



Study on Personality and Its Influence on Purchase: Strategic Study With Reference to Women Consumers in Chennai

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Abstract

Marketers are interested in understanding how personality influences consumption behaviour because such knowledge enables them to better understand consumers and to segment and target those consumers who are likely to respond positively to their product or service communications. This study investigated the relationship between personality and influence of women in the family purchase decision making of durable goods. Segmentation of women was done based on the factors influencing their personality. The step wise discriminating analysis reveals two independent variables viz. age and education influencing the factor formation as well as cluster classification of women. Based on the findings of the study, a model showing the impact of personality on the influence of women in family purchase decision making based has been developed.

Key words: Personality, Women, Durables, Chennai, Clusters.

1.0 Introduction

Liebert and Spiegler (1998) defined personality as the "unique, dynamic organization of characteristics of a particular person, physical and psychological, which influence behaviour and responses to the social and physical environment". It is a set of characteristics that accounts for the ways in which individuals differ from one another. According to Fiske (1971) personality can be defined as the consistency of interaction towards a person's external and internal stimuli. Personality research has been a cornerstone in psychology since the early 20th century and been used across various other disciplines outside psychology (Pervin and John, 2001; Monte, 1999). According to Baumgartner (2002), despite its growing popularity in other social science disciplines, the number of personality researches in marketing is considered very limited. It is suggested that marketers often rely to their own personality measurement scales rather than using the existing psychology construct when it comes to personality research (Baumgartner, 2002).

On the other hand, management scholars use existing psychology constructs, such as the Big Five, to measure the significance of employees' personality to work behaviour (Heller, Judge and Watson, 2002). Hence, the number of personality researches in management has so far surpassed those in marketing discipline although consumer personality research has received marketing scholars' interest since the 1960s (Westfall, 1962); there has always been a problem in finding the significance of personality to consumer behaviour (Shank and Langemeyer, 1994). It seems that marketers found it difficult to trust personality as a reliable construct to predict behaviour due to the complex nature of the human personality (Blackwell, et al. 2001) and the existence of more powerful tools to predict behaviour such as price, values, product usage, and perception (Shank and Langemeyer, 1994). This resulted in the substantial research gap in marketing discipline, particularly in examining the relationship between consumer personality and purchase influence. Jacoby (1971) argued that the arguments against the significance of personality in predicting behaviour are mostly "without justification". Jacoby (1971) pointed out the fact that most marketing scholars administer a broad-range of personality scales and attempt to correlate response to product preference without any prediction on how specific personality traits might correlate with specific aspects of behaviour. A number of marketing researchers have theorized that personality characteristics predict brand or store preference and other types of buyer activity (Martineau, 1957). Almost any type of buyer decision or choice is believed to be an expression of an individual's personality, and having knowledge of personality structure is directly applicable to marketing planning. (Norton, 1979). Consumer psychologists have also found that consumer personality is an effective way to segment markets (example, Engel, Kollat and Blackwell, 1969; Kassarijan, 1971; Kassarijan and Sheffet, 1991). However there has also been a problem in applying the research findings on the consumer personality, as personality-based segmentation in the past was not proved effective (Blackwell, et al. 2001).

Researchers have attempted to relate a wide variety of marketing variables to various theories of personality. For example, product usage (Cohen, 1967; Tucker and Painter, 1961), decision behaviour (Kernan, 1968; Westfall, 1962), purchase behaviour (Evans, 1959, 1961; Koponen, 1960), brand loyalty (Brody and Cunningham, 1968), innovative buying behaviour (Bruce and Witt, 1970; Donnelly, 1970), response to advertising and design features (Holbrook, 1986; Wright, 1975), and product acceptance and rejection (Dolich, 1969) have all been linked to various consumer personality measures.

Most of the research on family purchase decision making is in exploring its determinants. This exploration has covered a wide range from basic personality traits of the spouses to specific life styles of the members (Alexander, 1947; Bell, 1958; Bott, 1957; Foote and Cottrell, 1955; Heer, 1958, 1963; Ingersoll, 1948; Komarovskiy, 1946, 1961; Lu, 1952;

Oeser and Emery, 1954; Parsons and Bales, 1955; Zimmerman, 1947). Kenkel (1957) examined the reinforcing or counteracting effects of dominance, persistence and self-confidence. The latter has been researched further by other researchers in terms of specific self-confidence (Howard, 1969), Lu (1952) constructed a scale on which the spouse can be rated dominant, equalitarian or submissive in relation to the other spouse, and investigated as many as eleven background factors such as attachment or conflict with parents and home involvement prior to marriage. Marketers are interested in understanding how personality influences consumption behaviour because such knowledge enables them to better understand consumers and to segment and target those consumers who are likely to respond positively to their product or service communications.

2.0 Objectives of the Study

1. To assess the type of personality of the respondents.
2. To group the respondents into clusters based on the type of personality.
3. To study the impact of personality type on the influence of women in family purchase decisions of durable goods.
4. To develop a model showing the impact of personality on the influence of women in family purchase decision making based on the findings of the study.

3.0 Hypotheses

- i) There is no significant association between demographics and personality of women.
- ii) There is no significant relationship between personality and purchase influence of women.

4.0 Methodology

The study was conducted in Chennai city. The researcher has adopted Cluster Sampling procedure for the data collection. The entire population was divided into Central, North, South and West Chennai based on geographical location, using the telephone directory as the source (Table 1). From each part (cluster) of Chennai city, using postal zones all possible areas were identified. Among them, a few areas were selected using Systematic Sampling method covering 50 per cent areas from each cluster (Table 2). From each selected area, the required number of women was selected based on Judgement Sampling or Purposive Sampling by using some common criteria like reference groups, subject knowledge, occupational status and their attitude to cooperate for this study. The prepared questionnaires were distributed among the women residing in areas identified for the survey purpose. The respondents were chosen through friends, relatives and using an updated telephone directory -2012 as a source for identification. Of the 700 respondents contacted because of incompleteness and other survey difficulties, only 616 usable questionnaires were collected.

Table 1: Zone wise division of Chennai City

S.No	Zone	Areas
I	Central	Adyar Anna Road, Chindadripet, Chetpet Cathedral Road, Gopalapuram, Creams Road, Haddows Road, Ice House, Kotturpuram, Mambalam, Myiapore, Neelangarai, Perungudi, Royapettah, R.K.Nagar, Sholinganallur, Thiruvanmiyur, Thirumalai Road, Triplicane, Valluvarcottam, Vani Mahal
II	North	Agasthyar Nagar, Ambathur, Aminjikarai Anna Nagar, Avadi, Broadway, Choolai Ennore, Harbour, Kellys, Koiathur, Manali, Mogappair, Washermanpet, Padi, Perambur, Poonarnallee, Pattabiram, Pulianthope, Purasawakkam, Red Hills, Royapuram, Sholavaram, Shenoy Nagar, Thirunindravur, Thiruverkadu, Vallalar Nagar, Villivakkam
III	South	Meenambakkam, Chromepet, Ekkaduthangal, Gowrivakkam, Guindy, Hasthinapuram, Kalkattai, Madipakkam, Medavakkam, Mugalivakkam, Nanganallur, Perungalathur, Pallikaranai, Pamrnal, Pallavaram, Pozhichallur, Ramavaram, Rajakilpakkam, Selaiyur, St. Thomas Mount, Tambaram, Tidal Park, Ullagaram, Vandalur, Velachery
IV	West	Arumbakkam, Choolamedu, Kodambakkam, Koyambedu. K.K.Nagar, Kundrathur, Porur, Macluravoyal, Nelson Manickam Road, Saligramam, Valasaravakkam, Vadapalani, Virugambakkam

(Source: Bharat Sanchar Nigam Limited Chennai Telephones Phone Book 2012)

Table 2: Sampling Area Based on Systematic Sampling

S.No	Zone	Areas
I	Central	Adyar, Chindadripet, Cathedral Road, Creams Road, Ice House, Kotturpuram, Mylapore, Perungudi, R.K. Nagar, Thiruvanmiyur, Triplicane, Vani Mahal
II	North	Ambathur, Anna Nagar, Broadway, Ennore, Kellys, Manali, Washermanpet, Perambur, Pattabiram, Purasawakkam, Royapuram, Shenoy Nagar, Thiruverkadu, Villivakkam
III	South	Chromepet, Gowrivakkam, Hasthinapuram, Madipakkam, Mugalivakkam, Perungalathur, Pammal, Pozhichallur, Rajakilpakkam, St. Thomas Mount, Tidal Park, Vandalur,
IV	West	Arumbakkam, Kodambakkam, K.K. Nagar, Porur, Nelson Manickam Road, Valasaravakkam, Virugambakkam

(Source: Bharat Sanchar Nigam Limited Chennai Telephones Phone Book 2008).

4.1 The Questionnaire

Before the survey administration, pretest of the questionnaire (designed by Hari Sundar and Sudharani Ravindran) with a small group of respondents was collected and the results were satisfactory. The first part of the questionnaire consisted of questions relating to consumer demographics namely-age, education, income, type of family and family life

cycle stage. The second part consisted of questions relating to personality assessment. For this purpose, popular The Big Five Inventory was used. Five point Likert scale (1 =Strongly disagree, 2 = Disagree, 3 = Not certain or undecided, 4=Agree, 5 = Strongly Agree) was used to assess the personality of women. The third part related to the measurement of purchase influence of the various family members at each stage of the product purchase decision making process. Consumer durables like Television, Refrigerator and Washing Machine were chosen for this study as they are highly expensive products and also because these are the most common products used by almost every household.

5.0 Analysis & Interpretation

The analysis was carried out in two steps. In the first step, the respondent demographics and socio-economic characteristics were plotted and in the second step, the responses for Personality assessment were analyzed through Factor Analysis.

Table 3: Demographic Profile of the Respondents

Characteristics	Number of Respondents	Percentage of Respondents
Age:		
21 to 30 years	128	20.8
31 to 40 years	221	35.9
41 to 50 years	200	32.5
51 years and above	67	10.8
Education:		
Schooling	122	19.8
Graduate	252	40.9
Post Graduate	123	20.0
Professional	103	16.7
Doctorate	16	2.6
Occupation:		
Housewives	303	49.2
Working Wives	313	50.8
Monthly Income (INR):		
Nil	303	49.2
3000-7500	43	6.9
7501-15000	98	15.9
15001-22500	89	14.4
22501-30000	58	9.5
30001 and above	25	4.1
Monthly Family income (INR):		
3500- 20000	160	26.0
20001-40000	231	37.5
40001 -60000	134	21.8
60001-80000	54	8.7
80001 -3,00,000	37	6.0
Tenure of marriage:		
Upto 10 years	217	35.2
11 years -20years	166	27.0
21years-30years	206	33.4
31 years and more	27	4.4
Number of Children:		
No children	61	9.9
One	200	32.5
Two	300	48.7
Three	48	7.8
Four	7	1.1
Type of Family:		
Nuclear family	458	74.4
Joint family	158	25.6
Family Lifecycle stage:		
Couples with no children	61	9.9
Family with the youngest child below 6 years	154	25.0

Family with the youngest child above 6 years but below 18 years	194	31.5
Family with all children above 18 years	207	33.6
Area of Residence in Chennai city:		
Central Zone	159	25.8
North Zone	161	26.1
South Zone	154	25.0
West Zone	142	23.1

The above table shows that the sample is well represented and includes women of various age groups, different income levels, different education levels and different types of occupation. The typical respondent in this study is a graduate working woman in the age group of 31 to 40 years earning monthly income of Rs. 7,501-Rs. 15,000 and a monthly family income of Rs.20,001 to Rs. 40,000 been married for ten years having a nuclear family with two children above 18 years. The table also shows an almost equal representation of the respondents from all the four zones of Chennai city hence representative of the Chennai population.

5.1 Personality Assessment

Factor Analysis by Principal Component is applied on 44 variables of personality to reduce them into meaningful predominant factors. Measures of Sample Adequacy (MSA) such as correlation matrix, Barlett's test of sphericity and KMO value (0.814) showed that data were fit for factor analysis. Principal Component Analysis was used for extracting factors and the number of factors to be retained was based on latent root criterion, variance explained and Scree Plot analysis. The solution gave eleven factors which explained 61.60% of the total variance. The results were obtained through orthogonal rotations with Varimax and all factor loadings greater than 0.40 (ignoring the sign) were retained. The names of the factors, the statement labels and factor loadings are summarized in table 4.

Table 4: Factor Analysis Results

Factor No	Name of the factor	Label	Statement	Factor Loading
F1	Sensitivity	S7	Is helpful and unselfish with others.	0.696
		S3	Is considerate and kind to almost everyone.	0.672
		S3	Does a job with total involvement.	0.623
		S13	Is a reliable worker.	0.601
		S17	Has a forgiving nature.	0.527
F2	Introversion	S21	Tends to be quiet.	0.740
		S6	Is reserved	0.704
		S1	Is talkative.	-0.675
		S44	Prefers to be quiet in a group of strangers	0.576
		S26	Generally likes to be alone and does not show much emotion.	0.574
F3	Emotional Stability	S14	Can be tense	-0.694
		S9	Is relaxed, handles stress well.	0.671
		S24	Is emotionally stable, not easily upset	0.659
		S38	Gets nervous easily	-0.533
		S19	Worries a lot	-0.472
		S33	Remains calm in tense situations	0.461
F4	Negligence	S8	Can be somewhat careless	- 0.646
		S23	Tends to be lazy.	0.572
		S37	Makes plans and follows them.	-0.483
		S27	Keeps trying and does not give up until the task is finished	-0.432
		S32	Does things efficiently	-0.403
F5	Openness	S43	Has experience in social situations and knowledge about art, music or literature.	0.697
		S29	Appreciates beauty and art	0.553
		S40	Has few artistic interests	-0.501
		S41	Likes to cooperate with others	0.480
F6	Dominance	S25	Has a dominating personality	0.699

		S12	Starts quarrels with others	0.508
F7	Reasoning	S39	Is full of ideas	0.623
		S15	Is very intelligent and a deep thinker	0.583
		S5	Is original, comes up with new ideas	0.579
F8	Inquisitiveness	S25	Generates a lot of enthusiasm.	0.497
		S10	Is curious about many different things	0.491
		S11	Is full of energy	0.466
F9	Diversion	S42	Is easily distracted	0.536
		S30	Sometimes worries too much about what to say or do or what other people will think of me	0.504
F10	Mundane	S34	Prefers work that is routine.	0.700
F11	Creativity	S20	Has an active imagination	0.720
		S18	Tends to make a mess of things	0.416

Thus personality variables depend upon eleven factors namely sensitivity, introversion, emotional stability, negligence, openness, dominance, reasoning, inquisitiveness, diversion, mundane and creativity. Sensitivity relates with being helpful, considerate, kind and unselfish with others as well as having a forgiving nature. It also relates to being a reliable worker, one who does the job with total involvement. Introversion is a tendency to be directed inwards and have a greater affinity for abstract ideas and sensitivity to personal feelings. Introverts are quiet, introspective and emotionally unexpressive. Emotional stability is a tendency of an individual to be relaxed and remaining calm in tense situations. Negligence is a personality trait that exhibits the carelessness and inefficiency of an individual in doing jobs. Openness dimension assesses an individual's proactive seeking and appreciation of experience for its own sake, toleration for and exploration of the unfamiliar. Openness shows an individual has broad interests, is curious, liberal, impractical and likes novelty. Dominance deals with an individual projecting oneself as supreme and commanding over others. Reasoning means abstract thinking, high intelligence and full of ideas. Inquisitiveness reflects curiosity of a person to know things, people and situations. Diversion means the person gets distracted easily by others and their actions. Mundane reflects the tendency of an individual to do regular jobs and not liking any changes. Creativity deals with the thought processes of an individual It reflects in the development of new ideas.

Table 5: Results of K-Means Cluster Analysis Final Cluster Centers

Personality	Cluster		
	1	2	3
Sensitivity	3.84(III) (Moderate)	3.99 (I) (Moderate)	3.87 (II) (Moderate)
Introversion	2.99 (III) (Weak)	3.02 (II) (Moderate)	3.20 (I) (Moderate)
Emotional Stability	3.11 (III) (Moderate)	3.14(II) (Moderate)	3.30 (I) (Moderate)
Negligence	3.33 (II) (Moderate)	3.28 (III) (Moderate)	3.52 (I) (Moderate)
Openness	3.88 (I) (Moderate)	3.84 (II) (Moderate)	3.75 (III) (Moderate)
Dominance	2.51 (II) (Weak)	2.10(III) (Weak)	2.90 (I) (Weak)
Reasoning	2.72 (II) (Moderate)	2.73 (I) (Moderate)	2.53(III) (Moderate)
Inquisitiveness	3.47 (I) (Moderate)	3.27 (III) (Moderate)	3.43 (II) (Moderate)
Diversion	2.91 (II) (Weak)	2.44 (III) (Weak)	3.71 (I) (Moderate)
Mundane	1.84 (III) (Weak)	4.21 (I) (Strong)	4.19(II) (Strong)
Creativity	3.14(II) (Moderate)	2.96(III) (Weak)	3.58 (II) (Moderate)
Average	3.15	3.27	3.54

Note: Mean values: (1-2.99): Weak; (3-3.99): Moderate; (4-5): Strong

The Final Cluster Centers table shows the mean values for the three clusters which reflect the attributes of each cluster. For instance, the mean value of the openness and inquisitiveness for the first-cluster is 3.88 and 3.47 respectively and is ranked first for these two factors. This means that the first cluster people give high importance to openness and inquisitiveness. It is also noted from the table that no particular factor is heavily loaded on any particular cluster segment. The rank of the clusters on every factor is also given in the table. The description of all three clusters along with the label is given below.

5.2 Venturesome Women

The first cluster can be designated as venturesome women because it has secured third rank in the mean values of factors like sensitivity, introversion, emotional stability, mundane and first rank in openness and inquisitiveness. This means that women under this segment are extroverts by nature; feel comfortable in expressing their emotions frankly to others; hate mundane jobs and are curious by nature. They are basically open-minded women.

5.3 Practical Women

The mean value of factors such as sensitivity, reasoning and mundane in this segment is greater than 3.5 and is ranked first for these three factors. This segment ranks third in terms of negligence, dominance, inquisitiveness, diversion and creativity. This means that this segment of women is quite considerate; value others' view points; are logical and prefer routine jobs. These women are realistic and sensible. Hence this segment of women is aptly named as practical women.

5.4 Self-reliant Women

The third cluster has a high mean value of 3.54 and is ranked first in many factors such as introversion, emotional stability, negligence, dominance, diversion and creativity. It is ranked third in factors such as openness and reasoning. This means that women under this segment prefer to be alone; like to contemplate a lot, quite calm, composed; lazy by nature; get distracted easily; like to enforce their views on others and are highly imaginative. Hence this group can be designated as Self-reliant Women.

Table 6: ANOVA (Analysis of Variance) for the factors of Personality

Personality	Cluster			Error	F	Sig.
	Mean Square	df	Mean Square	df		
Sensitivity	3.370	2	0.278	613	8.866	0.000
Introversion	2.804	2	0.336	613	8.353	0.000
Emotional stability	2.282	2	0.222	613	10.271	0.000
Negligence	3.270	2	0.211	613	15.498	0.000
Openness	2.939	2	0.210	613	8.391	0.000
Dominance	33.334	2	0.677	613	49.258	0.000
Reasoning	3.517	2	0.350	613	9.576	0.000
Inquisitiveness	3.261	2	0.312	613	9.414	0.000
Diversion	85.303	2	0.621	613	137.321	0.000
Mundane	370.679	2	0.178	613	2079.353	0.000
Creativity	21.458	2	0.546	613	39.300	0.000

The final cluster center table shows that the three clusters differ in mean value of all the eleven factors. The ANOVA table indicates that the differences that exist among the three clusters in the mean values are significantly different. The significant value for all the eleven factors is 0.000. This means that all the eleven factors have a significant contribution in dividing women into three segments based on personality.

Table 7: Number of Cases in each Cluster

Cluster	1	195.000	32%
	2	216.000	35%
	3	205.000	33%
Total		616.000	

The number of cases in each cluster of the personality table indicates that there are around 195 women out of 616 women in cluster I of venturesome women followed by 216 women in cluster II of practical women and 205 women in cluster III of self-reliant women.

5.5 Testing Suitability of Segmentation

The next primary question is whether the identified clusters are genuine and each cluster differs from the other significantly and personality plays a role in separating women into three segments. For this purpose, reliability of the cluster classification and its stability across the samples has to be verified. Several authors have recommended the use of discriminant analysis for cross validation (Field and Schoenfeldt 1975; Rogers and Linden 1973). Following are the outcomes of discriminant analysis.

Table 8 -Tests of equality of group means for the factors of personality

Personality	Wilks Lambda	F	df1	df2	Sig.
Sensitivity	0.961	8.866	2	613	0.000
Introversion	0.973	8.353	2	613	0.000
Emotional Stability	0.968	10.271	2	613	0.000
Negligence	0.952	15.498	2	613	0.000
Openness	0.969	8.391	2	613	0.000
Dominance	0.862	49.258	2	613	0.000
Reasoning	0.936	9.576	2	613	0.000
Inquisitiveness	0.956	9.414	2	613	0.000
Diversions	0.691	137.321	2	613	0.000
Mundane	0.128	2079.353	2	613	0.000
Creativity	0.886	39.300	2	613	0.000

Table 8 contains Wilks' lambda, the F statistic, its degrees of freedom and significance level. Wilks' lambda is the ratio of the within-groups sum of squares to the total sum of squares. Wilks' lambda in this case ranges from 0.128 to 0.973. The small values of Wilks' lambda indicate that there is a strong group differences among mean values of eleven factors. The F statistic is a ratio of between-groups variability to the within-groups variability. The significance value is 0.000 for all the eleven factors which indicates that the group differences are significant.

Table 9 : Chi-square Analysis Results Demographic variables and clusters:

S. No	Variable	Chi-Square Value	Significant Value	Significant or Not
1	Age	25.884	0.000	Highly Significant
2	Education	25.039	0.002	Significant
3	Occupation	2.184	0.336	Not Significant
4	Income	17.198	0.028	Significant
5	Family Income	21.008	0.007	Significant
6	Number of years been married	23.206	0.001	Significant
7	Number of children	11.093	0.196	Not Significant
8	Type of family	1.703	0.427	Not Significant
9	Number of dependents	2.016	0.918	Not Significant
10	Family lifecycle stage	15.926	0.014	Significant
11	Area of residence	9.339	0.155	Not Significant
12	Native place	0.245	0.885	Not Significant
13	Status of the respondent as a child	1.821	0.935	Not Significant

From the above table it is clear that age, education, income, family income, number of years been married and family life cycle stage have a significant association with personality segments. The other demographic variables such as occupation, number of children, type of family, number of dependents, area of residence in Chennai, native place and status of the respondent as a child have no significant association with personality segments.

5.6 Discriminant Function

In the previous analysis, the variables which have impact on the personality of the women are decided by chi-square test. The influencing variables are age, education, income, family income, number of years been married and family life cycle stage. Now, it is necessary to find out which variable is the most significant variable in deciding the woman as a venturesome, practical and self-reliant woman. For this purpose, step wise discriminant analysis is used with personality as a grouping variable and all the variables which have influence on personality as independent variables.

Table 10-Tests of equality of group means for step wise discriminant analysis of personality

Variables	Wilks' Lambda	F	df1	df2	Sig
Age	0.963	11.906	2	613	0.000
Education	0.970	9.550	2	613	0.000
Gross monthly income	0.982	5.754	2	613	0.003
Monthly family income	0.985	4.520	2	613	0.011
Number of years been married	0.964	11.387	2	613	0.000
Family Lifecycle stage	0.982	5.645	2	613	0.004

The test of equality of group means a table gives information about Wilk's lambda, F statistic and its significance. The variables which have high F value and low significant values are age, number of years been married, education, gross monthly income, family life cycle stage, monthly family income and these variables can be called discriminating variables.

Table 11-Variables entered/removed under the step wise discriminant analysis of personality

Step	Entered	Wilks' Lambda	df1	df2	df3	Exact F	df1	df2	Sig.
1	Age	0.963	1	2	613.000	11.906	2	613.000	0.000
2	Education	0.932	2	2	613.000	10.900	4	1224.000	0.000

The above table displays statistics for the variables entered or removed at each step. To identify all the influencing variables, two steps are taken. In the first step the most discriminating variable age is entered and in the second step, next important variable education is entered. All the other variables are removed from the analysis. The statistics for the two variables are displayed in the above table.

Table 12-Final variables under the step wise discriminant analysis of personality

Step		Tolerance	F to Remove	Wilks' Lambda
1	Age	1.000	11.906	
2	Age	0.850	12.271	0.970
	Education	0.850	9.916	0.963

The above table displays statistics for the variables that are in the analysis at each step. The step wise discriminant analysis revealed two independent variables viz age and education influencing the factor formation as well as cluster classification. The segmentation of these categorical variables possess different parameters-mean and variance to have the influence over the personality traits of women in family purchase decisions.

Table 13-Structure matrix for the step wise discriminant analysis of personality

	Function	
	1	2
Age	0.927*	-0.375
Number of years been married	0.813*	-0.462
Family life cycle stage	0.632*	-0.454
Education	-0.013	1.000*
Gross monthly income	0.086	0.565*
Monthly family income	0.047	0.329*

(*denotes largest absolute correlation between-each variable and any discriminant function)

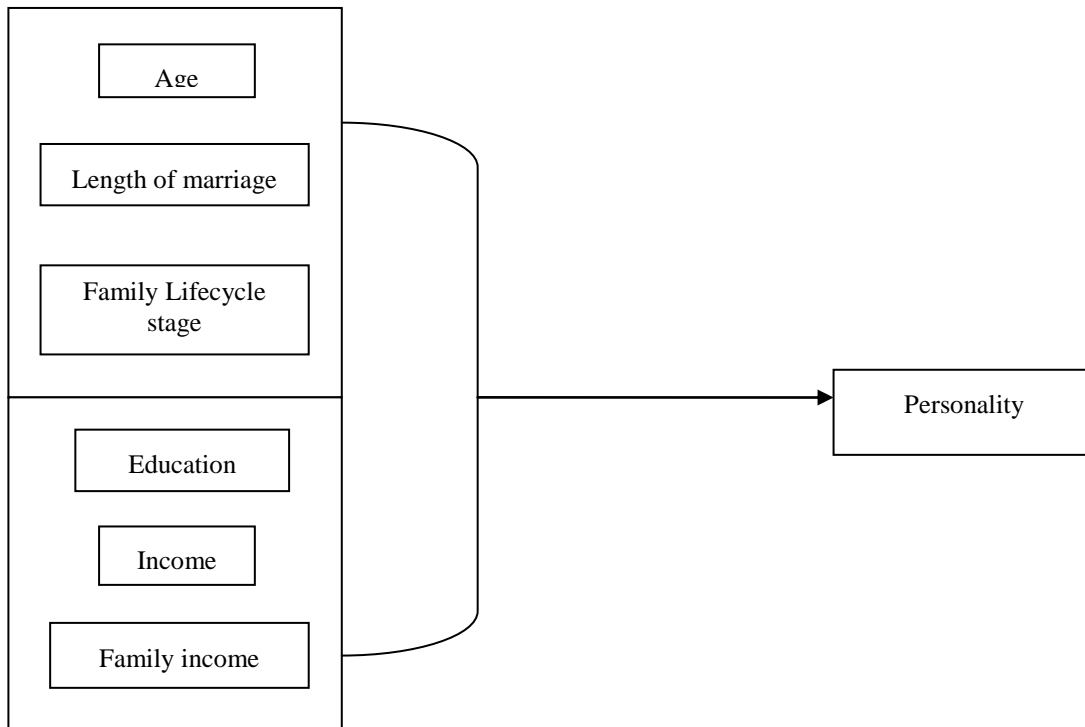
The structure matrix contains within-group correlations of each predictor variable with the canonical function. This matrix provides another way to study the usefulness of each variable in the discriminant function. The variables are ordered by the size of the correlation. There; are two discriminant functions which can be used to study the personality characteristics of population. The discriminant functions are as follows:

$$Z1 = -0.927 * \text{Age} + 0.813 * \text{Number of years been married} + 0.632 * \text{Family Life cycle stage}$$

and

$$Z2 = 1.000 * \text{Education} + 0.565 * \text{Gross monthly income} + 0.329 * \text{Monthly family income}$$

Fig: 1 Personality Model



5.7 Relationship between Personality segments and Purchase decision making of durables

It is necessary to analyze the factors that determine personality based segmentation. The chi-square analysis was done to find out whether personality has impact over the influence of women at various stages of the purchase decision making process.

Table 14 Chi-square value for association between personality and decision making of television

S.No.	Stages	Chi-Square Value	Significant Value	Significant or Not
1	Started an idea of purchase	20.898	0.022	Significant
2	Decided how much to spend	20.348	0.026	Significant
3	Gathered information regarding Price	15.803	0.105	Not Significant
4	Gathered information regarding Brands	19.567	0.034	Significant
5	Gathered information regarding Features	10.346	0.411	Not Significant
6	Visited stores/showrooms	15.605	0.112	Not Significant
7	Decided on Style/Type	30.285	0.001	Significant
8	Decided on Size	9.393	0.495	Not Significant
9	Decided on a Specific Brand	15.554	0.113	Not Significant
10	Decided on a Specific Store/Showroom	21.017	0.021	Significant
11	Decided on when to buy	8.366	0.593	Not Significant
12	Decided on mode of payment	10.455	0.402	Not Significant
13	Actually went to the store/showroom and made the purchase	20.448	0.025	Significant

The Optimal Scaling diagram shows that venturesome women had played an active role in deciding the budget whereas in case of self-reliant families, husbands played the main role while in case of practical families, both husband and wife had more influence in fixing the budget for the purchase of television.

The Optimal Scaling diagram shows that, venturesome women are playing an active role in gathering information about various brands of television whereas in case of self-reliant families, children played an active role while in case of practical families, husband was more active.

Table 15 Chi-square value for association between personality segments and in purchase decision making of refrigerator:

S. No	Stages	Chi-Square Value	Significant Value	Significant or Not
1	Started an idea of purchase	9.538	0.482	Not Significant
2	Decided how much to spend	19.293	0:037	Significant
3	Gathered information regarding Price	17.449	0.065	Not Significant
4	Gathered information regarding Brands	12.653	0.244	Not Significant
5	Gathered information regarding Features	20.192	0.027	Significant
6	Visited stores/showrooms	15.753	0.107	Not Significant
7	Decided on Style/Type	31 .958	0.000	Highly Significant
8	Decided on Size	10.820	0.372	Not Significant
9	Decided on a Specific Brand	20.120	0.028	Significant
10	Decided on a Specific Store/Showroom	14.823	0.139	Not Significant
11	Decided on when to buy	12.452	0.256	Not Significant
12	Decided on mode of payment	10.577	0.391	Not Significant
13	Actually went to the store/showroom and made the purchase	11.288	0.336	Not Significant

It can be inferred that the personality segments have a significant association with stages of purchase decision making such as deciding how much to spend, gathering information regarding features of various brands, decided on style/type and decided on a specific brand of refrigerator. The other stages such as starting an idea of purchase, gathered information regarding price, brands, visited showrooms, decided on size, showroom, decided on when to buy, decided on the mode of payment and actually went to the showroom and made the purchase of refrigerator have no significant association with personality segments.

Fig: 2 Association between personality segments and decision on specific brand for the purchase of refrigerator

The Optimal scaling diagram shows that venturesome women are playing a prime role in finalizing the brand of refrigerator while in the case of self-reliant families, the husband had more influence and in the case of practical families, husband, wife and children all together had more influence in finalizing the brand of refrigerator.

Table 16 -Chi-square value for association between personality segments and stages in purchase decision making of washing machine

S.No	Stages	Chi-Square Value	Significant Value	Significant or Not
1	Started an idea of purchase	11.906	0.291	Not Significant
2	Decided how much to spend	7.468	0.681	Not Significant
3	Gathered information regarding price	7.414	0.686	Not Significant

4	Gathered information regarding brands	9.543	0.481	Not Significant
5	Gathered information regarding features	16.163	0.095	Not Significant
6	Visited stores/showrooms	15.736	0.107	Not Significant
7	Decided on style/type	13.891	0.178	Not Significant
8	Decided on size	9.233	0.510	Not Significant
9	Decided on a specific brand	7.925	0.636	Not Significant
10	Decided on a specific store/showroom	11.733	0.303	Not Significant
11	Decided on when to buy	10.323	0.413	Not Significant
12	Decided on mode of payment	13.016	0.223	Not Significant
13	Actually went to the store/showroom and made the purchase	7.079	0.718	Not Significant

From the above table it is clear that all the thirteen stages of purchase decision making such as starting an idea of purchase, decided how much to spend, gathered information regarding price, brands, features, visited showrooms, decided on size, decided on style/type, decided on a specific brand, decided on a specific showroom, decided on when to buy, decided on the mode of payment and actually went to the showroom and made the purchase of washing machine have no significant association with personality segments.

6.0 Conclusion

The study has assessed the eleven key personality factors of women as sensitivity, introversion, emotional stability, negligence, openness, dominance, reasoning, inquisitiveness, diversion, mundane and creativity. Based on these key personality traits the respondents were categorized into three distinct groups called as venturesome women, practical women and self-reliant women. All the three groups showed significant association with demographic variables like age, education, income, family income, number of years been married and family lifecycle stage. Venturesome women are playing an active role in the family purchase decisions of durables when compared to practical and self-reliant women.

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