

CHAPTER – VI

*LIFE SATISFACTION AFTER
RETIREMENT*

CHAPTER VI

SATISFACTION TOWARDS LIFE ACTIVITY AFTER RETIREMENT

Satisfaction is a Latin word which means ‘to make’ or ‘do enough’. However, satisfaction with one’s life implies a “contentment with’ or ‘acceptance of one’s life circumstances’, or the fulfillment of one’s wants and needs for one’s life as a whole”. In essence, life satisfaction is a subjective assessment of the quality of one’s life, because life satisfaction has a large cognitive component. Life satisfaction is an overall assessment of feelings and attitudes about one’s life at the particular point in time ranging from negative to positive. It is one of the major indicators of wellbeing. Life satisfaction has positive effect as well as negative effect.

6.1 LEVEL OF SATISFACTION

Descriptive analysis is used to find the mean ratings for the various levels of satisfaction. Ratings were assigned for each level, namely 1 for “Highly dissatisfied”, 2 for “satisfied”, 3 for “Neutral”, 4 for “satisfied” and 5 for “Highly satisfied”. Thus the ratings will indicate higher the value, more is the level of satisfaction. The table below shows the satisfaction level of the respondents after retirement.

Table 6.1 - Descriptive Statistics – Level of Satisfaction

Statements	N	Minimum	Maximum	Mean	S.D
Financial independency	375	2.00	5.00	4.1893	.7869
Saving & Investment	375	1.00	5.00	3.8987	.8499
Involvement in family decision making	375	1.00	5.00	3.8507	.9806
Utilization of time after retirement	375	1.00	5.00	3.8693	.9737
Own status	375	1.00	5.00	3.9173	.9624
Level of enjoyment in pilgrimage tour	375	1.00	5.00	3.4880	1.1349
Expenditure pattern	375	1.00	5.00	3.3733	.9780
Usage of modern technologies	375	1.00	5.00	3.3147	1.2376
Health Conditions	375	1.00	5.00	3.6427	1.0317
Life style	375	1.00	5.00	3.7120	1.0171
Spending of leisure time	375	1.00	5.00	3.6720	.9572
Economic Security	375	1.00	5.00	3.7947	.9238

Source: Computed

The factor financial independency is rated as the highest level of satisfaction with a mean value of 4.1893, which lies between satisfied and highly satisfied. It states that the retired households are financially independent and they are very much satisfied with their financial income. The findings also indicate that the retired households' level of satisfaction lies between neutral and satisfied for the factors such as own status (3.9173), savings and investment (3.8987), utilization of time after retirement (3.8693), involvement in family decision making (3.8507), life style (3.7120), health conditions (3.6427) etc. The average scores are found to be 3.6720 for spending of leisure time. The lowest mean rating is (3.3147) found for the usage of modern technologies, since the respondents are not much aware of the recent technological innovations.

6.2 PERSONAL FACTORS VS LEVEL OF SATISFACTION

ANOVA and t-test is applied to test the significant difference between the selected personal factors with respect to the level of satisfaction scores

H₀: “The level of satisfaction scores do not differ significantly based on the selected personal factors”.

Table 6.2 - Personal Factors Vs Level of Satisfaction

Personal Factors		Level of Satisfaction Score			t	F	Sig
		Mean	S.D	No.			
Gender	Male	44.75	7.51	271	.110		Ns
	Female	44.65	7.45	104			
Age	58-61 yrs	46.80	7.09	103		6.054	**
	62-65 yrs	45.04	7.29	131			
	66-69 yrs	42.35	7.32	82			
	70-74 yrs	43.69	7.89	59			
Educational Qualification	Up to School Level	42.13	7.14	102		11.738	**
	Graduation	44.22	7.45	142			
	Post Graduation	46.07	6.98	71			
	Professional	48.73	6.83	60			

Personal Factors		Level of Satisfaction Score			t	F	Sig
		Mean	S.D	No.			
Area of residence	Urban	45.61	7.37	236		4.922	**
	Rural	43.77	6.69	66			
	Semi-urban	42.71	8.12	73			
Kind of living arrangement	Living with children	44.14	6.88	76		.296	Ns
	Living with spouse	44.85	7.56	73			
	Living with family	44.78	7.44	201			
	Living alone	45.68	9.51	25			
Type of Residence	Own	45.57	7.41	313	5.077		**
	Rental	40.45	6.37	62			
Monthly income after retirement	Below Rs.10000	39.27	6.65	49		18.077	**
	Rs.10000 – 20000	43.81	6.24	118			
	Rs.20001 – 30000	44.62	7.25	77			
	Above Rs.30000	47.64	7.65	131			
Savings per month	Below Rs.5000	41.07	6.75	153		39.743	**
	Rs.5001- Rs.10000	45.60	6.56	117			
	Rs.10001- Rs.20000	45.31	6.19	42			
	Above Rs.20000	51.57	6.20	63			
present savings habit with the money at your disposal	High [>70% of money at disposal]	50.97	6.97	62		36.999	**
	Medium [40%-70% of money at disposal]	44.74	6.31	170			
	Low [<40% of money at disposal]	42.00	7.41	143			
Total		44.72	7.49	375			

Ns - Not significant * - Significant at 5% level ** - Significant at 1% level

It is evident from the above table that the mean scores are found to be more or less equal in respect of the male and female respondents. Among the different age groups the mean score is high (46.80 and 45.04) for the age group of 58-61 years and 62-65 years respectively. Regarding the education, the post graduation and professionals score the highest (46.07 and 48.73). In case of area of residence, kind of living arrangement and type of residence, the respondents in urban areas, living alone and residing in own houses score the highest mean value of 45.61, 45.68 and 45.57 respectively.

It is observed from the mean scores that the respondents whose monthly income after retirement is above Rs.30, 000 have scored higher (47.64) compared to those who earn below Rs.30, 000. The mean score are found to be high (51.57) for the respondents who save above Rs.20, 000. The mean score is found to be high (50.97) for the present savings habit which is more than 70 per cent of the money at disposal.

The ANOVA result shows that there is a significant difference in the level of satisfaction based the selected personal factors namely, age, education, area of residence, monthly income after retirement, savings per month after retirement and the present saving habits. Hence the null hypothesis is rejected at 1 per cent level of significance. The average score does not vary with the kind of living arrangement. Hence, the null hypothesis is accepted.

The t-test result shows that no significant difference in the level of satisfaction among the gender. Hence, the null hypothesis is accepted. But in the case of type of residence, there is a significant difference between the levels of satisfaction. Hence the null hypothesis is rejected.

The results reveal that the personal factors, namely, age, education, area of residence, type of residence, monthly income, monthly savings and present savings habit significantly varies in the association with the level of satisfaction.

6.3 EMPLOYMENT ASPECTS VS LEVEL OF SATISFACTION

ANOVA and t-test is applied to test the significant difference between the employment aspects with respect to the level of satisfaction scores.

H₀: “The average satisfaction scores do not differ significantly based on the employment aspects”.

Table 6.3 - Employment aspects Vs level of satisfaction

Employment Aspects	Particulars	Satisfaction Score			t	F	Sig
		Mean	S.D	No.			
Occupation held	Private Employee	45.88	7.83	164	2.656		**
	Government Employee	43.82	7.10	211			
Retirement status	Regular Retirement	43.94	7.22	254	2.960		**
	Voluntary Retirement	46.36	7.79	121			
Years since retired from job	Less than 5 years	45.88	6.28	145	4.017		**
	5-10 years	42.98	7.83	125			
	11-15 years	44.44	7.74	52			
	More than 15 years	45.94	8.74	53			
Retirement benefits Received	Yes	44.03	7.23	263	2.784		**
	No	46.36	7.86	112			
Present employment status	Not Employed	43.81	6.91	199	8.211		**
	Part-time Employed	43.54	7.19	67			
	Full-time Employed	47.12	8.17	109			
Total		44.72	7.49	375			

Ns - Not significant * - Significant at 5% level ** - Significant at 1% level

With regards to occupation held before retirement the mean scores are found to be high (45.88) for the government employees. The respondents who voluntarily retired from job scores the highest mean value (46.36). The average scores are found to be high (45.94) for those who retired more than 15 years from job. The average mean score is

found to be high (46.36) for those who does not receive any retirement benefits. Regards the present employment status the mean score is found to be high (47.12) for the respondents who are full time employed after retirement.

The ANOVA result shows that there is a significant difference with years since retired form job and present employment status. Hence the null hypothesis is rejected.

The t-test result shows that there is a significant difference among the level of satisfaction and the occupation held, retirement status and the retirement benefits received. Hence the null hypothesis is rejected.

6.4 REGRESSION ANALYSIS ON SATISFACTION SCORES

The level of satisfaction after retirement influenced by various predictor variables (independent variables) is explained in the Multiple Regression analysis. Regression analysis is applied to find the effect of several purchase behaviour factors, decision making factors and level of investment, expenditure and influence scores along with personal and job related variables on the overall satisfaction of the respondents after retirement. The following 23 variables were identified to be included in the model. Stepwise multiple regression analysis is used to find the appropriate variables to be included in the model.

1. Investment Factors

Level of Investment Score'

Level of Influence Score

2. Consumption Expenditure Score

3. Purchase behaviour factors

Prudent Buying

Product Awareness

Quality conscious

Family involvement

Buying dependence.

4. Decision Making Factors

Involvement in Decision Making-Investment

Involvement in decision making-Purchase of Land or Building

Involvement in decision making-Purchase of Jewellery

Involvement in decision making-Purchase of Durable Goods

Involvement in decision making-Others

5. Personal variables

Gender

Age

Educational Qualification

Size of Household

Monthly income after retirement

Savings per month

6. Employment related factors

Occupation held'

Years since retired from job

Retirement benefits received

Present employment status

Multiple Regression is mainly building an equation wherein the predictor variables' coefficients are found out. The general Multiple Regression equation is of the form,

$$Y = a_0 + a_1X_1 + a_2X_2 + \dots + a_nX_n$$

Where Y, the dependent variable

a_0 , constant, a_1 , a_2 ... a_n are the regression coefficients for the independent variables X_1 , X_2 ... X_n respectively.

The analysis starts with estimating coefficients and the constant. Among the several methods of analysis of Multiple Regression, one method used here is stepwise regression method. Initially, the equation starts with no predictor variables, then at first step the variable with maximum correlation with the dependent variable is selected first and included in the model. Also once the variable is included in the equation, then it is again considered for removal from the equation to avoid multicollinearity (correlation between independent variables) problems.

Once the variable entered and remains in the equation, the next variable with highest positive/negative partial correlation is selected and considered for entry and if satisfied then added to the equation. Now the variables so far entered in to the equation are checked for removal. This process continues until all the variables satisfying entry and removal criteria are included in the equation. Finally either all the independent variables selected for the analysis would have been included in the model or the variables selected based on the selection criteria are alone included in the model.

Table 6.4 - Stepwise Regression Analysis for Overall Satisfaction Score Dependent Variable: Satisfaction Score

Variables	Regression Coefficients (B)	Std. Error	Beta	t	Sig.
(Constant)	10.985	2.428			
Consumption Expenditure Score	.336	.051	.277	6.596	**
Product Awareness	.325	.094	.159	3.443	**
Savings per month	1.224	.276	.179	4.427	**
Prudent Buying	.410	.083	.201	4.937	**
Involvement in decision making- Purchase of Land or Building	.175	.054	.125	3.207	**
Occupation held	-1.860	.530	-.123	-3.508	**
Involvement in decision making- Others	.151	.047	.116	3.227	**
Quality conscious	-.442	.137	-.116	-3.229	**
Level of Influence Score	.127	.040	.132	3.151	**

Source: Computed

Table 6.4 (a) - Significant effect on overall score

R	R Square	F	Sig.
.764	.584	56.825	**

Source: Computed

The table given above shows the results of stepwise regression analysis, giving details of Multiple R, R^2 , step wise inclusion of variables in the regression equation. However, for the problem under study, all the variables identified for the analysis have not been included in the equation. Out of 23 variables only 9 variables were included in the equation. The variables which have not met the selection criteria (the variable whose F-value is 3.84 and the associated probability for F-test is less than or equal to 0.05 is considered for inclusion in the equation. Similarly once the variable entered, removal criterion is F-value less than 2.71 associated with a probability of 0.10 or more) have been kept out of the equation.

Multiple R given in the table below the regression table is the multiple correlation coefficient of dependent variable with the group of independent variables included in the analysis. The R value indicates that a good correlation (0.764) exists between the dependent variable (Overall Satisfaction Score) and the set of independent variables. Next given is R square which when expressed in percentage, explains that 57.8% of the variation in the Overall Satisfaction score is due to the 9 predictor variables in the equation. Next given is F value (56.825). This value is F-statistic, calculated for R, used to find whether R value is significant or not. The associated significance level ($P < 0.01$) tells us that R is fairly significant at 1% level.

From the regression table, it is seen that all the 9 predictor variables have significant effect on Overall Satisfaction Score at 1 % level. Individually, Purchase Behaviour factors namely, Product Awareness, Prudent Buying have positive influence on the satisfaction score and Quality conscious has negative influence on satisfaction score. That is those who have scored higher on Product awareness and prudent buying have also scored higher on overall satisfaction. Similarly, among the decision making

factors, Purchase of land or building, and involvement in decision making are positively influencing variables on satisfaction score. That is more involvement in decision making factors makes the retired persons more satisfaction after retirement.

Other investment and saving and expenditure related factors are also having positive effect on their overall satisfaction scores.

However, years worked in the occupation have negative effect on the satisfaction score of the respondents. Those who have worked for more number of years are found to have less satisfied after retirement.

The t-test statistic calculated for the regression coefficients show that all the variables which were finally included in the model significantly influence the overall satisfaction of the respondents at 1% level.

Beta is the standardized regression coefficients calculated for each independent variable, which are free from units of measurements and hence comparable. The beta coefficient is higher for consumption expenditure score compared to other variables, which show that Consumption expenditure score has more effect on Overall Satisfaction Score compared to other variables. Occupation held is more negatively contributing to satisfaction score than Quality conscious factor which is also affecting the satisfaction score negatively.

6.5 FACTOR ANALYSIS FOR LEVEL OF SATISFACTION

The scales for Satisfaction consisted of 12 items and were factor analyzed to extract the underlying dimensions in the Satisfaction scale. The Factor Analysis technique is applied in this study to find out the underlying dimensions in the set of statements relating to the level of satisfaction of the retired households.

Factor analysis usually proceeds in four steps:

1. First, the correlation matrix for all variables is computed. Variables that do not appear to be related to other variables can be identified from the matrix. The relevance of the factor model can also be calculated.

2. Factor extraction, the number of factors necessary to represent the data and the method of calculating them must be determined. At this step, how well the chosen model fits the data is also ascertained.
3. Rotation focuses on transforming the factors to make them more interpretable.
4. Scores for each factor can be computed for each case. These scores are then used for further analysis.

The set of 12 statements (items) which measure the factors influencing investment has been used to find the underlying factors in it.

Step 1

Correlation matrix (Appendix IV) for the variables, item1 to item 12, was analyzed initially for possible inclusion in Factor Analysis.

Since one of the goals of the factor analysis is to obtain 'factors' that help explain these correlations, the variables must be related to each other for the factor model to be appropriate. A closer examination of the correlation matrix may reveal what are the variables which do not have any relationship. Usually a correlation value of 0.3 (absolute value) is taken as sufficient to explain the relation between variables. All the variables from 1 to 12 have been retained for further analysis. Further, two tests are applied to the resultant correlation matrix to test whether the relationship among the variables is significant or not.

Table 6.5 (a) - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.876
Bartlett's Test of Sphericity	Approx. Chi-Square	1446.765
	df	66
	Sig.	**

KMO and Bartlett's test are the two tests which test for the adequacy of the sample to conduct the factor analysis. The KMO measure being 0.876 (should be above 0.5 at least) and the Bartlett's test of sphericity significant at 1% level indicates the data are more appropriate for factor analysis.

Step 2

Principal Components Analysis (PCA) is used to extract factors. PCA is a method used to transform a set of correlated variables into a set of uncorrelated variables (here factors) so that the factors are unrelated and the variables selected for each factor are related. Next PCA is used to extract the no. of factors required to represent the data given below.

The scale consisted of 12 items (variables) each with a variance of 1 then the total variability that can potentially be extracted is equal to 12 times 1. The following tables give the variance accounted for by the successive factors.

Table 6.5 (b) - Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings (Rotated)		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.860	40.497	40.497	2.992	24.937	24.937
2	1.113	9.279	49.776	2.981	24.838	49.776
3	.979	8.160	57.936			
4	.832	6.935	64.871			
5	.744	6.202	71.072			
6	.663	5.529	76.601			
7	.615	5.122	81.723			
8	.534	4.446	86.169			
9	.499	4.155	90.324			
10	.448	3.733	94.058			
11	.407	3.395	97.452			
12	.306	2.548	100.000			

Source: Computed

From the table given above, in the second column it is found that the variance on the new factors that were successively extracted. In the third column, these values are expressed as a percent of the total variance. Factor 1 account for about 40 percent of the total variance, factor 2 about 90 percent, and so on. As expected, the sum of the Eigen

values is equal to the number of variables. The third column contains the cumulative variance extracted. The variances extracted by the factors are called the *Eigen values*. Only two factors are retained since the Eigen values are greater than 1. The total variance explained by the 2 factor model in the original set of variables is (49.78%).

The table shown below gives the Component Matrix or Factor Matrix where PCA extracted 2 factors. These are all coefficients used to express a standardized variable in terms of the factors. These coefficients are called factor loadings, since they indicate how much weight is assigned to each factor. Factors with large coefficients (in absolute value) for a variable are closely related to that variable. For example, Factor 1 is the factor with largest loading (0.721) for the item, namely “**Spending of leisure time**”. These are all the correlations between the factors and the variables, Hence the correlation between this Statement and Factor 1 is 0.721. Thus the factor matrix is obtained. These are the initially obtained estimates of factors.

Table 6.5 (c) - Component Matrix

Factors	Component	
	1	2
Spending of leisure time	.721	-.213
Life style	.717	.179
Economic Security	.698	-.142
Own status	.692	-.061
Expenditure pattern	.657	-.234
Saving & Investment	.631	.220
Health Conditions	.614	.247
Financial independency	.612	.388
Level of enjoyment in pilgrimage tour	.601	-.457
Utilization of time after retirement	.595	-.495
Usage of modern technologies	.588	.311
Involvement in family decision making	.466	.383

Extraction Method: Principal Component Analysis.

2 components extracted.

Step 3

The Component matrix obtained in the extraction phase indicates the relationship between the factors and the individual variables. Further to identify meaningful factors based on this matrix, the rotation phase of the factor analysis is used which attempts to transfer initial matrix into one that is easier to interpret. It is called the rotation of the factor matrix. The Rotated Factor Matrix with varimax rotation (Table titled Rotated Component Matrix) is given in Table 6.5 (d) where each factor identifies itself with a few set of variables. The variables which identify with each of the factors were sorted in the decreasing order and are highlighted against each column and row.

Table 6.5 (d) - Rotated Component Matrix

Factors	Component	
	1	2
Financial independency	.707	.157
Usage of modern technologies	.636	.195
Life style	.634	.379
Health Conditions	.609	.259
Saving & Investment	.602	.290
Involvement in family decision making	.600	.058
Utilization of time after retirement	.072	.771
Level of enjoyment in pilgrimage tour	.103	.748
Spending of leisure time	.361	.660
Expenditure pattern	.300	.630
Economic Security	.394	.594
Own status	.447	.531

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 3 iterations.

Step 4

Normally, from the factor results arrived above, factor score coefficients can be calculated for all variables (since each factor is a linear combination of all variables) which are then used to calculate the factor scores for each individual. Since PCA was used in extraction of initial factors, all methods will result in estimating same factor score coefficients. However, for the study, original values of the variables were retained for further analysis and factor scores were thus obtained by adding the values (ratings given by the respondents) of the respective variables for that particular factor, for each respondent.

Table 6.5 (e) - Factors identified against statements relating to Satisfaction

Statements	Factors identified
Financial independency	Personal Attention
Usage of modern technologies	
Life style	
Health Conditions	
Saving & Investment	
Involvement in family decision making	
Utilization of time after retirement	Personal Enjoyment
Level of enjoyment in pilgrimage tour	
Spending of leisure time	
Expenditure pattern	
Economic Security	
Own status	

Source: Computed

It is clear from the table that 12 variables in the data is reduced to 2 factor model and each factor may be identified with the corresponding variables as shown above.

6.6 CLUSTER ANALYSIS

The statistical procedure used to form groups that are similar in characteristics is called cluster analysis. The choice of variables is crucial to cluster analysis since only those used will determine the clusters or groups. The concepts of DISTANCE and SIMILARITY are key ingredients in this statistical procedure. Distance is the measure of how far apart cases are, whereas, similarity measures the closeness of cases within a specific group or cluster. Distance measures are SMALL while similarity measures are LARGE. Within cluster analysis, cases are grouped together on the basis of their “nearness”. Cluster Analysis usually employs the DISTANCE measure (how far apart cases are) in defining the clusters or groups.

Cluster analysis technique is employed in this study to segment the retired households in two or more similar groups. The factors developed for the study in relation to purchase behaviour of respondents, Involvement in decision making, investment, consumption expenditure and level of satisfaction. The main purpose of this classification is to see whether the respondents can be grouped into similar patterns. These groups will be further used to analyze whether there is association between the clustered groups on personal variables of respondents.

K-Means Cluster Analysis

There are different classification techniques to perform cluster analysis. K-means cluster attempts to identify relatively homogeneous groups of cases based on selected characteristics, using an algorithm that can handle large numbers of cases. However, the algorithm requires to specify the number of clusters. Number of initial cluster centers can be specified before if this information is known. Alternatively, the procedure is repeated by increasing the number of clusters from 2 to the required number of clusters, until the procedure, differentiates well between the clusters, and the cases within each cluster are homogenous as far as possible. There are two methods for classifying cases, either updating cluster centers iteratively or classifying only. For the study, the cluster centers are updated iteratively till meaningful clusters arrived at. Once the numbers of clusters are arrived at, then analysis of variance was applied to find whether the clusters

significantly differ from their group means. Since the cases or respondents were forced to form into similar groups, the ANOVA conducted is seen as a method of verification of the cluster procedure.

For the purpose of cluster analysis the following factors which were used in previous sections were considered:

Satisfaction Score

Involvement in Decision Making-Investment

Involvement in decision making-Purchase of Land or Building

Involvement in decision making-Purchase of Jewellery

Involvement in decision making-Purchase of Durable Goods

Involvement in decision making-Others

Prudent Buying

Product Awareness

Quality conscious

Family involvement

Buying dependence

Level of Investment Score

Level of Influence Score

Consumption Expenditure Score

The classification procedure is repeated to find some meaningful clusters. After repeated iterations and increasing the cluster groups one by one, finally 3 cluster groups were formed. The initial cluster centers are formed by selecting the means of the groups of each variable as centers. The table given below gives the initial cluster center values for each variable selected for this purpose. The scores calculated for each factor were used for this purpose.

Table 6.6 (a) - Initial Cluster Centers

Particulars	Cluster		
	1	2	3
Satisfaction Score	38.00	35.00	60.00
Involvement in Decision Making-Investment	10.00	5.00	25.00
Involvement in decision making-Purchase of Land or Building	20.00	5.00	25.00
Involvement in decision making-Purchase of Jewellery	25.00	5.00	25.00
Involvement in decision making-Purchase of Durable Goods	15.00	5.00	25.00
Involvement in decision making-Others	15.00	5.00	25.00
Prudent Buying	24.00	22.00	27.00
Product Awareness	13.00	22.00	22.00
Quality conscious	10.00	10.00	8.00
Family involvement	8.00	3.00	7.00
Buying dependence	11.00	7.00	7.00
Level of Investment Score	24.00	10.00	35.00
Level of Influence Score	20.00	54.00	62.00
Consumption Expenditure Score	36.00	20.00	50.00

Source: Computed

As the procedure evolved by adding the cases into the nearest cluster, the cluster centers vary for each cluster. Thus the final cluster centers are arrived when all the cases are grouped into either one of the cluster which has nearest distance. The table given below gives the details of the final cluster centers.

Table 6.6 (b) - Final Cluster Centers

Particulars	Cluster		
	1	2	3
Satisfaction Score	40.32	38.29	49.19
Involvement in Decision Making-Investment	17.54	11.21	21.72
Involvement in decision making-Purchase of Land or Building	17.52	11.06	21.88
Involvement in decision making-Purchase of Jewellery	18.71	8.88	21.24
Involvement in decision making-Purchase of Durable Goods	18.63	8.59	20.77
Involvement in decision making-Others	18.03	8.09	19.48
Prudent Buying	20.84	19.53	23.52
Product Awareness	15.02	14.38	18.75
Quality conscious	9.72	9.53	10.30
Family involvement	10.45	8.26	11.84
Buying dependence	10.76	9.56	11.11
Level of Investment Score	17.50	15.82	23.31
Level of Influence Score	45.82	44.24	54.83
Consumption Expenditure Score	31.19	29.24	37.65

Source: Computed

The table shows that the third segments have high values for all factors included in the analysis. This shows that the respondents are of opinion that they agree to most of the factors at the highest level. They can be called as **‘High’**. The second segment (column marked 2) respondents have low center values for all the factors and hence they may be grouped under **‘Low’**. The third type of respondents (column marked 1) who have center value at falling between ‘High’ and “Low” and hence can be called as **“Moderate”**.

In order to study the effectiveness of the clustering procedure and how effectively it has grouped the cases, the distances between the cluster centers are calculated. This will show how different each cluster from the other one and also how close one cluster to the other. It is seen from the table that clusters 2 and 3 have highest difference and the closest are the clusters 1 and 3.

Table 6.6 (c) - Distances between Final Cluster Centers

Cluster	1	2	3
1		19.996	17.559
2	19.996		32.667
3	17.559	32.667	

ANOVA is applied to find whether the cluster groups differ significantly among themselves based on the variables selected. The ANOVA table is produced below.

Table 6.6 (d) – ANOVA

Factors	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
Satisfaction Score	4,059.403	2	34.528	372	117.569	**
Involvement in Decision Making-Investment	1,903.803	2	15.212	372	125.149	**
Involvement in decision making-Purchase of Land or Building	2,032.347	2	17.809	372	114.121	**
Involvement in decision making-Purchase of Jewellery	2,230.727	2	16.810	372	132.706	**
Involvement in decision making-Purchase of Durable Goods	2,150.386	2	15.137	372	142.062	**
Involvement in decision making-Others	1,881.260	2	22.825	372	82.419	**
Prudent Buying	423.969	2	11.191	372	37.885	**
Product Awareness	698.463	2	9.660	372	72.303	**
Quality conscious	18.151	2	3.803	372	4.773	**
Family involvement	217.823	2	5.562	372	39.163	**
Buying dependence	35.672	2	3.772	372	9.458	**
Level of Investment Score	1,793.348	2	28.546	372	62.823	**
Level of Influence Score	4,093.059	2	38.606	372	106.020	**
Consumption Expenditure Score	2,234.440	2	26.336	372	84.844	**

** - Significant at 1% level

The ANOVA table given above shows the cluster procedure has differentiated the groups significantly on all of the factors. [The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.] Finally, the number of respondents who were grouped into each cluster is given in the following table.

Table 6.6 (e) - Distribution of Cluster Groups

Cluster Groups	No.	Percent
Low	34	9.1
Moderate	147	39.2
High	194	51.7
Total	375	100.0

Source: Computed

6.7 CLUSTER GROUPS VS PERSONAL FACTORS

Chi-square is applied to find the significant relationship if any, based on the personal factors and the following null hypothesis is framed to test the association.

H₀: “There is no significant relationship between the cluster groups and the selected personal factors”.

Table 6.7 -Personal Factors Vs Cluster Groups

Particulars		Cluster Group						TOTAL		Table Value	Chi-square Value	df	Sig
		Low		Moderate		High		No.	%				
		No.	%	No.	%	No.	%						
Gender	Male	26	9.6	105	38.7	140	51.7	271	100.0	5.991	.352	2	Ns
	Female	8	7.7	42	40.4	54	51.9	104	100.0				
Age	58-61 yrs	7	6.8	35	34.0	61	59.2	103	100.0	16.812	28.434	6	**
	62-65 yrs	5	3.8	46	35.1	80	61.1	131	100.0				
	66-69 yrs	9	11.0	40	48.8	33	40.2	82	100.0				
	70-74 yrs	13	22.0	26	44.1	20	33.9	59	100.0				
Marital Status	Single	1	10.0	2	20.0	7	70.0	10	100.0	16.812	19.245	6	**
	Married	20	6.9	116	40.3	152	52.8	288	100.0				
	Widowed	10	14.1	29	40.8	32	45.1	71	100.0				
	Divorced	3	50.0			3	50.0	6	100.0				
Educational Qualification	Up to School Level	18	17.6	48	47.1	36	35.3	102	100.0	16.812	26.620	6	**
	Graduation	9	6.3	60	42.3	73	51.4	142	100.0				
	Post Graduation	4	5.6	23	32.4	44	62.0	71	100.0				
	Professional	3	5.0	16	26.7	41	68.3	60	100.0				

Particulars		Cluster Group						TOTAL		Table Value	Chi-square Value	df	Sig
		Low		Moderate		High		No.	%				
		No.	%	No.	%	No.	%						
Area of residence	Urban	18	7.6	95	40.3	123	52.1	236	100.0	9.488	7.811	4	Ns
	Rural	6	9.1	19	28.8	41	62.1	66	100.0				
	Semi-urban	10	13.7	33	45.2	30	41.1	73	100.0				
Kind of living arrangement	Living with children	6	7.9	32	42.1	38	50.0	76	100.0	16.812	27.205	6	**
	Living with spouse	8	11.0	25	34.2	40	54.8	73	100.0				
	Living with family (children & spouse)	11	5.5	85	42.3	105	52.2	201	100.0				
	Living alone	9	36.0	5	20.0	11	44.0	25	100.0				
Type of Residence	Own	25	8.0	111	35.5	177	56.5	313	100.0	9.210	17.665	2	**
	Rental	9	14.5	36	58.1	17	27.4	62	100.0				
Total		34	9.1	147	39.2	194	51.7	375	100.0				

Ns - Not significant * - Significant at 5% level ** - Significant at 1% level

It is clear from the table that among the male respondents 51.7 per cent of them has high value for the factors in the cluster group. Among female respondents 51.9 per cent and 40.4 percent have high and moderate values for the factors respectively. The respondents between the age group of 62 to 65 years, 61.1 percent of them have high values for the cluster groups. Regards the marital status 70 per cent of the respondents who are single have high values for the factors in the cluster groups. With regards to education, the respondents who are professionals have high values (68.3) followed by the post graduates 62 per cent.

Majority of the respondents live in urban areas and they have high and moderate values for the cluster groups (52.1 percent and 40.3 per cent). The respondents who are living with spouse 53.4 per cent have high values. Most of the respondents are living in own houses and they also have a high (56.5 per cent) value for the factors in cluster groups.

Chi-square analysis is employed to ascertain the association between the personal factors and the cluster groups. It is observed from the above results that the cluster groups significantly associated with age, marital status, education, kind of living arrangement and type of residence. Hence the null hypothesis is rejected.

6.8 CLUSTER GROUPS VS MONTHLY INCOME, EXPENDITURE AND SAVINGS AFTER RETIREMENT

Chi-square is applied to find the significant relationship, between the cluster groups based on the monthly income, expenditure and savings after retirement and the following null hypothesis is framed to test the association.

H₀: “There is no significant relationship between the cluster groups and the monthly income, expenditure and savings after retirement”.

Table 6.8 - Cluster Groups Vs Monthly Income, Expenditure and Savings

Particulars		Cluster Group						TOTAL		Chi-square	df	Sig
		Low		Moderate		High		No.	%			
		No.	%	No.	%	No.	%					
Monthly income after retirement (Rs)	Below 10000	13	26.5	28	57.1	8	16.3	49	100.0	44.022	6	**
	10000 - 20000	6	5.1	54	45.8	58	49.2	118	100.0			
	20001 - 30000	6	7.8	23	29.9	48	62.3	77	100.0			
	Above 30000	9	6.9	42	32.1	80	61.1	131	100.0			
Monthly expenditure after retirement (Rs)	Below 5000	10	22.7	26	59.1	8	18.2	44	100.0	38.712	6	**
	5001 - 10000	17	11.0	58	37.7	79	51.3	154	100.0			
	10001 -20000	6	7.1	22	26.2	56	66.7	84	100.0			
	Above 20000	1	1.1	41	44.1	51	54.8	93	100.0			
Savings per month (Rs)	Below 5000	20	13.1	86	56.2	47	30.7	153	100.0	55.263	6	**
	5001- 10000	6	5.1	39	33.3	72	61.5	117	100.0			
	10001 - 20000	5	11.9	13	31.0	24	57.1	42	100.0			
	Above 20000	3	4.8	9	14.3	51	81.0	63	100.0			
Total		34	9.1	147	39.2	194	51.7	375	100.0			

Ns - Not significant * - Significant at 5% level ** - Significant at 1% level

It is observed from the above table that irrespective of the monthly income after retirement, most of them earn between Rs.20, 001 to Rs.30, 000 and have a high value (62.3 per cent) for the factors in the cluster groups. Regards the monthly expenditure after retirement, respondents who spend between Rs.10,001 - Rs,20,000 and above Rs,20,000 have high values 66.7 percent and 54.8 per cent respectively. As per the savings is considered, the respondents who save above Rs.20,000 per month after retirement have high values (81.0) for the factors in cluster groups.

It is observed from the table exhibiting the chi-square values that the monthly income, expenditure and savings after retirement significantly associated with the cluster groups at 1 per cent level of significance. Hence, the null hypothesis is rejected.

6.9 CLUSTER GROUPS VS EMPLOYMENT ASPECTS

Chi-square analysis is employed to ascertain the relationship between the employment aspects and the cluster groups by framing the following null hypothesis.

H₀: “There is no significant relationship between the employment aspects and Cluster groups”.

Table 6.9 - Cluster Groups Vs Employment Aspects

		Cluster Group						TOTAL		Chi-square	df	Sig
		Low		Moderate		High		No.	%			
		No.	%	No.	%	No.	%					
Occupation held	Private Employee	23	14.0	61	37.2	80	48.8	164	100.0	8.692	2	**
	Government Employee	11	5.2	86	40.8	114	54.0	211	100.0			
Years since retired from job	Less than 5 years	4	2.8	42	29.0	99	68.3	145	100.0	38.689	6	**
	5-10 years	12	9.6	65	52.0	48	38.4	125	100.0			
	11-15 years	7	13.5	23	44.2	22	42.3	52	100.0			
	More than 15 years	11	20.8	17	32.1	25	47.2	53	100.0			
retirement benefits received	Yes	19	7.2	113	43.0	131	49.8	263	100.0	7.112	2	**
	No	15	13.4	34	30.4	63	56.3	112	100.0			
Present employment status	Not Employed	19	9.5	94	47.2	86	43.2	199	100.0	14.524	4	**
	Part-time Employed	5	7.5	24	35.8	38	56.7	67	100.0			
	Full-time Employed	10	9.2	29	26.6	70	64.2	109	100.0			
Total		34	9.1	147	39.2	194	51.7	375	100.0			

Ns - Not significant * - Significant at 5% level ** - Significant at 1% level

Based on the occupation held by the respondents before retirement, those who worked as government employees, 54.0 per cent and 40.8 per cent have high and moderate values for the factors in the cluster groups respectively. The respondents who retire from job less than five years have high values (68.3), where as those who retired more than 15 years have low values (20.8) for the factors in the cluster groups.56.3 per cent of them who does not receive the retirement benefits have high values. In case of the present employment status, the respondents who are full-time employed have high values (64.2).

It is observed from the table exhibiting the chi-square values that the employment aspects significantly associated with the cluster groups at 1 per cent level of significance. Hence, the null hypothesis is rejected.

6.10 LIFE ACTIVITY AFTER RETIREMENT

The table 6.10 identifies the life activity of the respondents after retirement.

Table 6.10 - Life Activity after Retirement

Particulars	No.	Percent
Heavy	74	19.7
Moderate activity	215	57.3
Sedentary	86	22.9
Total	375	100.0

Source: Primary data

It is observed from the above table that out of 375 respondents taken for the study, 57% of the respondents have a moderate life activity, 22.9 % of them are sedentary and the remaining 19.7% of the respondents felt that their life activity is heavy after retirement since some of the older adults engage in some form of paid employment and may work because they want to live longer and stay healthier.

6.11 SUCCESS IN LIFE AFTER RETIREMENT

The following table investigates the success in life after retirement.

Table 6.11 - Success in life after retirement

Particulars	No.	Percent
Yes	220	58.7
No	47	12.5
Partly true	108	28.8
Total	375	100.0

The data collected shows that with regards to the retired life, 58 percent of the respondents consider their retired life as a successful one and 28.8 percent of them consider it as partly true. 12.5 percent of the respondents says “No” this is probably because immediately after retirement, retirees lose their role identity which lead to identity crisis for those who do not have other important roles to substitute for the last employment role.