Chapter 3
METHODOLOGY

The methodology of the study titled Motivations and Management Practices of Families in the Acquisition and Use of Consumer Durables: An Appraisal is explained below under suitable heads.

Research Approach

Since the study is associated with socially constructed nature of reality uncovering the meaning and significance of human behavior and experience, it lent itself to qualitative research- methodology and approach. The motivation for doing qualitative research is strengthened from the fact that human beings can talk and share their thoughts and experiences. Qualitative research methods are designed to help researchers understand people and the social and cultural contexts within which they live. The goal of understanding a phenomenon from the point of view of the participants and their particular social and institutional context is largely lost when textual data are quantified (Kaplan & Maxwell, 1994).

Many different academic disciplines in the Social Sciences and Market Research use qualitative research methods to generate rich and comprehensive data. Qualitative data sources include participant observation (fieldwork), in depth interviews, projective techniques and questionnaires, documents and texts and the researcher’s impressions and reactions (Denzin & Lincoln, 2005).

Field research of this nature is open-ended and exploratory (particularly when very little is known about a subject) in nature.

An in depth inquiry involving personal interviews with the respondents to learn about their knowledge, practices, preferences and satisfactions would give an insight into their motivations in relation to the study. Such an interactive research would become a great platform for learning and exchange of ideas.

With this premise the present study was carried out as a social and exploratory research where in respondents and their families could freely express their experiences. The study relied heavily on qualitative approaches such as informal discussions and interactions, in depth interviews and projective methods like stories and games. A semi structured interview schedule was designed to cover various aspects of the study. This approach helped to make the respondents comfortable without being subjected to intrusion and inquisitiveness about their family assets and resources.
The methodology has been deliberated upon in the following heads:

- Study Locale
- Sample Selection
- Tools and Techniques of Study
- Analysis of Data

### 3.1 Study Locale

The study locale was confined to the North District of Delhi. This locale was chosen to study consumer behavior of families by broadly controlling variables like income, occupation, location and access to markets.

The National Capital Territory of Delhi (India) has been divided into nine administrative districts- Central, New Delhi, South West, North, North West, North East, East, West and South. Figure 3.1 illustrates the location of North Delhi district.

North Delhi district is one of the densely populated areas of urban Delhi. Civil Lines, Model Town and Ashok Vihar are among the important localities of this district.

![Figure 3.1 Map of North District (Delhi, India)](http://www.dusu.in/DU-colleges/map.html)

North Delhi is also home to the campus of Delhi University, which is the main education hub of Delhi's undergraduate and post graduate studies. Delhi University has a special importance for North Delhi district. Therefore it is also called the "North Campus". The campus was established in 1922. Today there are several colleges and institutions in the
campus area and many of these offer residential tenements to their teaching and non-teaching staff. The area is recognized as a youth hub and an educational destination for young aspiring students from India and abroad.

According to the 2011 census North Delhi has a population of 883,418. The district has a population density of 14,973 inhabitants per square kilometre (38,780 /sq m). Its population growth rate over the decade 2001-2011 was 13.04%. North Delhi has a sex ratio of 871 females for every 1000 males and a literacy rate of 86.81% (Census, 2011).

North Delhi is well connected with bus and rail routes. The Inter State Bus Terminal (ISBT), Sarai Rohilla, Subzi Mandi, Kishan Ganj and Old Delhi Railway stations are among the main terminals of North Delhi (http://www.delhicapital.com/delhi-locations/north-delhi.html).

Figure 3.2 Map of North Campus (Delhi University)

3.2 Sample Selection

The population for the study comprised of families living and working in the North
Campus area of Delhi University. These families are given two roomed tenements. It was
the male head of the family in the sample group employed as part of the non-teaching
staff in various departments of the university- laboratories, libraries, administration,
cleanliness and maintenance.

Sample:

The study sample was drawn from the families fulfilling the following criteria that-

- the head of the family (male) should be in a permanent service, drawing a monthly
  salary between Rs 20,000-40,000 per month.
- the head of the family should be married for at five years or more and have at least
  one child.
- the family should have purchased at least one electrical/ electronic consumer
durable costing Rs 2000/- or more during the period 2007-10.

The above prerequisites were set in order to control the many demographic variables
among the sample like, the family income, occupation of the head of the family, family
size and life cycle stage. This was significant in creating a specific segment of the
consumer market for durables that is the lower Middle Income Group.

The study sample was confined to a single occupation group where the head of the family
was in permanent service, drawing a fixed salary, having similar perks, tax obligations
and housing conditions.

Families with income of the head of the household in the range of Rs 20,000-
40,000/month (Rs 2,40,000-4,80,000/year) could be considered as falling in the category
of ‘Aspirers’ (Rs 1,50,000-3,40,000/year) and lower ‘Middle Class’ (Rs 3,40,000-
17,00,000/year) at 2009-10 prices as per (NCAER, 2012 p 55).

NCAER (2011), estimates indicated that the average urban income in 2009-10 was Rs
2,50,000/ year and was projected to increase to Rs 3,50,000/year by 2015-16).

Thus, the study sample was primarily drawn from ‘Aspirers’ and the lower ‘Middle
Class’ families- representing the driving force of the Indian economy with high
propensity to purchase.

Consumer durables selected for the study included goods popularly categorized by the
market as white goods, brown goods and consumer electronics (detailed in Chapter 2).

On the basis of family needs these consumer durables were categorized into two groups:
1. Durables for Information, Education and Communication- Televisions, Audio and Video Systems, Computers, Mobile Phones, Digital Cameras, VCD-DVD players, Handy Cams, Ipad…. 

2. Durables for Comfort and Convenience- Refrigerators, Washing Machines, Air Conditioners, Microwave Ovens, Food Processors (Mixer Juicer Grinder), Water Purifiers and other domestic appliances 

Small home appliances (costing less than Rs 2000) as well as furniture items and automobiles were not included in the study. The time period for purchase was confined to three years as given above to aid the respondents in recalling their ‘latest’ purchase experience when sharing their buying decision process. Gifted items were not included with the assumption that these may not have been personally sought and acquired by the family. However, gifted consumer durables (if any) were included while preparing the overall profile of the consumer durables owned by a family at the time of data collection. The primary respondent for the study was the woman head of a family. The husband and children present at the time of data collection were allowed to help with missing information and validation of facts. In fact husband’s role became quite significant in the process of data collection. 

Sample size: 
A total of 150 families meeting the above criteria were selected from families living in various colleges and residential quarters of the North Campus, Delhi University. The sample size was pegged at 150 to enable the researcher to get a manageable yet comprehensive representation. 

Sampling Technique: 
A purposive sampling technique was used to select the sample for the study. A map of the proposed area for research was procured and a list of colleges / institutes offering residential accommodation was prepared. A preliminary survey in the area was conducted to personally verify the list. Following colleges and other institutes were identified: 
Colleges- Daulat Ram, Delhi School of Economics, Hindu, Hans Raj, Karori Mal, Miranda House, Ramjas, St Stephen’s, Sri Ram College of Commerce and Sri Guru Teg Bahadur Khalsa. 
Other institutes and areas- Institute of Economic Growth, Reids Lines and Jubliee Hall staff quarters.
Ramjas College campus was taken as the central location from where adjoining residential areas within a radius of 2 km were selected to identify the prospective sample. Each one of the campuses was visited and also families therein to identify the required study sample. Willingness of the families to participate in the research study and volunteer information was the first and the most important step in furthering the study. Next step was to make sure that families fulfilled the set (inclusion) criteria for drawing the actual sample. Table 3.1 lists the colleges and institutes from where the study sample was drawn.

**Table 3.1 The Study Sample (n = 150)**

<table>
<thead>
<tr>
<th>S No.</th>
<th>Colleges and Institutions</th>
<th>Number of prospective families</th>
<th>Number of families selected</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Daulat Ram College</td>
<td>16</td>
<td>12</td>
<td>75.0</td>
</tr>
<tr>
<td>2</td>
<td>Hans Raj College</td>
<td>30</td>
<td>17</td>
<td>56.6</td>
</tr>
<tr>
<td>3</td>
<td>Hindu College</td>
<td>40</td>
<td>29</td>
<td>72.5</td>
</tr>
<tr>
<td>4</td>
<td>Institute of Economic Growth</td>
<td>20</td>
<td>14</td>
<td>70.0</td>
</tr>
<tr>
<td>5</td>
<td>Karori Mal College</td>
<td>30</td>
<td>17</td>
<td>56.6</td>
</tr>
<tr>
<td>6</td>
<td>Ramjas College</td>
<td>32</td>
<td>24</td>
<td>75.0</td>
</tr>
<tr>
<td>7</td>
<td>Reids Lines</td>
<td>74</td>
<td>37</td>
<td>50.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>242</strong></td>
<td><strong>150</strong></td>
<td></td>
</tr>
</tbody>
</table>

Having interviewed all eligible and interested families in a campus the researcher moved to another campus. This procedure was followed till a sample of 150 families was covered. Starting from Ramjas College and going through neighbouring campuses the stipulated number of families was covered.

A practical approach was adopted in covering a set target of 150 families. The plan was to include 50% of the sample and above from each campus. The sample coverage realistically fell within a range of 50-75%. It was not possible to have an equitable distribution of the sample among the various campuses because of the pre condition of ‘availability and willingness’ of the families.

### 3.3 Tools and Techniques of Study

A semi structured interview schedule was designed with both open ended and closed ended questions. This offered the researcher an opportunity to use qualitative research techniques like Shadowing (observing), Storytelling (prompting respondents to tell their ‘Stories’ about their consumer experiences) and Laddering to probe and gain insights.
Laddering technique uses a series of increasingly more specific ‘why’ questions to gain insight into consumer motivation and consumers’ deeper, more abstract goals. It is a qualitative research approach to get inside consumers’ mind and find out as to what they are thinking or feeling about certain brands and products (Kotler, Keller, Koshi and Jha, 2007).

For the purpose of the study the term **Motivation** was defined as an inner drive which results in a desire for a product, service or experience. It is the drive to satisfy needs and wants, both physiological and psychological, through the purchase and use of products and services. There are five stages of the motivation process: Latent need, Drive, Want or desire, Goal, and Behavior (Kaufman, 2012). Maslow’s theory of Hierarchy of Human Needs was used to study and analyse the families’ motivations to acquire and use the selected consumer durables. The researcher probed and tried to uncover and understand the latent need(s) that were behind the acquisition of a good, the choice of model/design and brand, etc. by a family. The respondents were asked to think, recall and talk about the decision making rationale and processes.

For the study the term **Management Practices** was operationally defined as the process followed by families to acquire a consumer durable- this encompasses expression of a need/inception of an idea/the actual acquisition, use and upkeep of the durables under consideration.

The Five Stage Model of Buying Decision Process given by Kotler, Keller, Koshy and Jha (2007) was used as a reference to study the management practices and the buying process of the families. Semi structured questions were framed to seek details about family buying behavior regarding the acquisition process through various steps/stages, the critical issues, people involved and the practices for use of the selected consumer durables. This was also expected to provide information about decision makers, role of the respondents and their husbands in the buying decisions and influencers from within and outside the families.

To gain insight into the durables perceived to be the most important by the respondents for their family, a game as a projective technique was designed. The game was called ‘Pick and Choose’. It was used on a sample of 30 women (4-5 from each campus) who owned at least 6 consumer durables (It was found that a little more than 50% of the respondents owned 6 consumer durables). The game comprised of the following steps:

1. The women were required to identify pictures of consumer durables owned by their family from a pool of pictures.
2. State ‘why’ they had acquired each of those.
3. Selectively eliminate one-by-one stating ‘why’ till they were left with only one the most important/indispensable for them and their family.

Areas of inquiry in the Interview Schedule
The interview schedule comprised of a number of open ended and close ended questions. The following are the various heads under which data was collected:

I Demographic Profile of the Families
Family details in terms of present family size, number of children and other dependents, age, sex, education, occupation, family type, life cycle stage, etc.

II Nature and Type of the Consumer Durables
- Consumer Durables owned, Design/Model specification, Brands (Indian, MNC or local), Order of Purchase (First time, Replacement or Additional), Number of Years
  Previous consumer durable used and Type of Purchase (New or Second hand)
- Most recent Consumer Durable acquired
- Consumer Durable considered most important
- Consumer durable Aspired by the family

III Acquisition- Motivations and Management Practices
(a) Problem Recognition- Motivations to Acquire
- Motivation(s) for various aspects of the purchase process for each consumer durable
(b) Information Search
- Sources of information- adequacy and reliability

(c) Evaluation of Alternatives:
Factors Influencing- Product Choice
- Additional income/spare money, Price, Brand, owned by Reference Group (relatives/friends/neighbours/colleagues), Advertisements, Appearance, Design, Ease of operating, Cost of operation and maintenance, Warranty, After sales service, Special Sales Schemes/offers, etc.
Factors Influencing- Dealer Choice
- Location (local market, wholesale market or mall, etc.), Type of showroom - large multi branded showroom, Discount, Special Offers, Advice by sales persons, etc.

Factors Influencing - Purchase Timing

- Festivals and special family occasions

Factors Influencing - Payment Method

- Cash or credit

Most Important Factor Influencing the actual Purchase

(d) Purchase Decision

- Individual Roles of Members in Purchase of Consumer Durables - Initiator, Influencer, Decider, Buyer and User

- Customs and traditions followed by families

(e) Post Purchase Practices

- Bill (Issue and safe keeping), Reading of Instruction Manual, Frequency of use, Frequently used functions, Precautions observed, Care and Maintenance, Age and working, Frequency of Repair of the consumer durables, Source of Repair, Annual Maintenance Contract (AMC) for the consumer durables, Divestment/disposal, etc.

IV Consumer Awareness

Awareness about Consumer Rights, Laws, Courts, Voluntary Organisations, CPA 1986, Bill, ISI and BEE star label and National Consumer Helpline

An objective type awareness test was prepared to study consumer awareness of the respondents and their husband.

The interview schedule was pretested with five women (not included in the sample) to observe the ease and comfort with which they could respond to the questions - factual and subjective in content. The tool was further improved after seeking advice of subject experts. Thereafter the tool was finalized. Annexure A.

Data Collection

For entry into each college/institution campus help was taken from an employee who was a resident there. More than one visit was required with each of the families. The researcher went on from one family to another to accomplish her set goal.

The game ‘Pick and Choose’ was played with women who owned at least 6 of the selected durables on a separate visit depending on their willingness and availability of time. The visuals of consumer durables in the game have been included in Annexure B.
The data was collected usually in the late afternoons and evenings. Sometimes families were also visited during the weekends. Data collection spanned a period of two years between 2010 and 2012.

2.4 Analysis of Data
As stated above, the Interview Schedule comprised of both quantitative (factual) and qualitative data. The motivations expressed by the respondents to acquire the selected consumer durables were listed and categorized. They were analysed as per Maslow’s theory of Motivation into various levels in a hierarchical order. These motivations for buying have been summarized in Annexure C.

The Five Stage Model of Buying Decision Process given by Kotler, Keller, Koshy and Jha (2007) was used to analyse the management practices and the buying process of the families regarding consumer durables. The practices of the families regarding acquisition and use of the selected consumer durables were suitably coded and a code book prepared (Annexure D). Data was tabulated and frequencies worked out. Chi-square, a non-parametric test, was used to study the association between selected demographic variables as the intervening variables and the dependent variables—buying decisions (choices in terms of nature and types of durables owned and aspired) and consumer awareness. Chi square results were analysed at 5% level of significance.

The demographic variables selected for analysis were—

- Age, education and income of respondents and their husband (female and male head of the family)
- Present family size (number of family members)
- Number of earning members
- Number of years of marriage

The dependent variables chosen for statistical analysis were—

- Number of consumer durables owned
- Nature and type of consumer durables—order of purchase (first time/replacement/additional), brand (Name and origin—Indian/MNC), design/model and total number owned.
- Buying roles of Initiator/ Influencer/ Decider/ Buyer and User
- Consumer durable aspired
Consumer Awareness of the male and female head of the family

Consumer awareness of the women respondents and their husband was also analysed using Student’s ‘t’ test to determine if there was any significant difference between their awareness scores.

Data was presented in tables, charts other graphics to facilitate understanding and interpretation.