C H A P T E R - III

METHODOLOGY

Problem :

The present investigation is mainly concerned with studying consumer preferences in relation to motives and personality. More specifically it tries to predict consumer preferences of certain products from motives and personality. Marketers very well know that they cannot please all with the same thing. For this reason total product offerings are adapted to the demands of small homogeneous groups known as market segments mostly based on demographic variables like age, income, socialclass, etc. Workers in the field soon realised that individual differences should be more thoroughly studied in terms of many other factors like, interests, values, attitudes, motives, and the like. It is perhaps for this reason that attention was shifted to studying personality to segment market in a more meaningful way.

The extensive review of past literature in the field presented in the second chapter revealed that researchers attempted to predict consumer behaviour using various personality and motivational measures. In one experiment, susceptibility to mass communication appeals and preference for certain unique types of appeals were studied in relation

to the social character of people. The results were conclusive in that the tradition directed, innerdirected and other directed individuals did not reveal marked differences in their susceptibility to communication and preferences of unique appeals. In other researches various behavioural correlates of individuals differing in persuasibility were studied with the assumption that individuals with high persuasibility scores would differ significantly from those with low scores in respect of such factors as intelligence, sex, self-confidence and self-esteem, The results were quite contradictory and hence no definite conclusion was inferred. Other researchers thought that personality characteristics should predict brand or store preferences. The results of many researchers revealed that personality traits are not good predictors of buyer behaviour. It would thus seem that personality plays no significant role in predicting buyer behaviour.

On possible reason for this kind of lack of relationship between personality and buyer behaviour could be that the tests used to measure personality may not bear the weight of explanation they have been assigned in the various studies. Another reason could be that the tests themselves may be unsatisfactory with regard to their validity and reliability. Even if test reliability is ascertained, [illegible]

it cannot be said that tests are valid. Validity of the test is determined by its correlation with some external criterion. It may be that the validity of personality tests had not been demonstrated in terms of criteria which the researchers want to predict in a marketing setting. Yet another point is that buying behaviour is a complex process and any effort to predict complex process by means of standardised tests alone may not serve the purpose. It cannot be assumed that individuals with a given personality profile are homogenous in number of other aspects. It is therefore felt that the relationship between personality characteristics and buyer behaviour may be found in case of homogenous samples.

It may also be that the relation between personality and buyer behaviour is highly specific. In other words the relationship may be obtained in certain sub-groups based on such variables as sex and community. It is also probable that personality characteristics will be more highly related with consumer product preferences measured in the frame work of a certain theoretical setting than with other aspects of buying behaviour. Finally, personality defined in a motivational sense might predict some aspects of buying behaviour to a significantly greater extent. These are some of the possibilities which when explored might reveal some relationship between personality and various aspects of buying behaviour.

In the present investigation an attempt is made to explore these possibilities. The study is carried out to predict consumer preferences of products measured within the framework of Rosenberg's theoretical model from personality characteristics as well as personality needs (182). College hostel students were chosen as samples with a view to ensure homogeneity. Further, the subjects in the sample were made homogeneous in terms of their age, buying habits, etc. Besides, the study was conducted in two different settings using sub-groups based on sex and community as variables. This made it possible to examine specificity of the relation between personality and consumer preferences.

Reference was made in the above discussion to Rosenberg's theory for the measurement of attitudes. This theory was applied to marketing by some researchers to measure consumer preferences. In several studies designed to investigate the development of any change in consumers' attitudes, an attempt was made to examine the cogniture structure hypothesised to underlie attitudes. In some of the recent studies an effort was made by researchers to functionally relate attitudes to cogniture structure by applying a modified form of Rosenberg's two factor theory. Social psychologists have been concerned with evaluating attitudes towards an object, rather than with relative attitudes towards a group of objects. No

definition of attitude and attitude models in the social psychology literature applies directly to the issue of brand preference, since researchers have apparently been reluctant to compare a persons' relative attitude about one object with his attitude about another.

Rosenberg's theory is formally stated as :

$$Aik = f\sum_{j=1}^{n} (PIijk,\ VIij).$$ Where,

Aik = attitude towards an object k expressed in terms of an individual i's degree of like - dislike of that object.

PIijk = Individual i's perceived instrumentality of the Kth object towards attaining or blocking j^{th} goal or value.

VIjk = Value importance to an individual i of the j^{th} goal or value. More specifically, attitude towards an object 'k' is considered to a function of the weighted sum of beliefs about the object as to whether it blocks or helps the attainment of certain goals.

In the area of consumer behaviour the theory is translated to state that attitude towards a brand is a function of

(a) a buyer's beliefs about the brand's ability to satisfy or block consumption and usage motives, and

(b) the relative importance of these motives to him.

In other words, brand's preference is a joint function of perceived instrumentality and value importance. The problem of the relative importance of perceived instrumentality and value importance is not yet solved. The solution of this problem has significant implications for marketing. In case perceived instrumentality is superior to value importance, product features or attributes should be played up in an advertisement. On the other hand, if value importance is more important, certain goals should be emphasised in the consumption of a product. Thus, in terms of public policy the dominance of perceived instrumentality suggests product offering in accordance with the reorganization of priority of needs.

The weighted score is obtained by multiplying the instrumentality score with the value score. Instrumentality score is the evaluation of a brand in terms of its attributes as to the extent to which it satisfies the needs. Importance scores represent the value the consumer has for the various attributes in a product group. It may be that instrumentality scores are better predictors of consumer preferences than value scores or product preference scores based on the first two scores. In one research it was revealed that instrumentality predicted consumer preferences to a significantly greater extent than did the other two scores. It was also

observed that value importance not only did not contribute towards the determination of the consumer's effect towards a brand but also that it suppressed the dominant power of the perceived instrumentality scores. Other researchers have produced different results. In the present investigation product preference scores have been used. These scores are derived from perceived instrumentality scores and value importance scores. More specifically the product preference scores are obtained by multipling the corresponding scores on perceived instrumentality and value importance.

SELECTION OF PRODUCT GROUPS

A product that covers all types of market segments draws the attention of manufacturers as this would enable them to sell more in terms of volume as well as value. The net result is higher profit. Consumer non-durable products cater to all the different types of segments. From this angle, the product groups which would come to one's mind are 'Toilet Soap, Tooth Paste, and Face/Talcum Powder'. These three are grouped under the category of convenience goods (121). It can be observed from the following table that in India the rural consumer off-take for these products has not even cross 40 percent of the total off-take, even though 80 percent of Indian population is in rural areas.

	Product Groups	*Rural Consumer Off-take as percent of Total Consumer Off-take
1	Toilet Soap	37.1
2	Tooth Paste	7.3
3	Face/Talcum Powder	14.6

* Figures are calculated on the basis of shop audit reports of M/s. Operations Research Group, 1975

While the rural component for Toilet Soap as can be seen from the table is 37.1%, it is only 7.3% for Tooth Paste. In view of the lower contribution from the rural sector, it was thought to study the urban market of these three product groups in detail.

* Urban Consumer Off-take and Growth percent of the three product groups - 1975.

	Product groups	Consumer Off-take in Rs. Lacs	Growth percent 1975/1974
1	Toilet Soap	7086	59.0
2	Tooth Paste	2615	35.7
3	Face/Talcum Powder	1449	24.2

The above table clearly shows that these product groups not only have very high urban consumer off-take, but they also have high growth rate. However, the growth rate varies from 24.2 percent in case of face/talcum powders to 59 percent in case of toilet soaps. This higher consumer off-take and growth rate clearly indicate the wider spread of these products.

One more important factor considered while selecting the product groups was the variety. As various attributes were to be scaled, it was thought to have product groups with different varieties in which the attributes vary in degrees. The following table shows the position of the major brands in the three product groups.

* Urban Consumer Off-take, Market Share and Growth percent of major brands - 1975.

Major brands	Off-take in Rs.000's	% Market Share	Growth percent 1975/1974
TOILET SOAP-TOTAL MARKET	708,632	100.0	59.0
Lifebuoy	187,633	26.5	88.3
Lux	120,794	17.0	107.8
Hamam	73,179	10.3	122.3
Rexona	65,350	9.2	89.6
Jai	46,236	6.5	-27.8
Other (51 brands)	215,440	30.5	Not available
TOOTH PASTE-TOTAL MARKET	261,546	100.0	35.7
Colgate Dental Cream	130,274	49.8	42.8
Forhans	47,084	18.0	32.4
Binaca Top	23,402	8.9	38.7
Binaca Fluride	16,192	6.2	24.2
Signal Fluride	16,303	6.2	35.9
Other (20 brands)	28,291	10.9	Not available

* Courtsey : M/s. Operations Research Group.

Major brands	Off-take in Rs.000's	% Market Share	Growth percent 1975/1974
FACE/TALCUM POWDER-TOTAL MARKET	144,863	100.0	24.2
Ponds	57,415	39.6	29.0
Cinthol	9,920	6.8	47.3
Johnson Baby Powder	8,008	5.5	22.5
Cuticura	7,394	5.1	24.9
Himalaya	6,554	4.5	45.3
Maxfactor	6,526	4.5	100.6
Others (61 brands)	49,046	34.0	Not available

(Figures - Courtsey: M/s.Operations Research Group)

In all these three product groups, more than 60 percent of the market is shared by the first five major brands. On closer scrutiny it is observed that among tooth pastes this percentage is as high as 89. All the major brands have exhibited a high growth rate except Jai among toilet soap, which has registered a decline of 28 percent.

One more common product of 'durable nature', Dress Material/Cloth' was also included. This product is also bought and used by everybody. Dress material is a typical example of shopping goods (121).

The following table indicates the extent of usership of cloth in India in terms of per capita availability.

Availability of Cloth in India

Type of Fabric	1973	1974*
	Availability for Home Consumption (In Million Metres)	
Cotton Cloth	6913	7581
Blended Mixed Fabrics	250	211
Man - made Fabric Fabrics	839	797

Type of Fabric	Per Capita Availability (In Metres)	
Cotton Cloth	12.05	12.94
Blended Mixed Fabrics	0.44	0.36
Man - Made Fabrics	1.46	1.36

* Provisional

Source : Kothari's Economic & Industrial Guide of India, 1976, Thirty First Edition.

It is interesting to note that on an average an individual buys about 15 metres of cloth in a year.

The following points were kept in mind while selecting the above four product groups:-

1) The product should be fairly common,
2) The product should be frequently used or often purchased,
3) There should be several varieties of the same product,
4) Anticipated interplay of different motives in buying should be felt,

5) It should be a common product for both males and females.

6) It should be a common product for the two linguistic communities - Gujaratis and Maharashtrians - which are under study.

SELECTION OF GROUPS BASED ON COMMUNITY

There are different ways of grouping people and each group can be called a segment. Some bases of such groupings are religion, region, caste, language and social status. In India, at the national level, linguistic bifurcations are very commonly referred. The reason being that India is divided into states, mainly for administrative purposes, on the basis of the predominant language spoken in the particular region. Hence, the investigator also decided to select two community groups on the basis of the spoken language. For the present investigation, Gujaratis and Maharashtrains were selected from two community groups.

In addition, even from marketing point of view, these two linguistic groups arouse lot of curiosity with regard to the product groups selected viz., toilet soap, tooth paste, face/talcum powder. As can be seen from the following table, both the communities have differential consumption pattern, in terms of off-take, growth rate and per capita consumption.

In general, while the pattern among Maharashtrains is more or less identical to that of the total market, it is not so in case of Gujaratis.

Urban Consumer Off-take, Growth Percent, and Per Capita, Consumption among Gujaratis and Maharashtrians-1975.

	URBAN		
	Gujarat	Maharashtra	All India
* CONSUMER OFF-TAKE (VALUES IN RS.000's)			
Toilet Soap	28,309	99,450	708,632
Tooth Paste	13,133	39,867	261,546
Face/Talcum Powder	7,624	19,563	144,863
* GROWTH PERCENT (1975/1974)			
Toilet Soap	72.7	54.5	59.0
Tooth Paste	41.9	35.7	35.7
Face/Talcum Powder	9.2	23.6	24.2
** URBAN POPULATION (000's)	7,496	15,938	109063
PER CAPITA CONSUMPTION (In Rs. & Ps.)			
Tiilet Soap	3.78	6.24	6.50
Tooth Paste	1.75	2.50	2.40
Face/Talcum Powder	1.02	1.23	1.33

* Courtsey: M/s. Operations Research Group

** Source : Census of India, 1971.

The growth among Gujaratis was more than that of Maharashtrians for toilet soap, and tooth paste. This was not

the case for face/talcum powder. The per capita consumption was lower among Gujaratis than among Maharashtrains in all the three product groups.

Another factor which was considered for segmenting the groups was sex. Both males and females were included in each of the two subsamples based on community. Thus the inclusion of sex and community as variables made it possible to examine the specificity of the relationship between product preference and personality as well as motivation.

S A M P L E

Population Studied and Size :

Considering the community of the four selected product groups, college hostel students are chosen to be the subjects. As far as these four products are concerned, the hostellers are independent in making purchase decisions in general.

Questions have been raised about the validity in using students as samples in consumer researches. Skepticism arose because products and services were meant for some segments of the population and some of the products and services were not at all for students. Jagdish N. Sheth (186) designed a study to test, whether there was any difference between students and housewives in a post-decision dissonance choice situations. The effective sample consisted of 49 male

graduate students and 43 housewives. They were asked to rank 10 popular national brands of tooth paste of the same size, and also to scale product attributes, in order of their preferences. A simulated dissonant situation was created in the experiment. There was a remarkable degree of similarity between students and housewives as far as post-decision dissonance reduction was concerned. Chi-square analysis did not reveal any significant differences.

Inder P. Khera and James D. Benson (113) conducted a study to investigate the effect of students as substitutes for businessmen in behavioural research. The sample consisted of 228 students and 160 businessmen. All the subjects were asked to assume that they were purchasing agents for a paint manufacturer. They were exposed to a short sales film in order to create a purchasing situation or atmosphere. They were then asked to rate the quality of the product and sales communicator of the film on a five point modified Thurstone scale. The ratings of both the groups were found to be almost identical. Chi-square tests showed no significant difference. However, the students recommended the product more than businessmen in most of the cases. Hence, caution should be exercised while using students as substitutes for businessmen in behavioural researches.

An evaluation of sample population and size was done, among some of the past researches in certain particular conditions or circumstances (i.e. nature of study - personality, motivation etc. andproduct groups or brands considered). The detailed analysis of the same is appended.

Such an analysis has revealed that normally the respondents were students, head of the households, housewives, families, businessman etc. Wherever large sample size was used, it was because of the facilities provided by a few consumer research organizations which had regular consumer panels or retailer panels for consumer studies. The smallest sample considered was 42 women in a study on brand loyalty (198). Almost all types of product groups are covered in these researches. Whenever grocery products were one of the groups under study, the sample population was restricted to housewives or women, in general.

Further, a close look at this analysis reveals that sample population varies depending on the product group, nature of the study and the condition or situation in which the researches were carried out. One cannot refute the extensive use of students as samples in many of the studies.

Stratification :

Stratification is done at three stages viz. city level,

community and sex. The cities chosen for the study are a metropolitan city - Bombay in Maharashtra and and a small city - Baroda in Gujarat. According to 1971 census the population of these two towns were 59.7 and 4.7 lakhs respectively. The sample was restricted to Maharashtrian and Gujarati college hostellers (linguistical stratification), belonging to both the sexes.

Sampling Frame :

While, almost all the hostels (attached as well as private) were selected in Baroda areawise random selection of hostels was done in Bombay with the help of the State Education Department. After selecting the hostels, respective hostel Wardens or student secretaries helped to segregate hostellers belonging to Maharashtrian and Gujarati communities.

Sample Selection :

Random sampling method is adopted to select respondents in the three stages:

Sample Characteristics :

On the whole, 550 hostellers were contacted, and positive co-operation was received from 495 subjects. 38 schedules were again deleted from the final analysis, after

careful scrutiny, e.g. incomplete, vague responses etc. Thus the valid final sample was reduced to 457 which records 83% co-operation rate.

The effective sample spread in the two towns, according to sex and community is as indicated below:

Community	Male	Female	Total
		B O M B A Y	
Maharashtrian	96	41	137
Gujarati	52	78	130
Total	148	119	267
		B A R O D A	
Maharashtrian	40	21	61
Gujarati	70	59	129
Total	110	80	190
		T O T A L	
Maharashtrian	136	62	198
Gujarati	122	137	259
Total	258	199	457

The total number of hostels contacted in the two towns is as follows:

Cities	Hostels		
	Boys	Girls	Total
Bombay	6	9	15
Baroda	17	4	21
Total	23	13	36

Observations on the Sample :

(i) The average monthly family income of 87 percent of the subjects was above Rs.500/-.

(ii) In general, the age group of the respondents was between 15 and 25 and the average age is around 20.

(iii) The time taken to fill in the questionnaire varied from 60 minutes (1 Hr.) to 330 minutes (5 Hrs. 30 Min.) and the average time is around 103 minutes (1 Hr. 43 Min.).

Tools Used :

As mentioned in Chapter I, a number of personality tests were tried in marketing situation. A reference to 11 personality tests was made in this chapter. EPPS seemed to ba a popular test. From the preliminary enquiry and pilot study the investigator understood that self administered questionnaires would be better responded by hostel students for a study of this nature. Considering these views the following tools were used.

(i) Personality was measured by administering Cattell's Form 'B' of 16 Personality Factor Inventory.

(ii) Need Score was obtained by administering the short version of Edwards Personal Preference Schedule.

(iii) A structured questionnaire was devised for the measurement of product preference.

(i) Cattell's Form 'B' of 16 Personality Factor (16 P.F.) Inventory :

Cognition of the total personality in all its main dimensions is the major objective of this inventory. According to the manual the statistical predictions from the factors, and the psychological grasp of their modes of action, are continually increasing. It also states that the chief personality factors in the 16 P.F. exist throughout the growth period. In other words it is applicable to all age groups.

The majority of questions in the 16 P.F. are indirect, asking about interests which the subject would not necessarily perceive to be related to the trait in question, so that it escapes from some of the distortions which could arise due to the nature of the respondent -co-operative and unco-operative, well educated and poorly educated, honestly and ulteriorly - motivated subjects.

16 P.F. Form 'B' consists of 187 items. The subjects are provided with three alternative answers to each item. The middle category of answer or response is always 'uncertain' or 'in between'. The subjects are asked, not to omit any item. A brief description of 16 traits is given on next page.

Bipolar Descriptions of Source Traits (Factors) A Through Q_4

Factor	High Score	Low Score
A.U.1(L)1	Cyclothymia, A + (Warm, Sociable)	Schizothymia, A - (Aloof, Stiff)
B.U.1(L)2	General Intelligence, B + (Bright)	Mental Defect, B - (Dull)
C.U.1(L)3	Emotional stability or Ego Strength, C + (Mature, Calm)	Dissatisfied Emotionality, C - (Emotional, Immature, Unstable)
E.U.1(L)5	Dominance or Ascendance, E + (Aggressive, Competitive)	Submission, E - ("Milk-Toast", Mils)
F.U.1(L)6	Surgency, F + (Enthusiastic, Happy-Go-Lucky)	Desurgency, F - (Glum, Sober, Serious)
G.U.1(L)7	Character or superego strength G + (Conscientious, Persistent)	Lack of Rigid Internal standards G - (Casual, undependable)
H.U.1(L)8	Parmis, H + (Adventurous, "Thick - Skinned")	Threctia, H - (Shy, Timid)
I.U.1(L)9	Premsia, I + (Sensitive, effeminate)	Harria, I - (Tough, Realistic)
L.U.1(L)12	Protension (Paranoid Tendency), L + (Suspecting, Jealous)	Relaxed security, L - (Accepting, Adaptable)
M.U.1(L)13	Autia, M + (Bohemian Introverted, Absent - Minded)	Praxernia, M - (Practical concerned with facts)

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Factor	High Score	Low Score
N.U1(L)14	Shrewdness, N+ (Sophisticated, Polished)	Naivete, N - (Simple, Unpretentious)
O.U1(L)15	Guilt Proneness, O + (Timid, Insecure)	Confident Adequacy, O - (Confident, Self-secure)
Q_1.U.1(Q)16	Radicalism, Q_1 +	Conservatism of Temperament, Q_1 -
Q_2.U.1(Q)17	Self-sufficiency, Q_2 + (Self-sufficient, Resourceful)	Group Dependency, Q_2 (Sociably Group Dependent)
Q_3.U.1(Q)18	High Self-sentiment formation, Q_3 + (Controlled, Exacting, Will Power)	Poor Self-sentiment Formation, (Uncontrolled, Lax)
Q_4.U.1(Q)19	High Ergic Tension, Q_4 + (Tense, Excitable)	Low Ergic Tension, Q_4 - (Phlegmatic, Composed)

Reliability of 16 P.F.

Split-half reliability coefficients for Forms 'A' and 'B' together range from 0.71 for factor Q_1 to 0.93 for factor C.

Scoring :

Each response of every item was given a score of either 1 or 2. For each of the factors A, G, I, L, N, Q_2 and Q_3, the total score for any individual should not exceed 20. For the factors, C, E, F, H, M, O and Q_4 the total score limit was 26 per factor. Factor B had a limit of 13.

(ii) Measurement of Needs - Shortened form of Edwards Personal Preference Schedule (166)

Shortened form of Edward's Personal Preference Schedule (SPPS) (166) was used for the measurement of 15 personal needs. The fifteen needs measured by the original Edward's Personal Preference Schedule (EPPS) are : n. Achievement; n. Difference; n. Order; n. Exhibition; n. Autonomy; n. Affiliation; n. Intraception; n. Succorance; n. Dominance; n. Abasement; n. Nurturance; n. Change; n. Endurance; n. Heterosexuality; and n. Aggression.

EPPS consists of 210 pairs of statements which measures relative strength of 15 personal needs drawn from Murray's list. The statements measuring a particular need are paired

twice with each of the remaining 14 needs. The subjects are forced to choose one of the two statements. Thus their relative preference for one of the two needs is obtained. A respondent can record a maximum score of 28 and a minimum of zero.

Reliability of EPPS:

Reported split-half reliability coefficients for 15 needs ranging from .60 to .87 and test retest reliability coffficients ranging from .74 to .88 are noted in the manual.

Validity of EPPS :

EPPS is, basically, based upon face validity, but evidence for its validity comes from different sources.

Independence of the Scale :

Inter-correlations among 15 EPPS variables show that the variables are independent.

Justification for using EPPS :

These fifteen needs are global and universal in nature. Whatever be the cultural differences in the modes of expression, these needs are common human needs irrespective of socio-cultural environment which only condition the relative

importance of some of the needs. This conditioning, however, does not influence assessment of individual differences in the motivational make-up of individuals within a culture.

Shortened Version of EPPS (SPPS):

Although EPPS was thought to be a suitable measure for the measurement of personal needs, the length of the schedule limits its use to many situations. EPPS consists of 225 items and forced choice method necessitates several repetitions of items. The length and repetition cause boredom and annoy many respondents and it becomes difficult to get co-operation and genuine response from subjects. Keeping these facts in mind the short of EPPS (SPPS) was used in this study. This SPPS consists of only 105 pairs of statements.

In the EPPS there are two pairs of statement for the measurement of each need. In SPPS one of the two pairs was retained. The selection was based on the 'better comparable statements' criterion. Whichever of the two pairs appeared having more comparable (equally desirable or equally undesirable) statements, was selected. Selection was made on the basis of the majority judgement of eight experts - three psychologists, three sociologists, and two M.S.Ws (holders of master degree in Social Work and with sufficient experience in personal management in industries). There was

perfect agreement on all the selected pairs of statements except for the statement measuring Heterosexuality where majority opinion was taken into account. Maximum possible score on SPPS for any need is 14 as against 28 in EPPS. Procedure for the administration of SPPS was the same as for EPPS.

Reliability of SPPS:

EPPS was administered to 100 male secondary school teachers beloning to 20 to 45 years age group. They were explained the theoretical purpose of the study and were assured that responses would be kept strictly confidential. Since the aim was not only to determine reliability but also to see if the fifteen variables are relatively stable motivational dimensions of personality, SPPS was administered to the same individuals after one month with same instructions.

The scores of SPPS for each variable were doubled to make the mean scores and SDs on the two measures apparently comparable. A preliminary computation showed that this did not make any significant difference in the correlations. This procedure made the 'means' and 'S.Ds' on SPPS comparable with the means and S.Ds for male adults reported in the manual. No attempt was made to find out significance of differences between means and S.Ds reported in the manual for

the adult population and Means and S.Ds obtained by SPPS, but for simple comparison purpose they are reported in the following table,(see next page) along with the correlation coefficients between each EPPS and SPPS sub-scales.

Very high positive correlation coefficients not only show the reliability of SPPS but also indicate that personal needs measured by it are relatively stable motivational structure of an individual.

Scoring :

This short version of EPPS (SPPS) had 105 pairs of statements. Each factor had 14 statements. Because of its counting pattern of scoring or Ipsative Scaling procedure, for each factor, the maximum score for any factor was 14, and thus, for any individual the total SPPS score was constant at 105.

(iii) Product Preference Measurement Questionnaire :

This consists of five exclusive lists of attributes for the five product groups and are rated on a five point scale.

Development of the Questionnaire :

An enquiry was made among different types of people

Correlation Coefficient for the SPPS Variables and Means, and S. Ds for each Variable as obtained by EPPS and SPPS

Needs	Correlation Coefficients between EPPS & SPPS Score	SPPS		EPPS		For Adult Male Population in the Manual	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
n. Ach	.950	15.08	4.10	13.79	3.57	14.79	4.14
n. Def	.874	11.26	5.19	10.85	3.68	14.19	3.91
n. Ord	.849	12.08	4.33	12.47	3.66	14.69	4.87
n. Exh	.832	12.80	3.71	13.05	3.54	12.75	3.99
n. Aut	.901	15.60	4.55	14.79	3.52	14.02	4.38
n. Affi	.880	15.84	4.62	14.07	3.85	14.51	4.32
n. Intra	.891	15.67	4.80	15.60	4.05	14.18	4.42
n. Succ	.821	8.61	4.55	7.49	4.24	10.78	4.71
n. Domi	.863	15.04	4.40	16.39	3.10	14.50	5.27
n. Abas	.858	12.89	5.60	13.21	4.26	14.59	5.13
n. Nurt	.906	17.06	5.23	16.69	4.35	15.67	4.97
n. Chg	.854	18.69	3.69	17.61	2.80	13.87	4.76
n. End	.847	14.29	5.02	12.71	5.36	16.97	4.90
n. Het	.839	14.42	5.57	14.31	5.16	11.21	7.70
n. Agg	.865	16.81	3.99	16.09	2.63	13.06	4.60

about their opinion and preference for different attributes in the products Toilet Soap, Tooth Pastes, Face/Talcum Powder and Dress Material/Cloth keeping the results of this study in mind, an intensive personal interview was done among marketing and sales executive and students. This helped in the framing of another structured questionnaire, wherein the likes and dislikes of various attributes of these four product groups, were requested. The total number of people contacted in this connection was 69.

Yet another study of desk research type was done before the attributes were finalised. Over 50 advertisements on each of these five product groups were analyzed using content analysis to evaluate different qualities and attributes claimed by the advertiser or the manufacturer.

An analysis of the above two studies enabled the investigator to prepare a comprehensive list of a number of attributes, for each of the product groups, which are looked for in the respective products while buying the same. The total number of attributes for every product group is listed as below:

Product Group	Total No. of Attributes
Toilet Soap	21
Tooth Paste	25
Face/Talcum Powder	18
Dress Material/Cloth	102

After another detailed analysis and scrutiny, ten attributes were selected for every product group. The selected attributes are as follows :

Sr. No.	I - Toilet Soap
1.	Foam/Lather
2.	Imparts Freshness
3.	Germicidal/Medicinal
4.	Habit
5.	Hardness of Soap
6.	Lasts longer
7.	Newly, Introduced Brand
8.	Others opinion
9.	Price
10.	Reaction/Sensitivity to Skin

	II - Tooth Paste
1.	Feel Fresh
2.	Flavour
3.	Foam/Lather
4.	Formula/Content
5.	Germicidal/Medicinal
6.	Habit
7.	Newly Introduced Brand
8.	Others' opinion
9.	Price
10.	Taste

Sr. No.	III - Face/Talcum Powder
1.	Attractive Container
2.	Display of Brands
3.	Fragrance
4.	Imparts Freshness/Refreshing
5.	Habit
6.	Naturality
7.	Others' opinion
8.	Newly Introduced Brand
9.	Price
10.	Smoothness

	IV - Dress Material/Cloth
1.	Dark Colour
2.	Different types for different weather conditions
3.	Feel heavy while wearing
4.	Feel of the cloth
5.	Latest/new type of material
6.	Others' opinion
7.	Price
8.	Sober/Light colour
9.	Sober design/Plain
10.	Type of Fabric

Measurement of Preferences :

According to Rosenberg's two-factor theory (182), attitude towards an object or concept is considered to be a function of the weighted sum of beliefs about the object as

to whether it blocks or helps to attainment of certain goals (188). In the current investigation, weights are attached to the value or importance to the attributes in relation to an ideal brand (desirability scale) and to the level of presence of such a value in the brand in use (distinction scale).

Each attribute was rated twice on a five point scale, first on 'desirability scale' and then on 'distinction scale'.

Desirability Scale :

While rating on a desirability scale, the subjects were told to evaluate each attribute of every product group separately, depending on the importance and value he attached to the attribute in deciding an ideal brand of that product category. The adjectives used in the five point scale were "most desirable, moderately desirable, somewhat desirable, moderately not desirable, and least desirable", with scores of 5, 4, 3, 2 and 1 respectively.

Distinction Scale :

The subjects were asked to rate the difference or distinction they perceived in their brands as compared to alternate or other brands, with regard to a particular attribute of the same product group. The adjectives used were

"very much distinct, much distinct, distinct, somewhat distinct and not at all distinct", with scores of 5, 4, 3, 2 and 1 respectively.

Administration of Tests :

Each respondent was administered three tests, viz.

1. Form 'B' of 16 P.F.
2. Questionnaire for Product Preference
3. Short Version of EPPS

Individual as well as group administration of tests were carried out. The subjects were given relevant instruction.

Scoring :

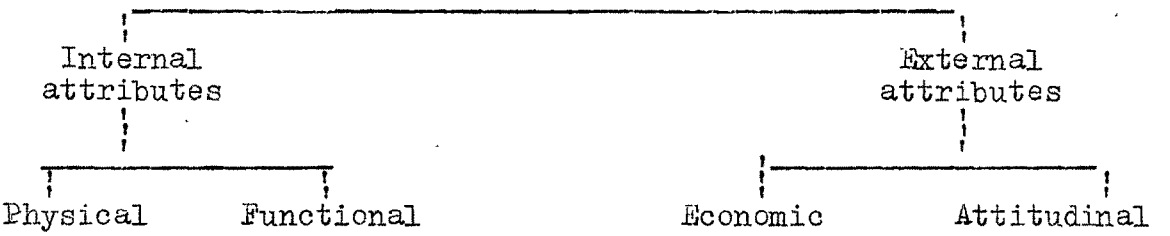
(a) Desirability Scale :- The scores were ranging from 5 to 1, for the adjectives 'most desirable' to 'least desirable' for any given attribute.

(b) Distinction Scale :- For any given attribute, the score ranged from 5 to 1, for the adjectives 'very much distinct' to 'not at all distinct'.

(c) Product preference score was derived by multiplying two corresponding scores of the desirability and distinction scales for a particular product attribute.

Classification of Attributes :

The various attributes of four different products are classified as follows:



The attributes could be broadly divided into the categories as internal and external. Those attributes which are related to the contents of the product are referred to as internal attributes and those which are external to the product are referred to as external attributes. The internal attributes are further divided into two sub-categories as physical and functional. The examples of physical attributes are Hardness, Formula/content, Taste, Fragrance, colour, etc. The examples of functional attributes are imparts freshness, reaction/sensitivity to skin, refreshing, etc. Functional attributes refer to what the product can offer. Similarly the external attributes are divided into two sub-categories as Economic and Attitudinal. Only price falls under economic category. Habit, others' opinion, newly introduced brand,etc. are the examples of attitudinal attributes. This scheme of classification was used after much

deliberations with some experts in the field. If all the product attributes are classified in this manner the comparison of different products would become easier and more meaningful.

HYPOTHESES:

The present investigation is one more attempt to t study whether consumer preferences could be predicted from personality and motivational factors. It was assumed that prediction would be greater among relatively more homogenous samples. It was also assumed that if consumer preferences are measured in a certain theoretical setting personality characteristics and motivational factors would serve as good predictors. It was also thought that the relationship between product preferences and personality characteristics as well as motivational factors will be specific to the product. These assumptions are reflected in the following hypotheses: -

(1) Since individual with a given personality profile are not homogeneous in many other respects it could be assumed that personality characteristics will predict consumer preferences to a significamtly greater extent in relatively more homogeneous groups based on sex and community.

(2) The type of product attributes that are predicted from personality variables will vary according to community and sex of the respondents.

(3) Sex difference in attribute prediction from personality characteristics will be greater in certain products than in others.

(4) Community difference in attribute prediction will be greater in certain products than in others.

(5) Consumer product preferences can be predicted to a significantly greater extent from EPPS needs.

(6) The relationship between product preferences and EPPS needs will be specific to the product.

(7) The extent to which product preference scores could be predicted from EPPS needs will depend upon sex and community of the respondents.

Methods of Analysis :

Partial correlation coefficients and multiple regression analysis were carried out. With the help of computer (R-1030 of M/s. Operations Research Group, Baroda) the equations were solved. The personality and need factors were the independent variables or predictors. Each score of an attribute was treated as dependent variable.

The same analysis was repeated for 10 attributes of all the 4 product groups. Separate analysis was made for each of the four sub-groups of respondents based on two communities and two sexes, viz. Maharashtraans, Gujaratis, Males and Females.

For statistical formulae, card format and sample output (which are used in this analysis) please refer respective appendices.