CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

In the first chapter, a conceptual model was proposed and research questions were advanced regarding the major influences on child’s role in family buying process. In addition to this, the effects of some pertinent characteristics of child and their parents were to be empirically investigated. This chapter is devoted to the methodology applied to find answers to research questions. Specifically, this chapter discusses the research design for operationalization of constructs and that of main study. The research methodology includes the procedures, techniques and practices adopted to lay foundation, built database and to furnish with processed information for analysis to accomplish the research objectives. While following the research procedure to study the child’s influence, the objectives of the study were taken into account and the study was followed strictly on those lines.

As defined by American Marketing Association [186], marketing research is “the function that links the consumer, customer, and public to the marketer through information used to identify and define marketing opportunities and problems; to generate, refine, and evaluate marketing actions; to monitor marketing performance; and to improve understanding of marketing process” [58]. This definition links a study’s findings to the managerial implications of marketing research. Research in consumer behavior is interdisciplinary because it attracts researchers from different fields who are interested in studying how people interact with the marketplace [75].

3.2 RESEARCH DESIGN

Research design is referred to the measures of determining the overall design to be whether exploratory, descriptive, or causal research, determining the sampling size, data collection methods, designing the research instruments, and developing a plan for data analysis [187] [188] [189] [190]. In line with this, research designs may be classified into two types: exploratory research design and conclusive research design. Conclusive research design is described in the forms of descriptive and causal research that is designed to describe specific
phenomena and examine specific relationships between the research constructs. Exploratory design is characterized by its flexibility is conducted to explore the phenomena that cannot be investigated through the conclusive research design. It involves quantitative and qualitative exploration [190].

The study undertaken is descriptive in nature. Personal investigations involved focus groups and original field survey with the household members which provided greater insight into all possible practical aspects of the research problem. Pilot surveys of the initial ideas also helped to refine the final statements of the scale. The changing role of children in household buying decisions has brought a new change in market place. Descriptive research attempts to describe in detail the relationship between various aspects of a research problem. The major purpose of descriptive research is description of the state of affairs as it exists at present. So the adoption of descriptive research design has been very effective in the present study. The research design is portrayed on semi-structured focus group discussions and structured questionnaires to achieve the following goals:

- Refine the research problem and split it into major issues;
- Determine which types of products and services need to be investigated in study;
- Develop the questionnaire design and construction.

### 3.3 DEVELOPMENT OF KEY CONSTRUCTS

The current study had considered various areas, where different conclusions have risen. Hence, by going through various available data and by examining the research regions, research questions have been framed for this particular study. The research questions for this study included discovering children's influence in family buying process in India focusing mainly on following steps. Figure 3.1 below illustrates steps to develop the key measures for the same.

- To determine if demographic variables of the child and parents affect the child’s influence levels in the family buying process.
- To analyze the child’s consumer socialization.
To discover the various influence strategies used by Indian children to persuade their parents.

To examine the child’s influence levels in different family buying process stages.

Finally, to analyze product categories for which child is more influential.

Figure 3.1: Research Design for development of key constructs

3.3.1 Initial Conceptualization

Based on previous studies, constructs for measuring child’s influence levels were conceptualized. At this stage, it was quite essential to identify those factors which affect child’s role in family buying process. A deep study of literature on buying process of families and child’s participation in decision process was studied. International and national referred journals were also screened for the formation of relevant statements.

These statements were grouped in sections. The first section comprises descriptive questions regarding respondent’s demographic profile. The second section contains a pool of 40 items. These 40 questions are measuring child’s socialization agents. The third section identifies the major influence strategies used by children from the 20 items. The next section contains a list of 20 product and services on which a child has influence. The last section has 7 items of buying process stages and sub-decisions.
3.3.2 Focus Groups

The inadequacies of available literature were overcome by developing measures on the basis of a systematic approach that involved focus group discussions, in-depth interviews, pilot study and various statistical measures. Focus groups can also serve as an innovative approach to understanding children's experiences from a developmental perspective [191]. Four focus group discussions were conducted with the children and their parents separately to gain insight into the Indian family’s buying process and family member’s role.

Children Focus Groups

Two focus group discussions were held prior pilot study as they offer a rich, interactive and developmentally effective approach to planning, content and evaluation in research with children. Focus groups with children can capture their perspectives, original ideas, and insights, which are often neglected in more traditional research. Each focus group discussion had 8 children in the age group of 8-12 years and it lasted 30-40 minutes. The groups had equal participation of girl and boy child. Initially few questions were asked to make a repo with the child like:

- What is the name of your best friend?
- Which is your favourite cartoon character?
- Which is your favourite TV program?

Then preliminary questions were asked such as:

- What are your hobbies?
- Do you like watching television?
- Do you like watching advertisements?
- Do you have many friends?
- Do you buy the same things as your friends?
- Do you have internet connection at home/school?
- Do you enjoy shopping with your parents?
**Parent Focus Groups**

Two focus group discussions were held with the parents also. These groups consisted of ten participants between the ages of 24 and 38 years. There were 5 mothers and 5 fathers in the first focus group and the second group had 6 mothers and 4 fathers. The discussions began with warm-up dialogues about their children and then progressed to families’ buying habits. The choice of statements depends upon the opinion of competent persons for its suitability towards the study and the tests. A set of statements has been developed and evaluated by the sample respondents on Likert scale. This also helped in determining the content validity. More than 100 selected statement items were given to the panel of parents, children, and also the marketing professionals so that the redundant statements can be struck off, ambiguous items or statements can be deleted and to collect suggestions and modifications in these statements.

### 3.3.3 Key Constructs

Based on past literature and focus group discussions with children and parents, constructs for measuring the child’s influence level were conceptualized in different sections. Child and parent may have different views on child’s level of influence, so proper care had been taken in choosing and naming the constructs.

**Demographic Variables**

Section A comprised of descriptive questions regarding child, parent and family’s characteristics. This section had open ended questions like: name, age, gender, number of children, number of siblings, parents’ qualification, parents’ occupation and family structure.

**Child Socialization**

Section B had second construct; children socialization. Focus group helped in identifying the 5 main socializing agents for them. 1. Television, 2. Friends, 3. Parents, 4. Internet and 5. Shopping. Other agents which were present in the initial conceptualization like newspaper, grandparents were removed.

**Product categories**

The third construct was child’s influence level in the purchase of five product categories. As discussed before very few researches had measured child’s generic influence in all the product
categories. So instead of taking only one or two products, five product categories were taken for the study. These product categories were adapted from the study by Guneri and Kaplan [90]. Guneri and Kaplan [90] selected product classification as family-major (home appliances), family-minor (milk), child-major (cellular phone), child-minor (shoes) and a service (dining outside). Major and minor discrimination is based on the risk levels associated with the consumption. This classification was extended by including three products and services in each category. Given below were the selected products and services:

1. **Family-major**: Car, Television and Washing Machine
2. **Family-minor**: Shampoo, Toothpaste and Grocery
3. **Child-major**: Computer, Video game and Mobile phone
4. **Child-minor**: Stationary, Food & Beverages and Clothes
5. **Services**: Movie tickets, Vacation and Dining out

**Family Buying Stages and Sub-decisions**

The three stage family buying process was adopted for the study namely: Initiation stage, search & evaluation stage and final decision stage. Other than this, there were questions about the sub decisions of buying process like where to buy, when to buy, which to buy and how much to buy.

**Influence Strategies**

This was the last construct which examined the use of various influence strategies by children to persuade parents. Children used varied strategies to influence parents like bargaining strategies, persuasion strategies, competition strategies, emotional strategies, aggressive strategies and playing a trick.

**3.3.4 Research Model**

With extensive literature review and focus group discussions, a detailed conceptual model of research (Figure 1.1) was developed. The model was helpful in analyzing the dimensions of children’s role in the family buying process and produces a working structure for the study. The model incorporates the child’s socialization dimensions, the influence strategies used by child, child’s influence level for different product categories and child’s influence level in the
family buying process stages. The detailed literature review helped in converting the research questions into different hypotheses. Figure 3.2 helps us in understanding the same.

![Research Model- Child’s role in Family Buying Process](image)

**Figure 3.2:** Research Model- Child’s role in Family Buying Process

As mentioned in earlier, the research model incorporated child’s socialization dimensions, the influence strategies used by child, child’s influence level for different product categories and child’s influence level in the family buying process stages. Table provides a detailed view of hypotheses based on research questions.

<table>
<thead>
<tr>
<th>Consumer Socialization</th>
<th>H1a: The child’s consumer socialization affects the child’s use of aggressive influence strategies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much child’s consumer socialization explains the use of influence strategies?</td>
<td>H1b: The child’s consumer socialization affects the child’s use of persuasive influence strategies.</td>
</tr>
<tr>
<td></td>
<td>H1c: The child’s consumer socialization affects the child’s use of rational influence strategies.</td>
</tr>
<tr>
<td></td>
<td>H1d: The child’s consumer socialization affects the child’s use of knowledge influence strategies.</td>
</tr>
<tr>
<td></td>
<td>H1e: The child’s consumer socialization affects the child’s use of emotional influence strategies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Categories</th>
<th>H2a: The child’s use of influence strategies affects the child’s influence on loud goods.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much child’s uses of influence strategies explain child’s influence for product</td>
<td></td>
</tr>
</tbody>
</table>
3.4 RESEARCH INSTRUMENT

In order to reflect family decision-making process accurately and to identify factors that have an impact on this process, survey method was carried out with a questionnaire that aimed to investigate family decision-making process for five different product classes and three buying stages with four sub-decision levels.

3.4.1 Questionnaire

Questionnaire was adapted from a range of earlier studies in the field. As earlier studies revealed differences in the perception of children as compared to their parents, two different questionnaires, one for child and other for their parents, were constructed. Once the type and size of sample was determined, the next task was to select various tools to be used to collect data from the identified universe. Two structured questionnaires were prepared. A structured questionnaire is one where questions and answers are specified.

Both the questionnaires had first section as demographic profile of child and parent (family) respectively. Child questionnaire had descriptive questions such as age, gender, class, school, number of siblings and birth-order. Parent questionnaire had descriptive questions such as
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age, gender, qualification, occupation, spouse’s qualification and occupation, number of children, family structure, etc. Child’s socialization measures like television, internet, friends, parents and shopping were part of section B in both the questionnaires. Section C contained measures to rate child’s influence level while purchasing 15 different goods and services. Section D asked respondents to rate child’s level of influence in three buying stages: initiation stage, search & evaluation stage and final buying stage. This section also captured child’s influence in sub-decisions like when to buy, how much to buy, what to buy and where to buy.

The last section, section E contained measures to rate the use of various influence strategies by child: bargaining strategies, persuasion strategies, competition strategies, emotional strategies, aggressive strategies and playing a trick.

3.4.2 Preparation of the multi-item scale

The responses were measured on three and five point scale. For parent questionnaire five point scales was used and for child questionnaire mostly three point scales was used. Scaling describes the procedure of assigning numbers to various degrees of opinion, attitude and other concepts. This can be done in two ways i.e. by making a judgment about some characteristics of some individual and then placing him directly on the scale or by constructing questionnaire in such a way that the score of the individual responses assign him a place on the scale. The method is based on Likert Scaling Technique [192]. The reason for choosing Likert scale was that children preferred this scale and they considered this scale easiest to fill out [193].

The likert technique consists of a series of statement to which one responds using a scale of possible answers. Strongly agree (5), agree (4), indifferent (3), disagree (2), strongly disagree (1), and the score can be vice-versa also. For the parent questionnaire statements carried five alternative responses like child’s level of influence for particular product category as no influence (1), very low influence (2), low influence (3), high influence (4) and very high influence (5). The three point scale was prepared for child questionnaire for example child’s level of influence at different buying stages as low (1), medium (2) and high (3).

3.4.3 Pilot Study

The questionnaires included key measures: demographics, socializing agents, child’s influence level for different product categories and at different buying stages and lastly the child’s use of influence strategies to influence the family buying. Preliminary draft of each
questionnaire was pre-tested on 40 parent-child dyads which helped in improving upon the questions and then final questionnaires were framed which have been appended. Both the questionnaires were tested for reliability with calculating cronbach’s alpha. For all the sections, cronbach’s alpha was more than 0.6 and hence the research instrument is considered reliable for study.

3.5 SAMPLING

3.5.1 Sampling Design and Technique

All items in any field of inquiry constitute a universe. A sample design is a definite plan for obtaining a sample from a given universe. For testing the reliability of the research instrument convenience Sampling was used. For the main study, random sampling and cluster sampling were used. In cluster sampling, a population of elements can usually be thought of as a hierarchy of different sized groups or ‘clusters’ of sampling elements. The use of cluster sampling in educational research is sometimes undertaken as an alternative to simple random sampling in order to reduce research costs for a given sample size [194]. So, the population of school students was grouped into a number of schools. A sample of students was then selected randomly from this population by selecting clusters of students (classroom groups) rather than individually. Here a cluster sample consisting of the selection of 10 schools was taken. From each of these ten schools, four classes were randomly selected- from classes student clusters were again randomly selected. Each cluster contained around 10 students. The Figure 3.2 describes the sampling structure for one school.

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>SCHOOL 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASSES</td>
<td>Class1</td>
</tr>
<tr>
<td>STUDENTS</td>
<td>a,b,c,d,e,f,g,h,i,j</td>
</tr>
<tr>
<td>Class2</td>
<td>a,b,c,d,e,f,g,h,i,j</td>
</tr>
<tr>
<td>Class3</td>
<td>a,b,c,d,e,f,g,h,i,j</td>
</tr>
<tr>
<td>Class4</td>
<td>a,b,c,d,e,f,g,h,i,j</td>
</tr>
</tbody>
</table>

Figure 3.3: Cluster Sampling Structure in one school
3.5.2 Sample Unit

While collecting data one child-parent respondents was considered as a sample unit. The present study had concern and draw logical analysis and inferences of the children under the age group 8-12 years. The respondents were both, the child and either of the parents. Only those families in which husband, wife and at least one child were living together during the data-gathering period were included in the study.

3.5.3 Sample Size

The sample size was so selected that it could be adequate enough to represent the whole population, and also help in meaningful comparison between the children and the parent. The sample size used is 350 respondents. The selected children along with their parents from 10 schools included two respondents: a parent (either mother or father) and a child in the age-group 8-12 years.

3.6 DATA COLLECTION

While collecting the data every care was taken to maintain its objectivity and accuracy. In this study, both primary data and secondary data sources were used, but the overall dominance remains of the primary data. Questionnaire method is the most important and popular method of collecting primary data. The primary data collected for this research study was collected through the structured questionnaires. Separate set of questionnaires were prepared for both parents and children. While drafting the questionnaire a covering letter was attached, which had information regarding answering, instructing and filling the questionnaires. All the questions were arranged logically and ambiguous questions were avoided.

Prior to data collection, proper meeting with the school authorities was held to secure cooperation and ensure quality control. Despite this, many schools did not allow the survey to be conducted in their school. With rigorous effort and tenacity, the data was collected from the agreed schools. Given that the young child respondents would have difficulties understanding questions, children were asked to complete the questionnaire in their class itself in the presence of the researcher but with the absence of the teacher. The parent’s questionnaire was sent home to be returned after two days. A total of 400 set of questionnaires
were sent to these 10 schools. Out of the 374 responses received, only 350 questionnaires were found to be fully filled, the rest 24 were discarded due to incomplete information.

3.6.1 Area of Study

Present study is restricted to the area of National Capital Region (NCR) of India. With a total area of about 33,578 km² (12,965 sq mi), it is the world's second largest urban agglomeration by population and the largest by area. The study was conducted in the four regions of NCR: Delhi, Noida, Ghaziabad and Gurgaon. The area was chosen because of its total participation in the whole country’s growth and development. Delhi and NCR represents the microcosm of India. Data was collected directly from the respondents and the responses were recorded under the same conditions.

3.6.2 Processing and Presentation of Data

For an empirical study and for ensuring that we have all the relevant data for making useful comparisons and analysis, it is vital that the data after collection is processed and presented in accordance with the requirement and purpose at the time of the development of the scale. The data was organized and summarized carefully in order to increase its validity in such a way that enables to relate critical points with the study objectives in simple and effective manner. Firstly, the data was edited, coded and then classified. To build the collected data self-explanatory, interesting and clearer, it had been presented in the form of tables, diagrams and charts.

3.7 TOOLS OF DATA ANALYSIS

On the basis of the objectives of study, the two questionnaires and the collected data was analyzed very exhaustively. The following tools were used in the study.

3.7.1 Content and Construct Validity

Each and every item of parent and child questionnaire were thoroughly examined and found that content of each item was related with the objectives of the study. In order to check the validity of scales, construct validity was used and accordingly principle component factor analysis was done. Four agents of child’s socialization were identified along with five
influence strategies and lastly three product categories were identified on the basis of child’s level of influence.

3.7.2 Reliability

Reliability means the consistency of items of scale and the whole scale. The consistency of the items was checked with the help of total items correlation coefficient method. The total of all the items of scale was computed and the correlation of total with each item was calculated. It was found that for all the sections, the correlation coefficient were highly significant which means that all the items were consistent or reliable. Cronbach Alpha was applied in order to check the reliability of each scale. Cronbach’s alpha is popularized by Cronbach [195] based on work in Guttman [196] and is the most common estimate of internal consistency of items in a scale. If the value of Cronbach Alpha is .060 or more, the scale is called reliable. As shown in Table 3.2, the value of Cronbach alpha had been found to be more than 0.60, which is higher than the value recommended, and implying high degree of internal consistency in response to the questionnaire [197] [198].

Table 3.2: Reliability check for instrument

<table>
<thead>
<tr>
<th>Sections</th>
<th>No. of items</th>
<th>Cronbach alpha</th>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</th>
<th>Bartlett’s test of sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td>B: Child’s Consumer Socialization</td>
<td>11</td>
<td>0.606</td>
<td>0.653</td>
<td>Approx. Chi Square 192.093</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Df 55.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sig. 0.000</td>
</tr>
<tr>
<td>C: Child’s Influence for different products</td>
<td>15</td>
<td>0.863</td>
<td>0.840</td>
<td>Approx. Chi Square 881.157</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Df 105.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sig. 0.000</td>
</tr>
<tr>
<td>D: Child’s Influence at various stages</td>
<td>45</td>
<td>0.924</td>
<td>0.791</td>
<td>Approx. Chi Square 5655.084</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Df 990.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sig. 0.000</td>
</tr>
<tr>
<td>E: Child’s use of influence strategies</td>
<td>16</td>
<td>0.790</td>
<td>0.783</td>
<td>Approx. Chi Square 586.471</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Df 120.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sig. 0.000</td>
</tr>
</tbody>
</table>

3.7.3 Statistical Tools

Coding of variables in a quantitative research is very critical for better interpretation of results. All the data was coded and entered into the excel file on computer. Gender had only two categories, thus they were taken as dummy variables (male=1 and female=1). Rests of the
questions were coded as per respondents’ answer on the Likert’s scale. The questions and responses were coded and entered in the computer using Microsoft Excel Software. Required analysis was done with the aid of Statistical Package for Social Sciences 18.0 Version. Certain statistical methods were applied on the data to get the results which were analyzed.

3.7.3.1 Factor analysis

Principal component factor analysis was conducted to identify the different constructs for the study. But prior to factor analysis, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was conducted. The KMO is a statistic that indicates the proportion of variance in the variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with the data. If the value is less than 0.50, the results of the factor analysis probably will not be very useful. Similarly, Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that the variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful with the data. Then factor analysis was done to extract the various factors. Principal Component Analysis was the method of extraction. Varimax was the rotation method. As per the Kaiser criterion [199], only factors with eigenvalues greater than 1 were retained. The items falling under each of these factors were then dealt with quite prudently. The screeplot of factor analysis was also provided. For the structural equation modeling, confirmatory factor analysis (CFA) was also conducted to confirm the different constructs for the study.

3.7.3.2 t-Test

In order to study how the various constructs like child’s influence for different products or child’s influence at different stages, etc. which varies across the personal and family characteristics of respondents, t-test was used. The tests revealed how these constructs diverge in case of child’s age, gender, no. of siblings, parents’ qualification and occupation and family structure.

3.7.3.3 Multivariate analysis of variance (MANOVA)

Multivariate analysis of variance (MANOVA) was applied along with post-hoc tests in order to compare the different constructs across the three birth-orders of the child. MANOVA is Homogeneity of covariances is tested by calculating Box's Test of Equality of Covariance
Matrices. If the significance value is more than .001 (P > .001) then the assumption of homogeneity of covariances is satisfied.

3.7.3.4 Correlation

Correlations were used to assess the relationship between the various constructs. The correlations were calculated to assess the relationship between the child’s socialization and the use of various influence strategies. Similarly, correlations were also calculated to find the relationship between the child’s use of influence strategies with child’s influence for different products and child’s influence at different stages.

3.7.3.5 Regression Analysis

Regression analysis analyzes the relationship between a dependent variable with one or more independent variables. It helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied. After finding the correlations of the dimensions, the next step was to analyze the relationship further through regression analysis. Stepwise regression was carried out to study the influence of the child’s socialization, influence strategies on the level of child’s participation in the family buying process.

3.7.3.6 Structural Equation Modeling

Structural equation modeling (SEM) is a term for a large set of techniques based on the general linear model [200]. SEM has both confirmatory and exploratory modeling. Confirmatory Model has a hypothesis that gets represented in a causal model. The causal model must then be operationalized to allow testing of the relationships between the concepts in the structural model. SEM is used to test the model of child’s influence in the family buying process.