mutual fund is professionally managed with expectation of high returns in future” showed the highest item load of .811. The total load of this factor is 3.935 with highest coverage of 28.620 percent variance and cumulative of 28.620 percent.

Factor 2: Safety and Security

Safety and Security consist of five items they are : I have taken life insurance because I am the earning member of my family, I have taken term life insurance policy mainly to financially support my dependent family members in case of my death, I have taken life insurance policy in my early age because I know that premium would be increased in proportionate ratio of my age, I have taken health insurance scheme primarily to cover expenses related to hospitalization, I have taken housing loan to replace the house rent with installments because it will fulfill my dream of owning the house. Among all of them “I have taken life insurance because I am the earning member of my family.” showed the highest item load of .708. The total load of this factor is 3.219 with highest coverage of 6.661 percent variance and cumulative of 35.281 percent.

Factor 3: Regular Income

Regular Income consist of five items they are : I have de-positd some part of my investment in fixed deposit (FD) schemes as it is not a risky investment, I have invested some funds in regular income fixed deposit schemes because it

provides regular interest income, I have taken recurring deposit to invest my small regular residual income as part of personal financial management, I maintain my three months' income in bank accounts to safeguard myself against the unforeseen contingencies, I have taken post office schemes as an alternate to bank FDs. Among all of them "I have de-positated some part of my investment in fixed deposit (FD) schemes as it is not a risky investment." showed the highest item load of .703. The total load of this factor is 3.054 with highest coverage of 6.224 percent variance and cumulative of 41.505 percent.

Factor 4: Tax Rebate

Tax Rebate consist of five items they are : The main objective of health insurance policies is to avail tax benefits under Section 80D of Income Tax Act. The main objective of taking life insurance is to avail tax benefits of life insurance premium under section 80C of Income Tax Act. The main objective of contribution to pension plans is to avail benefit under section 80 CCC and 80 CCD of Income Tax Act. The main objective of taking housing loan is to avail tax benefit on repayment of principal amount under section 80C of Income Tax Act up to certain limit. The main objective of taking housing loan is to avail tax benefit on interest payments under section 24 of Income Tax Act. Among all of them "The main objective of health insurance policies is to avail tax benefits under Section 80D of Income Tax Act." showed the highest item load of .7741. The total load of this factor is 3.193 with highest coverage of 4.884 percent variance and cumulative of 46.388 percent.

Factor 5: Financial Planning

Financial Planning consist of three items they are: I have done partial withdrawals from PPF deposit funds after 7th year as part of my personal financial planning. I purposely took loan against PPF deposits between 3rd financial year to 6th financial year as part of my personal financial planning. I have taken property insurance which will cover risk of unforeseen events like fire accidents, theft etc. Among all of them "I have done partial withdrawals from PPF deposit funds after 7th year as part of my personal financial

planning” showed the highest item load of .725.. The total load of this factor is 1.94 with highest coverage of 3.387 percent variance and cumulative of 50.755 percent.

Factor 6: Loan Facility

Financial Planning consist of three items they are : I have taken loan facility against FD’s as part of my personal financial management, I have invested in commodity market and stock market and yielded negative returns, I have taken loan facility against security of life insurance policy. Among all of them “I have taken loan facility against FD’s as part of my personal financial management..” showed the highest item load of .639. The total load of this factor is 1.772 with highest coverage of 3.540 percent variance and cumulative of 54.316 percent.

Factor 7: High Liquidity

High Liquidity consist of two items they are: I have invested in gold as it is considered as risk coverage against inflation in long term. I have taken gold as part of my portfolio investment as it provides high liquidity. Among all of them “I have invested in gold as it is considered as risk coverage against inflation in long term” showed the highest item load of .788. The total load of this factor is 1.534 with highest coverage of 3.107 percent variance and cumulative of 57.423 percent.

Factor 8: Time horizon

Time horizon consist of two items they are: I have invested lump sum residual income in real estate in spite of knowing that it will block my capital funds for long period. I have invested in real estate market because it generates high returns in long term. Among all of them “I have invested lump sum residual income in real estate in spite of knowing that it will block my capital funds for long period” showed the highest item load of .757. The total load of this factor is 1.493 with highest coverage of 2.569 percent variance and cumulative of 59.992 percent.

Factor 9: High Returns

High Returns consist of three items they are : I have invested in open ended mutual funds as they provide more liquidity, I rarely keep my surplus residual income in savings account as it gives only 4-6% return annually. Among all of them “I have invested in open ended mutual funds as they provide more liquidity” showed the highest item load of .788. The total load of this factor is 1.718 with highest coverage of 2.507 percent variance and cumulative of 62.499 percent.

As screen plot (**Fig 3.1**) interprets that values are very close to each other and there does not lies much difference than these factors were not used for further analysis

3.2 ANALYSIS RELATED TO OBJECTIVE 2

The data was collected with the help of a standardized scale from 650 respondents. This scale has two parts containing 40 questions in each part, i.e. financial literacy and personal financial management. The sum scores of the financial literacy and personal financial management were taken into consideration, which represent total financial literacy and total personal financial management. Then impact score was calculated as difference between total financial literacy and total personal financial management. The frequency of occurrence of each particular score was calculated for all three elements, i.e. financial literacy, personal financial management and impact score. The middle point or the median of these frequencies was also calculated for further calculations.

The data collected were analyzed according to different segments. The sample distribution of individuals as it relates to **income and region** characteristics. For the analysis of data, the researcher has applied **ANOVA** with the help of SPSS. The following discussion presented the results and findings of the financial literacy, personal financial management and impact of financial literacy on personal financial management in India.

3.2.1 ANOVA for Financial Literacy and Income Group

Total numbers of items were 40 which were based on overall financial literacy as per Income groups. The middle point or the median of the frequencies was calculated to know the level of financial literacy of all individuals in India. For financial literacy it was calculated to be 160. The minimum score was 40 and maximum score was calculated to be 280. This was taken as the reference for further calculation. The financial literacy score in the range of 40 to 160 was taken as low score and 160 to 280 was taken as high score. Mean score and standard deviation value were also calculated for further analysis.

1.1 One way analysis of variance is a statistical test that determines the probability values of a quantifiable data variable for two or more than independent sample or groups. This test is applied for ascertaining whether there is difference between the income groups or not. This technique was adopted to find and compare different income group's i.e. higher income group, middle income group and lower income group towards financial literacy in India. The respondents of lower income group were 249, middle income group was 199 and higher income group was 202 as per **Table No. 4.1**.

From the above **Table No. 4.2**, it was revealed F value for **income groups** was 12.272 and was found to be **significant** at 0.05 level of significance with degrees of freedom 2/650. It implies that the mean financial literacy score of various income groups differ significantly with each other.

In light of this, the null hypothesis namely "*There is no significant difference among various income groups with respect to level of financial literacy in India*" has been rejected.

This shows that there is statistical difference among three income groups with respect to their financial literacy in India. For further analysis, three sub null hypothesis were proposed and it was based on three different income groups- Lower and middle, middle and higher and higher and lower income groups in

India. To explore further that which income group has higher financial literacy, the researcher had applied post hoc test, which indicated the following results.

(i) As per **Table No. 4.3** post hoc difference between lower income and middle income group was found to be 12.899 and is **significant** for lower income group and middle income group. It reveals that the mean financial literacy scores of **lower income and higher income groups differ significantly** with each other.

Thus, in the light of this, the null hypothesis namely *“There is no significant difference between lower income group and middle income group with respect to level of financial literacy in India”* is not accepted.

Further the mean financial literacy score of **middle income group** is 197.78 which is **significantly** higher than **lower income group** mean 184.88. Hence, it can be concluded that the financial literacy of **lower income group and middle income group** differ significantly with respect to financial literacy in India.

According to the view of **Bahadur (2015)** financial literacy is of utmost importance for any country’s economic growth. Financial education is a dying need of the hour and a two way process; where financial education is taught and in turn we learn what ‘Real India’ is. Overall study was based on financial awareness, financial literacy and don’t know about that. It was concluded that individuals was not much aware about financial literacy because they prefer save their money rather than channelizing it in some investment. Individuals only had faith in insurance and similar kind of financial services or bank account. It was observed that most people refrained themselves from investment of any kind either because they were unaware of how to invest their money in a profitable and safe manner or they simply felt that it was too risky an option for them to undertake.

It was observed that overall financial literacy scores of lower income groups and middle income groups depict high financial literacy. It was also found that

financial literacy of middle income group was higher than lower income group because in case of lower groups the quality of education level availed is low as compared to middle groups. They cannot afford much financial education as it is expensive and they all work for their daily breads. Middle income group individuals learn more from their practical experiences in their routine lives with formal education system. Flow of income plays important role and is held responsible for the difference as in middle income group, here as the flow is more and so the savings and investments. This helps them to have wider approach towards various investments as compared to lower income group who have approach only to their daily breads and other expenditures.

(ii) It was seen from the **Table No. 4.3** that post hoc difference between **middle income and higher income group** was 6.414 and it was found to be **not significant**. It reveals that the mean financial literacy scores of **middle income group and higher income does not** differ significantly with each other.

In light of this the null hypothesis namely *“There is no significant difference between middle income group and higher income group with respect to level of financial literacy in India”* is not rejected.

Hence it can be concluded that the financial literacy of **middle income group and higher income group**, almost have the same level of financial literacy in India.

Financial literacy always plays important role in individual saving preference, of each income groups in India as well as world wise. A study by **N.S.Mahdzan, S.Taibiani** focus of work was based on financial literacy of individual saving in context of emerging market. In this study the impact of saving regularity, risk taking behavior, positive impact of saving etc. on income, gender and educational level was studied in Malaysia. The study covered 54% male and 46 female and among them 52% individuals had high income and others having less income. Approximately, more than 60%

individuals had understanding about risk diversification, more than 70% individuals knowledge about interest rates interest rate. Overall study concluded that saving acts as essential ingredient for long term development and economic growth.

It was observed that overall financial literacy score of middle income group and higher income group lie under high financial literacy. Both middle income group and higher income groups does not vary in level of financial literacy as knowledge and behaviour of both income groups is same. Minimum educational level is also attained by both groups so they have good numeracy skills and share same financial literacy.

(iii) It was seen from the **Table No. 4.3** that post hoc difference between middle income and higher income group was 19.314 and was found to be **significant**. It reveals that the mean financial literacy scores of **higher income group and lower income** differ significantly with each other.

In light of this the null hypothesis namely *“There is no significant difference between higher income group and lower income group with respect to level of financial literacy in India”* is rejected.

Further the mean financial literacy score of higher income group is 204.19 which is significantly higher than lower income group mean 184.88. Hence, it can be concluded that the financial literacy of lower income group and higher income group differ significantly with respect to financial literacy in India.

According to **kumar and Anees (2013)**, The financial market had been dramatically changed after liberalization and has been offering several opportunities for investor. At that span of time, financial services are flattering and more easily accessible, financial market offers myriad of products with intricate features and services, leaving many people laid up equipped to cope up with the sophisticated financial needs. The economies around the world had considered financial literacy as a key pillar for the development of their

financial system. The financial education has grown a lot from its pre liberalization beginning to the present day conditions of post liberalization corporate era. The study took into account the different dimensions of financial literacy and education in India i.e. financial education its relevance, determinants and, role of regulatory authorities in India.

In a study on financial literacy, “students from high-income families had significantly higher knowledge levels than students from low-income families” (Johnson and Sherraden,2007). In addition, low-income individuals are more likely to drop out of school, something that, in the long run, contributes to their financial illiteracy (Calamato, 2010).

It was observed that higher income group has higher level of financial literacy than lower income group because of varied variance in quality of life and they also share different financial goals. Higher income group individuals has more income to save, spend and invest and has far-reaching approach to achieve all standards in life but lower group lacks to achieve basic requirements and bears burden of whole family ranging from needs, expenditures , saving etc. Thus, higher income group is considered to have higher comprehensiveness and appeal towards financial literacy.

Overall financial literacy impression on all groups was moderate to high but was not found to be less. It was evaluated with the help of mean score, standard deviation, post hoc values and F value on level of significance. Discussion is moving on the side of huge potential of increment of financial literacy in Indian market to overall growth of economy. Financial literacy is a need of all areas in India and World also, as per income group it was observed that lower income groups need to improve financial literacy in terms of knowledge and education. They should be aware of government programs for financial education and increase their level financial literacy. Additional funding should be given to them for increasing their financial literacy levels with scholarship. As financial literacy is indicator of economic development of the country so all groups should increase their financial literacy for better quality of living. High

financial literacy will increase money management skills of all income groups leaving them with apt decision making and secured financial future.

The finding of this study was supported by the research of Atkinson and Messy (2012) found that low income levels are associated with lower financial literacy levels. Monticone (2010) found that wealth has a little, but positive, effect on financial literacy. In turn, Hastings and Mitchell (2011) provide experimental evidence to show that financial literacy is related to wealth. Pentland (2005) argued that financial counsellors provide this interaction on the basis of the income segment consideration of lower income group as they aware of the cultural constructs. This study also revealed some measures to disseminate financial literacy through campaigns, media, ad, so that financial literacy could be increased at all income segments.

4.3.2 ANOVA for Personnel Financial Management and Income Group

Total numbers of items were 40 which were based on overall personnel financial management as per Income groups. The middle point or the median of the frequencies was calculated to know the personal financial management of all individuals in India. For personal financial management it was calculated to be 160. The minimum score was 40 and maximum score was calculated to be 280. This was taken as the reference for further calculation. The personal financial management score in the range of 40 to 160 was taken as low score and 160 to 280 was taken as high score. Mean score and standard deviation value were also calculated for further analysis.

1.2 One way analysis of variance is a statistical test that determines the probability values of a quantifiable data variable for two or more than independent sample or groups. This test is applied for ascertaining whether there is difference between the income groups or not. This technique was adopted to find and compare different income group i.e. higher income group, middle income group and lower income groups towards personal financial

management in India. The respondents of lower income group were 249, middle income group was 199 and higher income group was 202 as per **Table No. 4.4**.

From the above **Table No. 4.5**, it was revealed F value 3.403 which was **not significant** at .05 level of significance with degrees of freedom 2/650. It implies that the mean **personal financial management score** of various income groups **does not differ significantly** with each other.

Further null hypothesis namely *“There is no significant difference among income groups with respect to personal financial management in India”* has been rejected.

This shows that there is statistical difference among three income groups with respect to their personal financial management in India. For further analysis, three sub null hypothesis were proposed and it was based on three different income groups- Lower and middle, middle and higher and higher and lower income groups in India. To explore further that which income group has higher personal financial management skills, the researcher had applied post hoc test, which indicates the following results.

(i)As per **Table No. 4.6** Post hoc difference between lower income and middle income group was found to be 9.901 and is **significant** for lower income group and middle income group. It reveals that the mean personal financial management scores of **lower income and middle income groups differ significantly** with each other.

Thus, in the light of this, the null hypothesis namely *“There is no significant difference between lower income group and middle income group with respect to of personal financial management in India”* is rejected.

Further the mean personal financial management score of **middle income group** is 170.61 which is **significantly** higher than **lower income group** mean

160.70 (**Table 4.4**). Hence, it can be concluded that the personal financial management of **lower income group and middle income group** differ significantly with respect to personal financial management in India.

William Loe (2013) wrote in his blog that Middle income individuals earn more spend more and invest more money because they have more disposable income than lower income group. Lower income group spend more percentage of money and are able to save less so they are left out with no money for investments.

It was observed that overall personal financial management scores of lower income groups and middle income groups depict high personal financial management. It was also found that personal financial management of middle income group was higher than lower income group because lower group's education level is low as compared higher groups. As middle income groups try to engage themselves with good formal education where they get formal learning of basics of how and where to do investments for good returns. It develops positive attitude among them and also they also have some extra savings for investments so they share high personal financial management. Flow of income is lower in lower income groups and education level is merely stick to degrees and is of less practical in nature which makes them to lie under low personal financial management skills

(ii) It was seen from the **Table No. 4.6** that post hoc difference between middle income and higher income group was 8.86 and was found to be **significant**. It reveals that the mean personal financial management scores of **middle income group and higher income** differ significantly with each other.

In light of this the null hypothesis namely *“There is no significant difference between middle income group and higher income group with respect to personal financial management in India”* is rejected.

Further the mean personal financial management score of **middle income group** is 170.61 which is significantly higher than **higher income group** mean 161.74(**Table 4.4**). Hence, it can be concluded that the personal financial management of middle income group and higher income group differ significantly with respect to financial literacy in India.

According to Goyal and Sharma (2014) and survey NCAER Indian lower income and middle income group individuals are growing faster but inflation is also higher so they are able to save less. But it is also true, that middle income group individuals save out of hardships so they want to invest their money after analyzing all risk and returns. They want safe and secured investments so they manage their finances with their mental acumen by knowing all pros and cons of it. They prefer investments in bank, bullion market, Real estate, Gold but are less interested in stock market, equity, bond, debenture due to presumption of high risk involved. A middle class individual gives less preference to tax benefits related with investments. Higher class individuals give preference to it.

It was observed that middle income group has better personal financial management than higher income group because middle income group individuals manage their finances by themselves that is they don't seek any financial help like higher income group individuals. Middle income groups wants to invest their hard earned money with proper fundamental analysis and research. They have more fear in their mind as they don't have much capacity to bear financial shocks like higher income groups. Thus, middle group individuals tend to surpass higher income groups in terms of personal financial management.

(iii) It was seen from the **Table No. 4.6** that post hoc difference between **lower income and higher income group** was 1.04 and it was found to be **not significant**. It reveals that the mean personal financial management scores of **lower income group and higher income does not** differ significantly with each other.

In light of this the null hypothesis namely *“There is no significant difference between lower income group and higher income group with respect to personal financial management in India”* is not rejected.

Hence it can be concluded that the personal financial management of **lower income group and higher income group**, almost have the same personal financial management in India.

It was observed that overall personal financial management score of lower income group and higher income group lie under high financial literacy. Both lower income group and higher income groups does not vary much in their personal financial management as both hire professionals and depend themselves on others for their personal financial management as they are not able to use their literacy level to an extent. As the cost of financial literacy is high so lower income individuals do not connect themselves with it and seek advice from friends and relatives for further investments and the higher income individuals have high education standards but they need perfection and have capacity to pay high commissions of brokers so they go for professional services. Thus, it could be said that both share same personal financial management.

Overall personal financial management impression on all groups was between moderate to high but more close less personal financial management score . It evaluated with the help of mean score, standard deviation, post hoc values and F value on level of significance. Discussion is moving on the moderate side of personal financial management among various income groups. According to business line (2011) low income individuals plans investments and looks for convenience, liquidity and inflation protection. They plan for good real returns

and capital protection. There is no old age security awareness in low income individuals as compared to higher income individuals but launch of NPS National Pension scheme has forced them to invest and save for it. Complexity of products also does not allow and motivate lower income individuals for proper investments. Selecting best investment according to your goal is more than half work done. Thus, higher income individuals have better investment opportunities than lower income group as they can hire professionals and also have good education standards. Lower income individuals spend more money on basic needs and middle income individuals spend income in balanced way to manage expenditure, investments etc and high income individuals prefer to go for high investments with expenditures on luxury things for pride as their financial capacity is good. So savings and investments also vary in same pattern. Personal financial management of middle income was found to be good as they manage themselves and prefer safe and secured investment.

4.3.3 Analysis of Impact Factor Income wise

Total numbers of items were 40 which were based on overall impact factor of financial literacy and personnel financial management as per Income groups. The middle point or the median of the frequencies was calculated to know the level of financial literacy of all respondents from region wise calculated by 0 which shows medium impact. Minimum impact score was 240 and maximum impact score was calculated -240. This was taken as the reference for further calculation. The Impact score in the range of 121 to 240 was taken as very low impact; range from 0 to 120 was taken low impact; range -1 to and -120 was taken as high score and range from -121 to and -240 were taken as very high score. Mean score and standard deviation value were also calculated for further analysis. **Table No. 4.7.**

1.3 One way analysis of variance is a statistical test that determines the probability values of a quantifiable data variable for two or more than independent sample or groups. This test is applied for ascertaining whether there is difference between the income groups or not. This technique was adopted to find and compare different income group i.e. higher income group, middle income group and lower income groups towards impact of financial literacy on personal financial management in India. The respondents of lower income group were 249, middle income group was 199 and higher income group was 202.

From the above **Table No. 4.8**, it was revealed F value 12.479 which was **significant** at .05 level of significance with degrees of freedom 2/650. It implies that the mean impact score of various income groups differ significantly with each other.

In light of this, the null hypothesis namely “*There is no significant difference among income groups with respect to impact of financial literacy on personal financial management in India*” has been rejected.

This shows that there is statistical difference among three income groups with respect to impact of financial literacy on personal financial management in India. For this three sub null hypothesis is proposed for further analysis and it based on three different income groups- Lower and middle, middle and higher and higher and lower income groups in India. To explore further that which income group has higher impact, the researcher had applied post hoc test, which indicates the following results.

(i) It was seen from the **Table No. 4.9** that post hoc difference between middle income and higher income group was 2.993 and it was found to be **not significant**. It reveals that the mean impact scores of **lower income group and middle income group does not** differ significantly with each other.

In light of this the null hypothesis namely “*There is no significant difference between lower income group and middle income group with respect to impact of financial literacy on personal financial management in India*” is not rejected.

Hence it can be concluded that the impact of financial literacy on personal financial management in India of **lower income group and middle income group** almost share the same level. It can be said that both groups saving attitude as well investment attitude. The savings is low in both cases so investment preference and selection does not vary much. It can said that both groups do not use their literacy skills in managing their finances to an extent and behave in profligate manner.

(ii) It was seen from the **Table No.4.9** that post hoc difference between **middle income and higher income group** was 15.280 and was found to be **significant**. It reveals that the mean impact scores of **middle income group and higher income** differ **significantly** with each other.

In light of this the null hypothesis namely “*There is no significant difference between middle income group and higher income group with respect to impact score of financial literacy and personal financial management in India*” is rejected.

Further the mean impact scores of **higher income group** is 42.45 which is significantly higher than **middle income group** mean 27.17 (**Table 4.7**). Hence it can be concluded that the impact of financial literacy on personal financial management of **middle income group and higher income group** differ significantly in India. High score indicates low impact and low score indicates high impact.

As it can be said that higher income group people are more risk takers and more money is available to them for investments and also, they have back up available with them. So they also study in good schools and take good education but it is seen that they don't use their financial literacy skills in a

good way for personal financial management, they follow more their instincts based on practical experiences. Middle income groups have burden of status and also has less savings so they save less and invest less. Thus, they are not able to experiment their financial literacy skills for better personal financial management. Thus, it can be said that middle income group have high financial literacy and also uses that in their practical life for personal financial management to an extent as compared to higher groups.

(iii) It was seen from the **Table No 4.9** that post hoc difference between **lower income and higher income group** was 18.273 and was found to be **significant**. It reveals that the mean impact scores of **lower income group and higher income group** differ significantly with each other.

In light of this the null hypothesis namely *“There is no significant difference between lower income group and higher income group with respect to impact score of financial literacy and personal financial management in India”* is rejected.

Further the mean impact scores of **higher income group** is 42.45 which is significantly higher than **lower income group** mean 24.17(**Table 4.7**). Hence it can be concluded that the impact of financial literacy on personal financial management of **lower income group and higher income group** differ **significantly** in India.

It can said that the impact score of higher income group individuals is higher which means they have high literacy but lacks personal financial management skills, because they demonstrate good financial behaviour as they have high wealth holdings. They generally pursue higher education and then don't implement them in practical life for better financial planning. Lower income group do not have good literacy skills but try to safeguard their money with adequate financial literacy and fundamentals and also uses it for better financial planning.

Thus, overall it can be said that all income groups had low impact of financial literacy on personal financial management in India. It was evaluated with the help of mean score, standard deviation, post hoc values and F value on level of significance among them. HIG has the impact score valued high depicting lowest impact score was more towards very low impact and LIG impact score was highest as more positive means more low impact. Normally it was observed that lower income groups are risk averse and cautious for hard earned money and higher income groups have high flow of income and money so they are more risk takers. Middle income groups have more burden of status of society and they also can't experiment much with investments. So, all groups on average did not use their literacy skills well for personal financial management.

3.3 ANALYSIS RELATED TO OBJECTIVE 3

3.3.1 ANOVA for Financial Literacy for Region Wise

Total numbers of items were 40 which were based on overall financial literacy as per Income groups. The middle point or the median of the frequencies was calculated to know the level of financial literacy of all individuals in India. For financial literacy it was calculated to be 160. The minimum score was 40 and maximum score was calculated to be 280. This was taken as the reference for further calculation. The financial literacy score in the range of 40 to 160 was taken as low score and 160 to 280 was taken as high score. Mean score and standard deviation value were also calculated for further analysis(**Table 5.1**).

1.1 From the above **Table No. 5.2**, it was revealed that F value is 20.446 which is **significant** at .05 level of significance with degrees of freedom 3/650. It implies that the mean personal financial management score of different regions namely **differ significantly** with each other. Further the null hypothesis namely *“There is no significant difference among regions with respect to level of financial literacy in India”* has been rejected. The regions are divided **into four parts north, east, west and south**. To explore further which region has

higher financial literacy, the researcher applied post hoc test in SPSS, which indicates the following results.

(i) From **Table No. 5.3** it was revealed that Post hoc difference between **north region and east region** was 1.952 and it was found to be **not significant**. It reveals that the mean financial literacy scores of **north region and east region** do not differ significantly with each other.

In the light this, the null hypothesis namely *“There is no significant difference among north region and east region with respect to level of financial literacy in India”* is not rejected.

It has been observed that there is no significant difference in level of financial literacy between Northern and eastern states of India. This can be attributed to following reasons as nearly similar number of branches per thousand square kilometers in states like UP, Bihar, Delhi, Haryana and West Bengal. Historically, green revolution was spread out in Northern and Eastern states of India. Thus, similar level of economic growth has been observed in these regions. Literacy rates are very similar in these states eg. West Bengal (77.1%), Haryana (76.6%), Punjab (76.7%), Odisha (73.5%), Assam (73.2%). Source - Census 2011. GDP growth rate of North and Eastern states are more or less similar which indicates uniform economic growth in both the regions. Example: Odisha (9.1%), Punjab (5.1%), Assam (6.8%), Haryana (7.1%). Source Central Statistical Organization, GDP growth rate for 2012-2013. If Punjab, Haryana, western UP have proved themselves to be agricultural pioneers, Jharkhand, Chhattisgarh and Odisha had been prominent mining regions of India which had fuelled economic growth. Further, it may be concluded that both north region and east region, have almost same level financial literacy in India.

(ii) From **Table No. 5.3** it was revealed that Post hoc difference between **east region and west region** was 19.033 which was found to be **significant**. It reveals that the mean financial literacy scores of **east region and west region** differ significantly with each other.

In the light of this, the null hypothesis namely *“There is no significant difference between east region and west region with respect to level of financial literacy in India”* is rejected.

Further the mean financial literacy score of **west region** is 211.69 which is significantly higher than **east region** mean which is 192.65(**Table 5.1**). Hence it can be concluded that the financial literacy west region and east region differ **significantly** with respect to financial literacy in India.

It has been observed that there is significant difference between financial literacy of West and East regions of India. Western states have scored higher than Eastern states, this can be attributed to following factors such as Political instability in North-eastern states has rendered a highly vulnerable atmosphere in these region which has affected growth of education and economic development. High levels of ethnic clashes and secessionist tendencies in seven sister states of Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram, Meghalaya, Tripura etc. Spread of naxalism and development of red corridor in eastern states like West Bengal, Chattisgarh, Jharkhand etc has affected penetration of banking services in these regions. Western states have political stability and high rate of economic growth in terms of education, industries, public health, banking services etc. Eastern states are more prone to frequent floods and famines thus institutionalization of banking /credit services has been a great challenge in this region. Very strong network of MFIs in states like West Bengal, Odisha etc have traditionally restricted banking services in these states. High popularity of ponzi schemes and chit funds in eastern states.

According to Census 2011, more states of western regions have higher financial literacy than eastern states. Western states like Maharashtra has highest and Gujrat have high financial literacy than Rajasthan and western part of Madhya Pradesh.

(iii) From **Table No. 5.3** it was revealed that Post hoc difference between **west region and south region** was 33.265 which was found to be **significant**. It reveals that the mean financial literacy scores of **west region and south region** groups differ significantly with each other.

In the light of this, the null hypothesis namely *“There is no significant difference between west region and south region with respect to level of financial literacy in India”* is rejected.

Further the mean financial literacy score of **west region** is 211.69 which is significantly higher than **south region** mean which is 178.42 (**Table 5.1**). Hence it can be concluded that the financial literacy **west region and south region** differ **significantly** with respect to financial literacy in India.

It has been observed that there is significant difference between financial literacy of West and South regions of India. Western states have scored higher than Southern states, this can be attributed to following factors such as in promoting financial inclusion services, differences in language had been a great barrier for government agencies. Kerala, Tamil Nadu, Karnataka and Andhra Pradesh, each state has its own different official working language. Huge penetration and stronghold of local moneylenders in rural areas of southern states has historically restricted credit options in these regions. Thus people have largely relied upon these money lenders thereby affecting penetration of banking institutions in these regions. High rate of industrialization and economic growth is in western states. Reluctance of southern states to accept western education and conservative approach in embracing instruments of financial inclusion also becomes an important reason for the difference.

(iv) From **Table No 5.3** it was revealed that Post hoc difference between **north region and south region** was 12.880 and it was found to be **significant**. It reveals that the mean financial literacy scores of **north region and south region differ significantly** with each other.

In the light this, the null hypothesis namely “*There is no significant difference between north region and south region with respect to level of financial literacy in India*” is rejected.

Further the mean financial literacy score of **north region** is 190.70 which is significantly higher than **south region** mean which is 178.42(**Table 5.1**). Hence it can be concluded that the financial literacy **north region and south region** differ **significantly** with respect to financial literacy in India.

It has been observed that there is significant difference between financial literacy of North and South regions of India. Northern states have scored higher than Southern states, this can be attributed to following factors such as traditionally southern states like Andhra Pradesh, Tamil Nadu, Karnataka etc have had an inclination towards vernacular languages as the medium of formal education. Huge penetration and stronghold of local moneylenders in rural areas of southern states has historically restricted credit options in these regions. Thus people have largely relied upon these money lenders thereby affecting penetration of banking institutions in these regions. Post Green Revolution, income level of northern states has risen very significantly as compared to southern states, thus more liquidity and cash flow in northern regions have given more financial experiential learning in these areas. In promoting financial inclusion services, differences in language had been a great barrier for government agencies. Kerala, Tamil Nadu, Karnataka and Andhra Pradesh, each state has its own different official language as compared to Hindi language which is working as the binding factor in Northern states of India. There are higher number of branches per thousand square kilometer of geographical area in Punjab, Haryana, Delhi, UP etc in comparison to southern states.

According to Census 2011 reported that, among all states in north only Jammu and Kashmir have low financial literacy and in south only Andhra Pradesh have low financial literacy. The state of south Kerala topped in level of financial literacy in census 2011 but in Delhi and Chandigarh also showed good level of financial literacy so overall it can be seen that that some parts of south show very high financial literacy but overall financial literacy of south was low as compared to north region.

(v) From **Table No. 5.3** it was revealed that Post hoc difference between **west region and north region** was 20.984 which was found to be **significant**. It reveals that the mean financial literacy scores of **west region and north region** groups differ **significantly** with each other.

In the light of this, the null hypothesis namely *“There is no significant difference between west region and north region with respect to level of financial literacy in India”* is rejected.

Further the mean financial literacy scores of **west region** is 211.69 which is significantly higher than **north region** mean which is 190.70(**Table 5.1**). Hence it can be concluded that the financial literacy **west region and north region differ significantly** with respect to financial literacy in India.

It has been observed that there is significant difference between financial literacy of North and west regions of India. Western states have scored higher than Northern states, this can be attributed to following factors as hilly and difficult terrain of states like Jammu and Kashmir, Himachal Pradesh, Uttarakhand etc has restricted physical access thereby affecting overall growth of these regions. Poor literacy rate exists in states like Jammu and Kashmir, UP, Haryana in comparison to western states like Gujarat and Maharashtra. Long history of terrorism and infiltration in Jammu and Kashmir, frequent floods and landslides in these regions has affected educational growth and economic development. Relatively peaceful environment in western states and abundance of natural resources in western states like MP, Maharashtra, Gujarat

etc has propelled engines of economic growth complemented with better literacy rates in the region. Reaping the maximum benefits of Green revolution, state like Haryana, Punjab and Western UP have traditionally resorted to agriculture as primary mode of occupation thereby neglecting formal education resulting in poor financial literacy.

According to recent KPMG study reported by business standard (2010) revealed that western states have dominated northern states in terms of literacy. According to EDI Educational development Index, northern states lagged behind western states. The reason behind is low enrollment of students and high dropout rates in northern region.

(vi) From **Table No. 5.3** it was revealed that Post hoc difference between **east region and south region** was 14.232 which was found to be **significant**. It reveals that the mean financial literacy scores of **east region and south region** groups differ **significantly** with each other.

In the light of this, the null hypothesis namely *“There is no significant difference between east region and south region with respect to level of financial literacy in India”* is rejected.

Further the mean financial literacy score of **east region** is 192.65 which is **significantly** higher than **south region mean** which is 178.42 (**Table 5.1**). Hence it can be concluded that the financial literacy of **east region and south region** differ significantly with respect to financial literacy in India.

It has been observed that there is significant difference between financial literacy of East and South regions of India. Eastern states have scored higher than Southern states, this can be attributed to following factors as in promoting financial inclusion services, differences in language had been a great barrier for government agencies. Kerala, Tamil Nadu, Karnataka and Andhra Pradesh, each state has its own different official working language. Green Revolution was restricted to Northern and eastern regions of India, It could not penetrate

southern states. Thus, economic benefits were less realized in southern states. Eastern states like Jharkhand, Chattisgarh, Odisha are very rich in natural resources. Thus southern states were deprived of economic growth. Traditional reliance on local money lenders in south India is still largely prevalent today. Reluctance of southern states to accept western education and conservative approach in embracing instruments of financial inclusion.

Overall financial literacy impression on all regions was low to moderate. It evaluated with the help of mean score, standard deviation, post hoc and F value on level of significant by 0.05. Discussion is moving on the side of huge potential of increment of financial literacy in Indian market and all regions to overall growth of economy. Financial literacy is a need of the hour in all states in India. As all regions are concerned, it was observed that west region and east region was growing faster and it is followed by north region, and south region. There is high correlation among education, financial literacy, socio demographic factors and job opportunities. Every state and region has its own way to manage human as well natural resources. Some regions have inheritance to give importance to education and some have good institutional set up for that which is directly linked with high skill employment in turn good personal financial management. Some regions offer good financial literacy programs for more penetration of financial literacy. Thus, financial literacy acts a locus of control and should be increased in all states for effective investment preference and selection. Financial literacy lands an individual with handsome incomes with its proper channelization to get proper returns and benefits on investments.

3.3.2. ANOVA for Personnel Financial Management and Regions Group

Total numbers of items were 40 which were based on overall personnel financial management as per Income groups. The middle point or the median of the frequencies was calculated to know the personal financial management of all individuals in India. For personal financial management it was calculated to be 160. The minimum score was 40 and maximum score was calculated to be

280. This was taken as the reference for further calculation. The personal financial management score in the range of 40 to 160 was taken as low score and 160 to 280 was taken as high score. Mean score and standard deviation value were also calculated for further analysis(**Table 5.4**).

From the above **Table No.5.5** was revealed F value 1.995 which was **not significant** at 0.05 level of significance with degrees of freedom 3/650. It implies that the mean **personal financial management score** of various regions **does not differ significantly** with each other.

Further null hypothesis namely *“There is no significant difference among regions with respect to personal financial management in India”* is not rejected.

Thus, it can be concluded that there is **no statistical difference** among four regions with respect to their personal financial management in India. Further, it can be said that all four regions – **North, East, West and South** of India almost have same level of personal financial management.

It can be said that various individuals in different regions of India rely on more on friends and other people for investments. They have fear in mind to connect to formal banking system and many places don't have adequate infrastructure requirements. No doubt government has laid strict norms for that and all financial institutions have started opening their branches in rural areas. So they don't show much differences in their personal financial management.

3.3.3 ANOVA for Impact Factor Regions Group

Impact Factor Regions wise

Total numbers of items were 40 which were based on overall Impact factor of financial literacy and personnel financial management as per Income groups. The middle point or the median of the frequencies was calculated to know the level of financial literacy of all respondents from region wise calculated by 0 which shows medium impact. Minimum impact score was 240 and maximum impact score was calculated -240. This was taken as the reference for further calculation. The Impact score in the range of 121 to 240 was taken as very low impact; range from 0 to 120 was taken low impact; range -1 to and -120 was taken as high score and range from -121 to and -240 were taken as very high score. Mean score and standard deviation value were also calculated for further analysis(**Table 5.7**).

From the above **Table No.5.8**, it was revealed that F value is 10.448 which is **significant** at .05 level of significance with degrees of freedom 3/650. It implies that the mean impact score of different regions namely **differ significantly** with each other.

Further the null hypothesis namely *“There is no significant difference among regions with respect to impact of financial literacy and personal financial management in India”* has been rejected.

The regions are divided **into four parts north, east, west and south**. To explore further which region has higher impact, the researcher applied post hoc test in SPSS, which indicates the following results.

- (i) *“There is no significant difference between north region and east region with respect to impact of financial literacy and personal financial management in India”*

From **Table No. 5.9** it was revealed that Post hoc difference between **north region** and **east region** was 2.128 and it was found to be **not significant**. It reveals that the mean impact scores of north region and east region do not differ significantly with each other.

In the light this, the null hypothesis namely *“There is no significant difference among north region and east region with respect to impact of financial literacy on personal financial management in India”* -is not rejected.

Further it may be concluded that both **north region and east region**, have almost same level impact of financial literacy and personal financial management in India.

It can be said that the difference between north east in impact is insignificant as there is no significant difference in level of financial literacy and personal financial management between Northern and eastern states of India. The GDP growth rate of Northern and Eastern states are more or less similar which indicates uniform economic growth in both the regions. The Northern states like UP, Haryana, Punjab are primarily agricultural states and Eastern states like Jharkhand, Odisha primarily rely on natural resources like forests and mining for their economic prosperity. Thus, being traditional in outlook their financial literacy is limited and thus its impact on personal financial management is also limited.

(ii) *“There is no significant difference between east region and west region with respect to impact of financial literacy on personal financial management in India”*

From **Table No. 5.9** it was revealed that Post hoc difference between **east region** and **west region** was 10.887 which was found to be **significant**. It reveals that the mean impact scores of **east region and west region groups** differ significantly with each other.

In the light of this, the null hypothesis namely *“There is no significant difference among east region and west region with respect to impact of financial literacy on personal financial management in India”* is rejected.

Further the mean impact scores of **west region** is 41.74 which is significantly higher than **east region** mean which is 30.87 (**Table 5.7**). Hence it can be concluded that the impact of financial literacy on personal financial management on **west region and east region** differ **significantly** in India.

It has been observed that there is significant difference between financial literacy of West and East regions of India. Western states have scored higher than Eastern states but impact of financial literacy on personal financial management is more in Eastern region. People of eastern states like West Bengal, Bihar etc are known for their intellectual spirit since time immemorial. Hardworking people of Bihar, Jharkhand, West Bengal despite facing natural calamities like famines, draughts and floods have always bounced back and their contribution in GDP is respectable. Their hardships have turned them into more judicious in exploiting whatever resources they have. This sense of weighing pros and cons of every financial decision is rooted in their financial literacy and monetary acumen.

(iii) *“There is no significant difference between west and south region group with respect to impact of financial literacy on personal financial management in India”*

From **Table No. 5.9** it was revealed that Post hoc difference between **west region and south region** was 23.650 which was found to be **significant**. It reveals that the mean impact scores of west region and south region groups differ **significantly** with each other.

In the light of this, the null hypothesis namely *“There is no significant difference among west region and south region with respect to impact of financial literacy on personal financial management in India”* is rejected.

Further the mean impact scores of **west region** is 41.74 which is significantly higher than **south region** mean which is **18.09 (Table 5.7)**. Hence it can be concluded that the impact of financial literacy on personal financial management on **west region and south region** differ **significantly** in India.

It has been observed that there is significant difference between financial literacy of West and South regions of India. Western states have scored higher than Southern states. On the contrary, impact of financial literacy on personal financial management is higher in southern states as compared to western region. People of south India are deemed very disciplined and strong believer of Dravidian culture. Their conformance to schooling and laws of the land are way higher than people of western region. People of western states like Rajasthan which is majorly arid, western MP, runn of Kutch are traditionally more inclined to conservative means of occupation.

(iv) *“There is no significant difference between north and south region group with respect to impact of financial literacy on personal financial management in India”*

From **Table No. 5.9** it was revealed that Post hoc difference between **north region and south region** was 10.664 and it was found to be **significant**. It reveals that the mean impact scores of **north region and south region** differ significantly with each other.

In the light this, the null hypothesis namely *“There is no significant difference among north region and south region with respect to impact of financial literacy on personal financial management in India”* is rejected.

Further the mean impact score of **north region** is 28.74 which is significantly higher than **south region** mean which is 18.09 (**Table 5.7**). Hence, it can be concluded that the impact of financial literacy on personal financial management **north region and south region** differ **significantly**.

It has been observed that there is significant difference between financial literacy of North and South regions of India. Northern states have scored higher than Southern states. On the contrary, Southern states have more impact of financial literacy on personal financial management. People of south India are traditionally disciplined and bear self restraint. They are ardent believer of Dravidian culture and still follow vernacular system of studies which have made them less speculative in nature as compared to people of Northern India.

(v) *“There is no significant difference between west and north region group with respect to impact of financial literacy on personal financial management in India”*

From **Table No. 5.9** it was revealed that Post hoc difference between **west region and north region** was 13.005 which was found to be **significant**. It reveals that the mean impact scores of **west region and north region** groups differ **significantly** with each other.

In the light of this, the null hypothesis namely *“There is no significant difference among west region and north region with respect to impact of financial literacy on personal financial management in India”* is rejected.

Further the mean financial literacy scores of **west region** is 41.74 which is significantly higher than **north region** mean which is 28.74 (**Table 5.7**). Hence it can be concluded that impact of financial literacy on personal financial **management west region and north region** differ **significantly**.

It has been observed that there is significant difference between financial literacy of North and west regions of India. Western states have scored higher than Northern states. On the contrary, Northern states have more impact of financial literacy on personal financial management than western states. People of western states like Rajasthan which is majorly arid, western MP, run of Kutch are traditionally more inclined to conservative means of occupation. Government efforts in boosting financial management efforts are hindered by

language barrier due to multiplicity of languages like Gujarati, Marathi, Malwi, Mewati etc. However, Northern states are mostly united by a common language- Hindi.

(vi) *“There is no significant difference among east and south region g with respect to impact of financial literacy on personal financial management in India”*

From **Table No. 5.9** it was revealed that Post hoc difference between **east region and south region** was 12.772 which was found to be **significant**. It reveals that the mean impact scores of **east region and south region** groups differ **significantly** with each other.

In the light of this, the null hypothesis namely *“There is no significant difference among east region and south region with respect to impact of financial literacy on personal financial management in India”* is rejected.

Further the mean financial literacy scores of **east region** is 30.87 which is significantly higher than **south region** mean which is 18.09 (**Table 5.7**). Hence it can be concluded that the impact of financial literacy on personal financial management **east region and south region** differ **significantly**.

It has been observed that there is significant difference between financial literacy of East and South regions of India. Eastern states have scored higher than Southern states. On the contrary, Eastern states have less impact of financial literacy on personal financial management as compared to Southern states. Eastern states like Bihar are struggling due to high population pressure. Jharkhand, Odisha, West Bengal, Assam etc are bruised with problems like naxalism, infiltration etc. Thus, government efforts are more inclined in maintaining peace and order as compared to southern states where tranquil environment facilitates more time in financial inclusion endeavors of government agencies. People of South India are traditionally more disciplined and bear high conformance to schooling and higher education.

Overall impact impression on all regions was seen to be low. The study found that impact score of western regions was highest which depicted the lowest impact of financial literacy on personal financial management in India and impact score was lowest in southern in region which depicted comparative high impact of financial literacy on personal financial management in India. The difference in impact scores of north and east was very less and they had almost same impact of financial literacy on personal financial management in India. West and east people have good financial literacy but do not use their financial literacy skills for personal financial management. Western individuals showed highest financial literacy skills followed by east but low personal financial management. These individuals are aware of all investments but are less motivated towards personal saving and investments. The impact on south individuals was seen to be highest as impact score was lowest, which means as their literacy was also good and personal financial management skills were scored moderate in comparison to others. These individuals corner themselves from various proliferated and complex options but opt for planned and proper investments. Individuals of north have better literacy level and possess moderate personal financial management skills so the impact was higher. According to Education Development Index for most of the North Indian states is low as compared to the other parts of the country and also North India also has lower intake of students in Higher Education. According to KPMG study (2010). In North India, the overall literacy rate is 60% as against 69% in the South and 71% in the West.

3.4 ANALYSIS RELATED TO OBJECTIVE 4

Interaction between Monthly Income Group and Regions with Respect to Impact of Financial Literacy in India.

3.4.1 Interaction between Monthly Income Group and Regions with Respect to Financial Literacy in India.

From the **Table No. 6.1** it reflects that two factors income and region have been taken for measuring the interaction at .05 significance level. Regarding the monthly income, 249 investors have lower income group come under the range of less than 50,000, 199 middle income group investors have between 50,000 to 1 lakh and rest 202 higher income group have above 1 lakh. In the same way region wise it shows that 134 investors belonged to North Region, 150 from East Region, 207 from West Region and remaining 159 from South Region.

From the **Table No. 6.2** it was revealed that north MIG had highest mean and LIG had lowest mean. In eastern HIG have mean score and LIG have lowest. In western region HIG have highest mean and LIG have lowest. In southern region HIG have highest mean and LIG have lowest.

It was seen from that **Table 6.3**, that F value for monthly income was 24.272 and it was found to be significant at .05 level of significance with degree of freedom 3/650. It implies that **region differ significantly** and we can consider that region is one of the important factor which governs financial literacy. Then, it can be said that there is interaction among various regions with respect to financial literacy in India. Similarly, for region the F value for monthly income was 16.659 and it found to be significant at .05 level of significance with degree of freedom 2/650. It implies that **monthly income differ significantly** and we can we can consider that monthly income is one of the important factor which governs financial literacy. Then, it can be said that there is interaction among various monthly income with respect to financial literacy in India. The F value for interaction between monthly income and region was 1.086 and it was found to be insignificant at .05 level of significance with .05 degrees of freedom 6/650. It implies that the mean FL scores of **monthly**

income and region do not differ significantly with each other. Thus, it can be said that there is no different effect of monthly income on different regions of India with respect to financial literacy in India.

In the light of this, the null hypothesis namely “*There is no significant interaction between Monthly Income Group and Regions with respect to Financial Literacy in India.*” is not rejected.

Further, it may be concluded that **Monthly income and region both are independent** with respect to with respect to financial literacy in India.

Interaction is also measured by R squared which is .142 which means that only 14.2 per cent variance is explained in these two variables which is negligible.

Figure 4.1 also indicated that there lines on graph shows no interaction between monthly income and region overall though interaction was seen among monthly income groups themselves and region themselves.

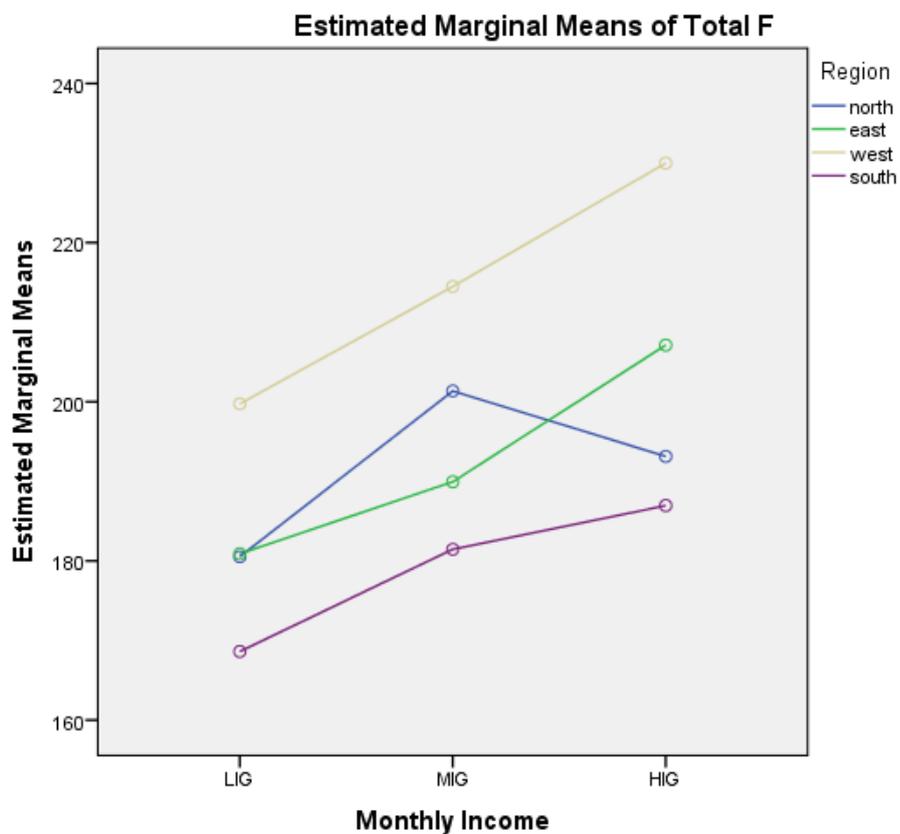


Figure No. 4.1- Estimated Margin Means for Financial Literacy

3.4.2 Interaction between Monthly Income Group and Regions with Respect to on Personal Financial Management in India.

From the **Table No. 7.1** it reflects that two factors income and region have been taken for measuring the interaction at .05 significance level. Regarding the monthly income, 249 investors have lower income group come under the range of less than 50,000, 199 middle income group investors have between 50,000 to 1 lakh and rest 202 higher income group have above 1 lakh. In the same way region wise it shows that 134 investors belonged to North Region, 150 from East Region, 207 from West Region and remaining 159 from South Region.

From the **Table No. 7.2** it was revealed that north region MIG had highest mean score and LIG have lowest. In eastern HIG have mean score and LIG have lowest. In western region LIG have highest mean and MIG have lowest. In southern region MIG have highest mean and LIG have lowest.

It was seen from that **Table 7.3**, that F value for monthly income was 4.66 and it was found to be significant at .05 level of significance with degree of freedom 2/650. It implies that **monthly income differ significantly** and we can consider that monthly income is one of the important factor which governs personal financial management. Then, it can be said that there is interaction among various monthly income groups in India. Similarly, for region the F value was 1.554 and it found to be insignificant at .05 level of significance with degree of freedom 3/650. It implies that **region do not differ significantly** and we can we can consider that region is not one of the important factor which governs personal financial management. Then, it can be said that there is no interaction among various regions in India. The F value for interaction between monthly income and region was 1.661 and it was found to be insignificant at .05 level of significance with .05 degrees of freedom 6/650. It implies that the mean PFM scores of **monthly income and region do not**

differ significantly with each other. Thus, it can be said that there is no different effect of monthly income on different regions of India with respect to personal financial management in India.

In the light of this, the null hypothesis namely *“There is no significant interaction between Monthly Income Group and Regions with respect to Personal Financial Management in India.”* is not rejected.

Further, it may be concluded that **Monthly income and region both are independent** with respect to with respect to Impact of Financial Literacy on Personal Financial Management in India.

Interaction is also measured by R squared which is .035 which means that only 3.5 per cent variance is explained in these two variables which is negligible.

Figure 4.2 also indicated that there lines on graph shows no interaction between monthly income and region overall though interaction was seen among monthly income groups themselves and no interaction among region themselves.

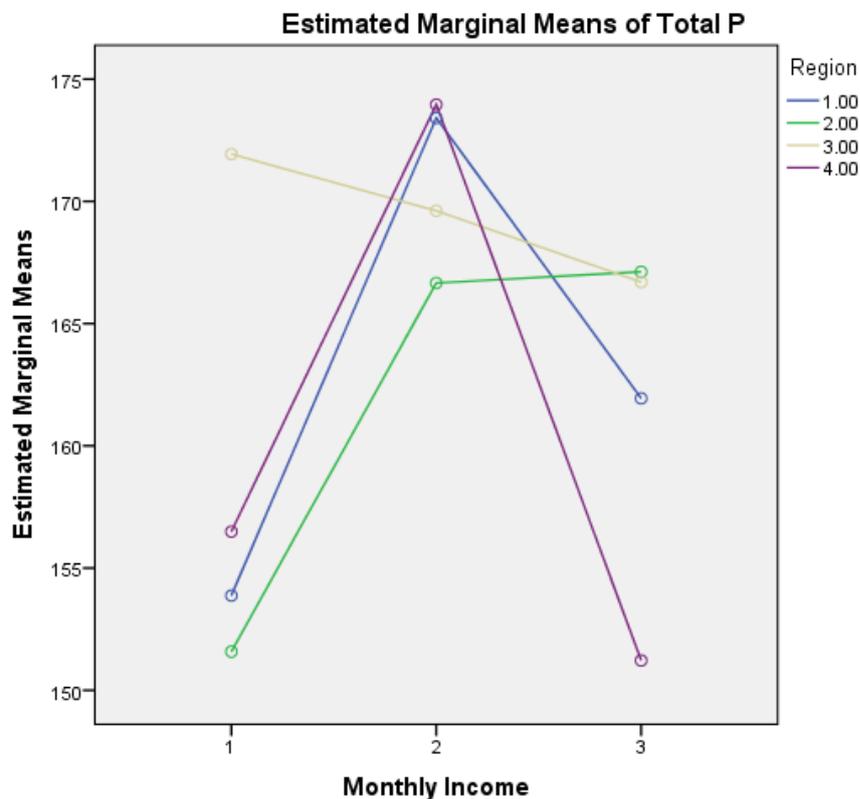


Figure No. 4.2- Estimated Margin Means for Perosnal Financial Management

13.4.3 Interaction between Monthly Income Group and Regions with Respect to Impact of Financial Literacy on Personal Financial Management in India.

From the **Table No. 8.1** it reflects that two factors income and region have been taken for measuring the interaction at .05 significance level. Regarding the monthly income, 249 investors have lower income group come under the range of less than 50,000, 199 middle income group investors have between 50,000 to 1 lakh and rest 202 higher income group have above 1 lakh. In the same way region wise it shows that 134 investors belonged to North Region, 150 from East Region, 207 from West Region and remaining 159 from South Region.

From the **Table No. 8.2** it was revealed that north region HIG had highest mean score and LIG have lowest. In eastern HIG have mean score and MIG have lowest. In western region HIG have highest mean and LIG have lowest. In southern region HIG have highest mean and MIG have lowest.

It was seen from that **Table 8.3**, that F value for region was 14.171 and it was found to be significant at .05 level of significance with degree of freedom 3/650. It implies that **region differ significantly** and we can consider that region is one of the important factor which governs impact of financial literacy on personal financial management. Then, it can be said that there is interaction among various monthly income groups in India. Similarly, for monthly income the F value was 14.100 and it found to be insignificant at .05 level of significance with degree of freedom 2/650. It implies that **monthly income do not differ significantly** and we can consider that monthly income is not one of the important factor which governs impact of financial literacy on personal financial management. Then, it can be said that there is no interaction among various regions in India. The F value for interaction between monthly income and region was 2.620 and it was found to be significant at .05 level of

significance with .05 degrees of freedom 6/650. It implies that the mean impact scores of **monthly income and region differ significantly** with each other. Thus, it can be said that there is different effect of monthly income on different regions of India with respect to impact of financial literacy on personal financial management in India.

In the light of this, the null hypothesis namely “*There is no significant interaction between Monthly Income Group and Regions with respect to Impact of Financial Literacy on Personal Financial Management in India*” is rejected.

Further, it may be concluded that **Monthly income and region both are dependent** with respect to with respect to Impact of Financial Literacy on Personal Financial Management in India.

Interaction is also measured by R squared which is .112 which means that only 11.2 per cent variance is explained in these two variables. **Figure 4.3** also indicated that there lines on graph shows interaction between monthly income and region overall though interaction was also seen among monthly income groups and region themselves.

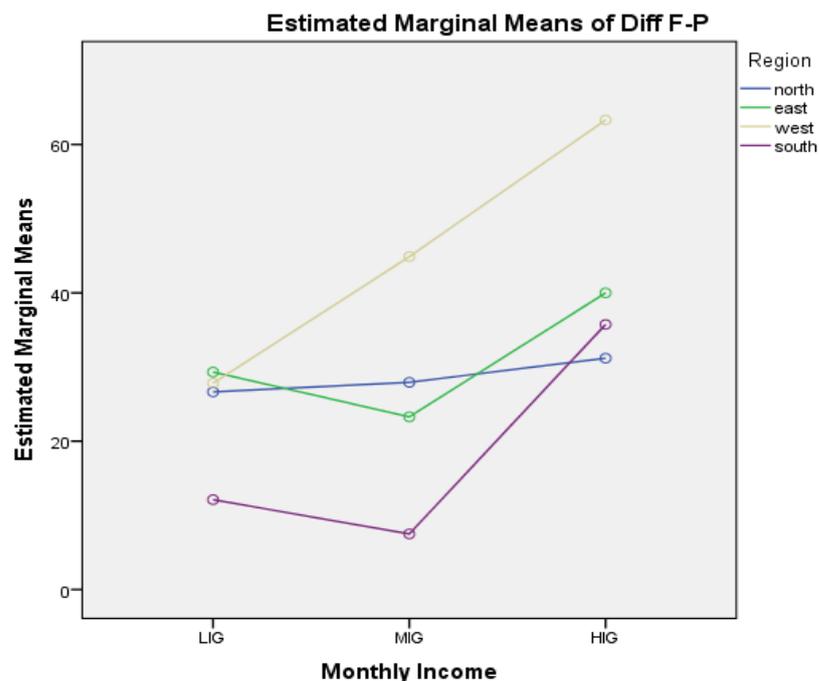


Figure No. 4.3- Estimated Margin Means for Impact of Financial literacy on Perosnal Financial Management in India.

3.5 : The Study of Relationship Between Financial Literacy and Personal Financial Management

Below **Table No. 9.1 and 9.2** shows that Pearson's correlation coefficient between Financial Literacy and Personal Financial Management was found to be 0.552 and was found to be significant at 0.05 significance level with degree of freedom 1/650. Therefore, it can be concluded that there is significant correlation and association between Financial Literacy and Personal Financial Management. Furthermore, since the value of correlation coefficient r suggested a strong positive correlation, we can use a regression analysis to Model the relationship between the variables.

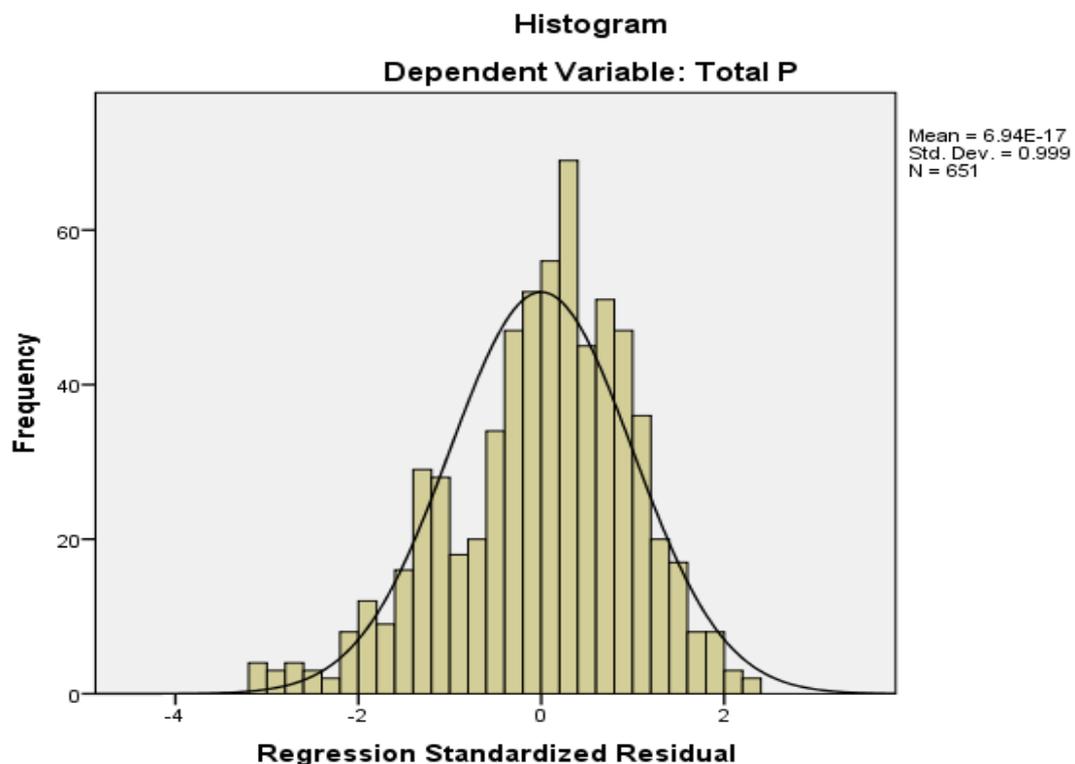


Figure No. 4.4 – Histogram of Regression standardized Residual.

Histogram on Financial Literacy and Personal Financial Management

From Table No. 9.3, Over all model summary shows the value of correlation coefficient $R=0.552$, and there was linear correlation coefficient between observed and model predicted values of the dependent variable, its large value indicates a strong relationship. R^2 , the coefficient of determination is the

squared value of the correlation coefficient. The value of adjusted $R^2=0.305$, R^2 change is also 0.304 and these values were found to be significant which showed that overall strength of association was noteworthy. The coefficient of determination R^2 is 0.305; therefore, 30.5% of the variation in Personal Financial Management is explained by Financial Literacy.

From Table No. 9.4, ANOVA is used to exhibit model's ability to explain any variation in the dependent variable. ANOVA table exhibits that the hypothesis that all model coefficients are 0 was rejected at .05 level of significance which means that the model coefficients differ significantly from zero. In other words we can say that there existed enough evidence to conclude that slope of population regression line was not zero and hence, Personal Financial Management is useful as predictor of Financial Literacy.

From the **Table No. 9.5** of coefficients, the regression equation can be obtained as

$$\text{Financial Literacy} = (Y) 57.410 + .547 (X_1) * \text{Personal Financial Management}$$

The normal probability plot was obtained to test the assumption about the normality of residuals and it appeared that the residuals were approximately normally distributed. Thus the assumptions for regression analysis appear to be met.

The above finding on the above hypothesis revealed that financial literacy had significant positive association with personal financial management and was found to be significant and thus, null hypothesis was rejected. Financial literacy is an understanding of the most basic economic concepts needed to make saving and investment decisions and, the understanding that ordinary investors should have adequate knowledge about investment options to do proper personal financial management. It was found that as the level of financial literacy increases the more investors are able to manage their personal finances competently.