CHAPTER 3
Research Methodology

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Chapter 3

RESEARCH METHODOLOGY

3.1 Research Methodology

Research methodology is a collective term for the structured process of conducting research. A research methodology defines what the activity of research is, how to proceed, how to measure progress, and what constitute success. The term research methodology also referred to as research methods, usually encompasses the procedures followed to analyse and interpret the data gathered. Research methodology adopted should be such that the research objectives are achieved with great accuracy. Systematic methodology followed provides great insights in solving the research problem.

Research methods are grounded in philosophical traditions that stem from the researcher’s paradigm or “basic set of beliefs that guides action” (Guba, 1990). These traditions differ from various quantitative and qualitative research methods. For example, realist paradigms (empiricists, positivists) view reality as existing in the objective world external to the individual while interpretivist paradigms (relativists, existentialists) view it much more subjectively, existing in individuals as they construct it (Flint et al., 1999).

3.1.1 Qualitative Research

Qualitative research is all about exploring issues, understanding phenomena, and answering questions. Qualitative research is best described as a category of research methods rather than a single research framework. Qualitative research approach is an intricate fabric composed of minute threads, many colors, different textures, and various blends of materials (Creswell, 1998). It
is identified with several paradigm terms such as naturalistic, humanistic, and interpretive.

The aim of the qualitative approach is to understand the phenomenon in its own terms (Hirschman, 1986); the first step on the qualitative path is data collection. The philosophical assumption is “Knowledge is in the meanings people make of it; knowledge is gained through people talking about their meanings” (Creswell, 1998:19). The second step in the qualitative path is to describe the phenomenon from the point of view of the informants. Qualitative research is designed to explore the deep structure of the phenomenon using thick descriptions that explore the multiple dimensions and properties of the phenomenon. Descriptions are generated using qualitative techniques such as asking open ended questions and examining multiple data sources (Hirschman, 1986), which can take the form of interviews, observations, documents and audio visual materials. The next step is building a substantive theory - a theory of phenomenon from descriptive data. Qualitative data is analyzed working inductively from detailed parts to more general perspectives that may be called categories, themes, dimensions, or codes, depending on the analytical method prescribed by the methodology selected by the researcher. The analysis yields substantive theory of the phenomenon, which is typically a process model describing relationships among variables with feedback loops that capture the dynamics nature of the phenomenon.

“These relationships emerge late in the study after the researcher exhaustively describes a single idea” (Creswell, 1998:21), bringing the researcher full circle to a deeper understanding of the core phenomenon.
3.1.2 Quantitative approach

Quantitative research refers to the systematic empirical investigation of social phenomena via statistical, mathematical or computational techniques. Qualitative research, generates statistics through the use of large-scale survey research, using methods such as questionnaire or structured interviews. The goal of the quantitative approach is to add to the body of knowledge by building formal theory that explains, predicts and controls the phenomenon of interest. The first step in the quantitative approach is to review appropriate literature in order to develop a conceptual framework that specifies relevant variables and expected relationships among them (Bickman & Rog, 1998). Any field interview at this stage is often for the purpose of developing and refining measures or clarifying the variables and relationships among them rather than generating the conceptual framework as in the case with the qualitative approach.

The next is to build a formal theory grounded in previous research. Formal theories are generally applicable to many people in many places and are capable of generating predictive statements that can be tested by confronting the theory with real world data about the phenomenon (Hunt 1991). Before collecting the data researcher proposes the answers to research questions in the form of hypothesis arising from the theory. These hypotheses are generated thorough deductive reasoning. In the third step, data is collected through carefully constructed measurement instruments administered in field surveys or experiments. The purpose of data collection is to verify the formal theory by testing the significance and strengths of proposed relationships among the variables expressed in the hypothesis. The conclusion of a quantitative study
brings the researcher full circle to a higher level of understanding and explanation of the phenomenon, generating more questions to be answered in future research.

According to Marie, Myburgh and Van (2006) quantitative and qualitative research complement each other in the search for the truth and the solution of research problems, they reason that qualitative enquiry actually precedes quantitative inquiry in classical scientific method. Quantitative research deals in numbers, logic and the objective, while qualitative research deals in words, images. Qualitative and quantitative research approaches are not substitutes for one another; rather observe different aspects of the same reality (McCracken, 1988). However, the two approaches represent very different intellectual frames of mind. Learning the qualitative tradition will require the absorption of new assumptions and ways of seeing. It will require new strategies of conceptualizing research problems and data. Deductive (typically quantitative) and inductive (typically qualitative) approaches to research provide different views of consumer behavior. Which approach provides better information? It depends on what you want to know about the phenomena.

Johnson and Onwuegbuzie (2004) defined mixed method research as the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts, into a single study. Creswell et al., (2003) stressed that the mixed method researcher can give equal priority to both qualitative and quantitative methods or choose to emphasize either one or the other, but a researcher should select the designs that effectively answer their research questions.

The current research has used both qualitative and quantitative research. Through qualitative research data are collected on consumer behavior and marketing mix,
which has enabled the basic knowledge to the qualitative research. From the qualitative study the existing body of the knowledge with respect to the research requirement is gathered and further used to test for its relevance in current research through quantitative research.

3.2 Gap study

Reasons for the purchase of any product depend on the motivation of the consumers, but what motivates consumers to buy the product is the important aspect, which attracts marketers to decide upon the marketing mix elements while taking strategic decisions. Knowing the influencing elements of purchase will help the marketers to take proper decision at appropriate time. Consumer behavior analysis represents one development within the behavior analytic tradition of interpreting complex behavior (Gordon, Jorge, Victoria, 2006). In this research the factors influencing cosmetic marketing mix was identified from the perspective of cosmetics consumers behaviour and cosmetics company’s formulation of marketing mix elements.

The concept of marketing most textbooks treat it today was introduced around 1960. The concept of the marketing mix and the four Ps of marketing – product, price, place and promotion – entered the marketing textbooks at that time (McCarthy, 1960). Quickly they also became treated as the unchallenged basic model of marketing, so totally overpowering previous models and approaches, for example, the organic functionalist approach advocated by Wroe Alderson (Alderson, 1950, 1957). This research identifies the consumer behaviour towards chemical and herbal cosmetic products and describes the influence of consumer behavioural factors on the marketing mix aspects. This research also explains the major discriminatory factors between chemical and herbal cosmetic products and also the difference in consumer behaviour
between various groups. Knowing about the factors affecting marketing mix is crucial for making strategic decision with respect to cosmetic marketing.

3.3 Research Questions

The major research questions were;

1. What are Davangere women's consumer behaviors towards cosmetics?
2. What are Davangere women’s consumer response towards marketing mix strategies of cosmetics companies?
3. How do cosmetics consumer behavior act upon cosmetics companies marketing mix Strategies?
4. What is the influence of chemical cosmetics consumer behavior on marketing mix strategies of cosmetics companies?
5. How do herbal cosmetics consumer behavior explicate on marketing mix strategies of cosmetics companies?
6. How does chemical cosmetics consumer behavior differ with different age, income and category of women?
7. How does herbal cosmetics consumer behavior differ with different age, income and category of women?
8. What are the discriminating factors between chemical and herbal cosmetics consumer behavior?

3.4 Objectives

The main objective of this study is to analyse the pattern of cosmetics buyer behaviour and to discover the impact of it on marketing mix variables. In particular, the objective is to discover-

- The consumers’ individual, psychological and socio-cultural factors responsible for the selection of cosmetics.
• The consumers’ response towards external marketing influences.

• The variation in consumer responses, for demographic variables like age, income, category and education.

• The discriminating factors revealing difference between, behavior of chemical and herbal cosmetic users.

• The influence of chemical cosmetics users’ behavior on marketing mix strategies.

• The influence of herbal cosmetics users’ behavior on marketing mix strategies.

3.5 Profile of Davangere city

Davangere is a city in the Indian state of Karnataka. It is the administrative headquarters of Davangere district which lies at the centre of the state of Karnataka. The city is located on National Highway 4 at a distance of about 265 km from the state capital, Bangalore. Davangere became a separate district in 1997 when it was separated from the then united district of Chitradurga for administration conveniences. It is the 7th largest city in Karnataka.

The civic administration of the city was managed by the Davangere City Corporation (Davanagere Mahanagara Palike), before it was established as a municipality on 7th Aug, 1951. It now has the status of a City Corporation, and gained this on the 6th of January 2007. It is headed by a mayor, assisted by commissioners and council members. The city is divided into 41 wards and the council members (corporators) are elected by the people of the city. Davanagere had a municipality as early as 1870. The Imperial Gazetteer of India (1911).

Davangere is the "Heart of Karnataka". Davangere is surrounded from Chitradurga, Bellary, Shimoga, Chikmagalur and Haveri districts. Davangere is at the center of
Karnataka, 14° 28’ latitude, 75° 59’ longitude and 602.5 meters (1,977 ft.) above sea level, Davanagere district receives average annual rainfall of 644.0 mm.

Davanagere had a population of 363,780. Males constitute 52% of the population and females 48%. Davangere has an average literacy rate of 69%, higher than the national average of 59.5%: male literacy is 74% and, female literacy is 64%. In Davangere, 12% of the population is under 6 years of age. As of 2011[census] Davangere city have a population of 4,35,125 and the Davangere city has an average literacy rate of 84.89. (2011).

Davanagere is a mixed community centre, with different sub-castes within the community. Second largest population is Muslims and then Christians. The mixed culture had previously developed very good tolerance for each other's religious practices.

Davanagere is located on the Bangalore-Pune national highway NH4 which is part of the Golden Quadrilateral highway network. Geographically the city is divided into Old Davangere and New Davangere. Old Davangere comprises most of the Market Areas like Mandipet, Hasabavi Circle, Chowkipet, Kaipet, Chamrajpet, K.R Market, Kalikadevi road and residential areas like Gandhinagar, Shivajinagar, Devaraj Urs Layout, SM Krishna nagara, S S Layout, karur etc....

New Davangere comprises residential extensions like Nittuvalli, KTJ Nagar, KB Extn, PJ Extn, MCC A Block, MCC B Block, Anjaneya Extension, Swamy Vivekananda Extension, Shamanur, Nijalingappa layout, SS layout A Block, SS Layout B Block, Vinobha Nagar, Vidyagagara, Taralabalu Badavane, Vinayaka Nagar, Sarswathi Nagar, Shivakumara Badavane 1st stage and 2nd stage, Jaya Nagara A Block, Jaya Nagara B Block, DCM Layout, Ragavendra Nagara, Shakti Nagara, LIC colony,
Avargere, vinayaka extension, banshankri, Ram nagara, S O G Colony, boommika nagara, siddaveerappa nagara... Etc... The National highway 4 and the Railway track exactly cuts the City into two halves. In the late 18th century, Haidar Ali, ruler of Mysore, gave Davangere to the Maratha leader Apoji Ram, who encouraged merchants to settle there. The city eventually developed into an area with large-scale textile industry and as a trading center for cotton and grain. Davangere consists of 803 villages.

Davangere is an educational centre. It is known for its higher educational institutes. In Davangere there are three major engineering colleges, two dental colleges, two medical colleges, one Ayurvedic medical college, a number of management schools and colleges, an art college and a fashion design college. Bapuji Educational Association in Davangere is a conglomerate of over 50 educational institutions across the city of Davangere. The institute was established in the year 1958 with the start of a first grade college in Davangere. Two medical colleges, two dental colleges, an engineering college Bapuji Institute of Engineering & Technology, Bapuji B-Schools and numerous other colleges are associated with association. These colleges account for around 50 institutions. Davangere also has other three engineering colleges G M Institute of Technology and University B.D.T College of Engineering. Recently in the academic year 2011-2012 a new engineering college is started in Davangere called Jain Institute of Technology it is situated near Avargere.

A new University has been established in 2008 at Davangere named as Davangere University. All degree colleges in Davangere, Chitradurga and Haveri districts come under Davangere University.
The Shivagangothri Campus located at Tolahunase, 8 km from Davangere and houses the post graduate departments of Commerce, Biochemistry, Microbiology, Economics, Food Technology, Accounting & Finance, M.Ed., and MSW. The Institute of Management studies is also located at P.G. Centre. The campus of 73 acres (300,000 m²) as attractive buildings as well as hostels.

Davangere town is a major trading center of Karnataka state. It was called the "Manchester of Karnataka" for housing many cotton mills and supported trade and business. Being at the center of the State makes it suitable for trading. The surrounding hinterland provide support to business at Davangere. Crops like Rice, Arecanut and Cotton are traded here. There are many rice mills making puffed rice and beaten rice in and around this town. Davangere is famous for textiles mills. Shankar Textile Mills, Chigateri Mills, Chandrodaya Mills Ltd, Yallamma Cotton Woollen and silk mills Ltd all contributed the economic development of the city. The Cotton mills which are existing till date are Anjaneya Cotton mill, Ganesh Mill, Siddeshwara Cotton Mill. Davangere was a major cotton textile exporter during the 1960s till the 80s. But most of the mills were shut down during the 90s and currently the major agro-industrial activity around Davangere revolves around rice and sugarcane, with a number of sugar mills in and around this area. The Shamanur Sugar Mills situated in the Dugavathi village near Davangere is a Major Industry in Davangere. Many of the rice Mills are established in the Industrial area near the Bye Pass Road. Davangere has a big Garment and clothing Shop i.e. B.S. Channabasappa and Sons. This is a big garment shop of the city with its branches spread all over the city.
3.6 Research Models: The conceptual model of current research is presented below.

The above table depicts the conceptual model of the research. Firstly this model explains consumer behaviour towards general, chemical and herbal cosmetics, secondly it explains the influence of consumer behaviour on marketing mix strategies of the companies, thirdly the model delineates the discriminatory factors between herbal and chemical cosmetic consumer behaviour, lastly the model explains the factors varying across different age, income and category of woman.

3.7 Need of the study

The increasing market size is the direct result of the changing socio-economic status. Vigneron and Johnson (1999) reported that people's needs for appearances and materialism were increasing and this created a boom in the cosmetic and toiletries sector across the world. Higher paying jobs and increasing awareness of the Western world and beauty trends have served to change the tastes and preferences of the middle class and higher strata of the society, with the result that a woman from such strata now is more conscious of her appearance and is willing to spend a portion of
disposable income on enhancing it further. Today increasing numbers of women, especially from the middle-class population, have more disposable income leading to a change in cosmetic and skin care product consumption. This actually has fuelled a growth in certain product categories in the market that hardly was the experience earlier. This indicates a growing awareness of cosmetics among consumers. Hence it is important to explicate the influence of cosmetic consumer behaviour for both chemical and herbal cosmetics product on marketing mix strategies. Voss and Parasuraman (2003) opined that the purchase preference is primarily determined by price than quality during pre-purchase evaluation. It is also crucial to know the influence of income, age and category of women on cosmetic consumer behaviour, Parmar and Gupta (2007) studied the impact of demographic variables on consumer’s preference for the cosmetics and found that age, occupation and family income have significant influence on the selection of cosmetics. Moreover it is significant to study the discriminating factors between chemical and herbal cosmetic consumer behaviour. Makkar (2007) studied the factors by which consumer attitude and perception are changing from chemical cosmetics towards herbal cosmetics.

3.8 Scope of the research

Cosmetics consumer behavior has been studied by numerous specialists including psychologists, sociologists, economists, behavior analysts and anthropologists. Nord and Peter (1980) presented an overview of various schools of behaviorist thought and their possible relevance to marketing practice. A year later, Rothschild and Gaidis (1981) entered the arena, again proposing pragmatic applications of behavioral psychology to marketing and promotions. This research is an attempt to understand the buyer decision making process, both individually and in groups. Most women agree on the fact that features such as physical attractiveness and beauty are more and
more appreciated and required by society, and that attractive women have more chances of succeeding in their social and professional relationships (Etcoff et al., 2004). Indeed, research shows that external appearance frequently affects professional success (Marlowe et al., 1996; Frieze et al., 1990; Hamermesh and Biddle, 1994) and is often decisive in social interactions (Nash et al., 2006; Adams and Read, 1983; Bloch and Richins, 1992). The use of cosmetics may enhance the reactions of others to the person using them (for example, people should perceive a woman more favorably in terms of personality characteristics and are likely to have a higher opinion of her; Graham and Jouhar, 1981). Characteristics of individual consumers such as demographics, and behavioral aspects are studied in this research. According to Novak and Macevoy (1990) age, marital status, ethnicity, conservatism, social class and income influences consumer behavior. It also attempts to explain influences on the consumers from groups such as family, friends, reference groups along with the influence from Firm’s Marketing efforts and Vice-Versa. Through this research the discriminating factors of chemical and herbal cosmetics are established.

3.9 Research design

Decisions regarding what, when, where, how much, by what means, concerning an inquiry constitute a research design. A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine the relevance to the research purpose with economy in procedure.

"While designing a research, one is faced with a continual series of trade-offs. Since there are tropically numerous design alternatives that will work, the goal is to find the design that enhances the value of the information obtained, while reducing the cost of obtaining it" (Malhotra, 2005). "A research design is the arrangement of conditions
for collecting and analyzing of data in a manner that aims to combine relevance to the research purpose with economy in procedure” (Kothari, 2007).

In fact, research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Research design is needed because it facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible yielding maximum information with minimum expenditure of effort, time and money. A good research design is often characterized by adjectives like flexible, appropriate, efficient, and economical and so on (Kothari, 2007).

A good research design will ensure that the data collected is relevant to the research problem and that it was collected, from an objective and in an economical manner (Green, Tall and Albaum 1997).

3.9.1 Research methodology

Research methodology adopted should be such that the research objectives are achieved with great accuracy. Systematic methodology followed provides great insights in solving the research problem (Ramshukla, 2011).

This research was carried out in two phases. First phase includes collection of secondary information through literature review. In second phase specific Field research was conducted to test the hypothesis.

Stage 1: This stage of the research was exploratory in nature. This was done in two phases. The initial phase was to undertake detailed secondary search about cosmetic industry in India, its characteristics, major players in the market, market segmentation and purchase patterns are collected from various journals and websites. It was followed by a set of focus group discussions among cosmetic customers to assess the
consumer preferences, perceptions, cosmetic use and purchase patterns. The exploratory search was the basis for preparing the interview schedule for the next stage.

Stage 2: A descriptive research was carried out at the second stage by applying a survey method. Data for the study were collected from consumer households belonging to the Davangere city in Karnataka. The tool used for data collection is a questionnaire with Likert 5 point rating scale for interview schedule, which covered the demographic profile of consumers, details about purchase patterns, and various factors considered for buying cosmetics.

3.9.2 Sampling design

3.9.2.1 Sample unit

Before selecting a sample, a decision has to be taken concerning the sampling unit. A sampling unit may be a geographical one such as a state, district or village, a construction unit, it may also be a social unit or it may be an individual one (Gopal and Rohit, 2009). In the current research Consumer Households of Davangere city are visited to collect information from Working Women, House Wives and Students.

3.9.2.2 Sampling procedure

Sampling is a process of selecting certain members of population. This is done so that they can act as representatives of that population. When the size of population is too big, it is not feasible to take into account each and every member of such population. For the purpose of observation and research some members are selected so that they can act as representatives of the entire population. Sampling is that part of statistical practice concerned with the selection of a subset of individuals from within a population to yield some knowledge about the whole population, especially for the purposes of making predictions based on statistical inference. In business and medical
research, sampling is widely used for gathering information about a population (Ken Black 2004).

According to Joan Joseph Castillo (2009) in cluster sampling, instead of selecting all the subjects from the entire population right off, the researcher takes several steps in gathering his/her sample population. First, the researcher selects groups or clusters, and then from each cluster, the researcher selects the individual subjects by either simple random or systematic random sampling. In this research probabilistic Cluster Sampling (two stage cluster sampling) was adopted using systematic random sampling method.

The survey was conducted in Davangere City, to know the woman consumers behaviour towards cosmetics. Davangere has a population of seven lakhs. Males constitute 51% of the population and females 49%. New Davangere comprises of residential extensions like Nittuvalli, KTJ Nagar, KB Extn, PJ Extn, MCC A Block, MCC B Block, Anjaneya Extension, Swamy Vivekananda Extension, Shamanur, Nijalingappa layout, SS layout, Vinobha Nagar, Vidyanagara, Taralabalu Badavane, Vinayaka Nagara, Sarswathi Nagara, Shivakumara Badavane, Jaya Nagara, DCM Layout, Ragavendra Nagara, Shakthi Nagara, LIC colony... and Etc...Davangere has got 41 wards under the jurisdiction of Davangere City Corporation.

Since research was carried out on woman to know about their behavior towards cosmetics, the survey was conducted for only woman of Davangere city. Research requires the comprehensive knowledge about cosmetics amongst consumers. The criteria for selecting qualified respondents were set as follows:

- The respondents must be woman.
- Users of cosmetics can be any one from house wife, working woman and college going girls etc.
• The respondents must know at least four or five brands available in cosmetics.

• They should know the difference between herbal and chemical cosmetics. They should be users of either one or both.

• The respondents should spend an average of Rs 300 or more per month on cosmetics.

A certain range of cosmetics are afforded by middle class and upper middle class people, thus middle class and upper class residential extensions were selected to conduct the survey. They are MCC ‘A’ block, MCC ‘B’ block, P J extension, Vidyanagar, Nijalingappa layout, SS layout, Taralabalu Badavane, Shivakumara Badavane and Vivekananda Extension. In each area based on number of households available 40 households were selected. Systematic random sampling method was adopted to identify respondent houses. In each house the qualified respondent criteria was ensured first.

3.9.2.3 Sample size

Sample size refers to the numbers of elements that are to be included in the study. Determining the sample size is a complex process and involves several qualitative and quantitative considerations. In general, for more important decisions, more information is necessary and the information should be obtained more precisely. The nature of research also has an impact on the sample size.

Hair and Ortinau (2003) have pointed out that most of the sampling that takes place in consumer research is under the situation in which the researcher has no prior knowledge about the population parameters of interest. This is primarily due to the fact that today’s business environments are so complex and so rapidly changing that it becomes extremely difficult to ascertain the population characteristics.
Since the questionnaire was constructed by the researcher, obtaining reliable scale item was necessary to obtain the reliable questionnaire, and to get a reliable questionnaire the survey was conducted in five stages. To obtain reliable scale items many pilot surveys were conducted and factor analysis was done, the factors above 0.70 were selected to frame final questionnaire items. The first two round of survey was done for 100 respondents; the third and fourth round of survey was done for 200 respondents. After obtaining a fine tuned questionnaire final round of survey was conducted based on the below formula.

\[ n = \frac{z^2 \sigma^2}{E^2} \]  

with 95% confidence level and 0.05 level of significance.

The detailed sample size calculation is shown in descriptive statistics. As per the sample size calculation, the highest sample size obtained is 400 therefore the survey was conducted for 400 respondents.

3.9.3 Survey Instrument

To generate good response rate and sound instrument, a single questionnaire is used to measure multiple theoretical constructs of consumer behavior. Likert scale of measurement is used to measure the items. The number of points in the Likert scale should be considered carefully. Reliability increases as the number of scale points increases to five and continues to increase at a much smaller rate for additional points above five (Lissitz & Green, 1975). A 5-point Likert scale is used for all applicable items in order to ensure higher statistical variability among the survey responses (Ahire et al., 1996; Roth & Miller, 1992). The questions have been placed in a logical order so that the completion of the questionnaire is easy for the respondents (Flynn, Schroeder, & Sakakibara, 1994). Annexure 1 presents a copy of the survey instrument used for the survey.
3.9.4 Measures: Generation of scale items

Following guidelines developed by Churchill (1979) and Nunnally (1978), a set of items were generated to delineate the domain of consumer behavior and marketing mix strategies. Specifically, more than 300 items were derived from the literature, in-depth interviews with consumer behavior experts and practitioners. Each item was selected for its appropriateness, uniqueness, and ability to convey to informants "different shades of meaning" (Churchill, 1979). Multiple items were generated within each of the fourteen primary domains they are motivation, personality, perception, learning, attitude, reference group, social class, culture, subculture, cross culture, product, package, price, promotion and physical distribution. Items used to measure consumer behavior were generated from a series of in-depth interviews. Having generated the initial item pool, the survey then underwent pilot testing, which resulted in the refinement of the survey format and some survey items. Survey instrument was developed using a 5 point Likert scale measuring the consumer behavior where 1 means "strongly disagree", 2 means "disagree", 3 means "neither agree nor disagree", 4 means "agrees", 5 means "strongly disagrees". In the survey respondents were asked to give their opinion concerning, their behaviour towards cosmetics products.

Framing an appropriate questionnaire requires to cross several stages to reach a final stage of fine-tuned questionnaire. The different stages carried for this research are given below:

**Stage I**

Based on the knowledge gained 36 statements were developed and a pilot survey was conducted for 100 respondents, to see the applicability of the idea generated. While gathering information it has been understood that the items
are not reflecting complete elements of behaviour or the items are vague. For
some objectives less than three items were used while framing questionnaire,
but the thumb rule to frame questionnaire says there should be minimum three
items used for any constructs otherwise the questionnaire lacks reliability.

Stage II

Procedure to construct a reliable questionnaire was learnt by having a
discussion with research experts. To establish a reliable questionnaire it was
understood that a systematic procedure has to be approached. It was learnt that
the questionnaire suffers from researcher bias if the questionnaire is
constructed on researcher knowledge alone and questionnaire may lack item
generalization and adaptability. To overcome the drawback while framing
questionnaire the idea of items or statements are supposed to be developed by
conducting an interview with sufficient number of respondents. The first-hand
information obtained, acts as references to frame an item, which reflects
generally the opinion of consumers not the researcher.

The basic idea for framing questions are obtained from the interview of more
than 50 women, 100 college going students and 30 working women. Many
discussions on cosmetics were carried at beauty parlours, shops, colleges, and
houses. In the interview deep discussions were held

The discussions have acted as basement to frame the items and to construct
questionnaire. From the discussion it has been understood that there are three
aspects which influence consumers, they are: Marketers influence, socio-
cultural environment and psychological factors. Based on information
obtained, the theoretical model to the research is developed. Further For
convenience the answers are categorised in to the information on consumer 
behaviour and marketing strategy.

Along with the items generated from the interview of respondents few more 
items are generated based on the theory to fulfil criteria to obtain a reliable 
questionnaire. The criteria are that there should be a minimum of three items 
loaded during the factor analysis. Therefore maximum items are to be 
generated considering various aspects to match all sorts of consumers; 
therefore few items drawn from theory are being included. Ultimately the 
questionnaire was prepared with 353 statements and the pilot survey was 
conducted for 100 respondents.

**Stage III**

Factor analysis was done on the information obtained from pilot survey. 
During the factor analysis the items got reduced from 353 to 185. The item 
reduction was done considering the highest factor loading. From the reduced 
factors another questionnaire was prepared and another pilot survey was 
conducted for 200 respondents.

**Stage IV**

Again the above said procedure is repeated and the data is obtained by 
performing factor analysis, the statements were fine-tuned to get final 
questionnaire by taking the items loading above 0.07; there by the items got 
reduced to 128 and the final survey was conducted for 400 respondents.

In a nutshell an entirely new research tool was prepared for conducting the research, 
but developing a reliable tool requires a step by step approach to establish reliability. 
As a reason an extensive questionnaire was prepared, and many pilot surveys were
conducted. Factor analysis was done for the data gathered at each stage of pilot survey, the highest loaded items from factor analysis are filtered and Chrownbach’s alpha test was conducted to know the reliability of the items for framing a final questionnaire. The 128 items obtained at the stage IV got alpha score above 0.70 which is the best loading obtained. The items from the fourth round filtering were considered and a final survey was conducted by estimating simple size. From the information obtained in the final survey further factor analysis was conducted to know consumer behaviour towards cosmetics, regression analysis was performed to know the influencing factors of chemical and herbal cosmetic consumer behaviour towards marketing mix strategies of companies, ANOVA was administered to study the factors varying across different groups like age, income and category and discriminant analysis was carried to know the discriminating factors for chemical and herbal cosmetic products.

3.9.5 Limitations

All though all out efforts have been made, especially in the past decade, to study consumer behaviour, still it remains untouched in many areas and aspects. It has been observed that the forces operating on the Indian consumer are for different from those that operate on the western counterpart and so are the opportunities available to the marketers. This has put a constraint on the on-going consumer research resulting in limitations to the study. Some of these limiting factors are-

1. Consumers not only differ from one another but have varying feelings about the same object or phenomenon from time to time.

2. Consumers often have powerful ‘psychological’ rather than logical reasons for buying, though they strongly believe that what they do is always logical. Their attitudes have a strong emotional base.
3. The individual consumer is conditioned by her environment, her upbringing, and her education. In many cases, these social and group influences are the most powerful motives.

4. Factors like needs, drives, past experiences, personality, value system etc., influences the consumers view of reality considerably.

5. Though the buyer may be different from users, majority of buying decisions are joint decisions and the relative dominance of individuals, members in the decision-making units and their interactions determines the final outcome.

6. Changing environment of the firm and that of the consumer effect (vis-à-vis) each other's behavior.

7. A marketer can only indirectly influence a consumer's needs motives etc..

8. Consumers generally hope to satisfy their desires with a single purchase.

9. Post purchase as well as pre-purchase behavior is equally important to study consumer behavior.

10. Small geographical unit Davangere city was considered, to bring out reliability and validity, for multi-dimensional study of consumer behavior.