Chapter- 3
Research Methodology
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In the preceding chapter, a conceptual model explaining various variables and their relationships has been developed to provide directions for the current study. Based on the research questions, objectives are defined for the study. This chapter is devoted to understanding the methodology used for conducting the empirical study. It basically entails research design, data collection methods employed, sampling procedure, and the data analysis plan. Besides, operational definition of the constructs provides further clarity to various variables discussed in the previous chapter.

3.1 Objectives of the study

The objectives of the present study are as follows:

1) To identify the various variables affecting impulsive buying of consumer in organized retail stores.

2) To study the various product categories purchased impulsively.

3) To investigate the impact of store related factors like Price, Promotion offers, Behavior of staff, Proximity on urge for Impulsive Buying.

4) To examine the impact of internal factors like Hedonic feelings and IBT on urge for impulsive Buying.

5) To investigate the impact of situational factors like having credit card and Peers on urge for impulsive Buying in organized retail store.

6) To understand the impact of various external, internal and situational factors on impulse purchase through developing a holistic model of impulse buying using SEM.

7) To understand the impact of demographics variables like age, Income, Gender and marital status on impulsive buying in organized Retail Store.
8) To understand the impact of demographics variables like age, Income, Gender and marital status on urge for impulse purchase.

3.2 Hypothesis for the study

Keeping in mind the objectives of the study, the researcher had framed the major Hypotheses which were subjected to further analysis and tested by various statistical methods. These hypotheses are as follows:

3.2.1 Factors influencing for Urge for impulse Purchase

The first hypothesis assessed the relationship between the factors like widow displays, promotional offer, staff Behavior, Price, Proximity of the product, shopping with peers, Having credit card , Hedonic feelings and impulse buying. This has been hypothesized and is represented by the first hypothesis H1 and its sub hypotheses which range from H1a0 to H1i0. They propose the association of the independent and the dependent variables

**H10:** Factors such as window display, Promotional offer, Staff behavior, Price, Proximity of the product, shopping with peers, Having Credit card, Hedonic feelings and Impulsive Buying Tendency have no significant association with impulse buying among consumers

**H11:** Factors such as window display, Promotional offer, Staff behavior, Price, Proximity of the product, shopping with peers, Having Credit card, Hedonic feelings and Impulsive Buying Tendency have significant association with impulse buying among consumers

H1a0: Window display has no significant relation with Urge for impulsive Buying.
H1a1: Window display has significant relation with Urge for Impulsive Buying.

H1b0: Promotional offer has no significant relation with Urge for impulsive Buying.
H1b1: Promotional offer has significant relation with Urge for impulsive Buying.

H1c0: Staff Behavior has no significant relation with Urge for impulsive Buying.
H1c1: Staff Behavior has significant relation with Urge for impulsive Buying.

H1d0: Price has no significant relation with Urge for Impulsive Buying.
H1d1: Price has significant relation with Urge for Impulsive Buying.
H1e0: Proximity of the product has no significant relation with urge for impulsive Buying.
H1e1: Proximity of the product has significant relation with urge for impulsive Buying.

H1f0: Shopping with peers has no significant impact on urge for impulsive Buying.
H1f1: Shopping with peers has significant impact on urge for impulsive Buying.

H1g0: Having Credit card has no significant impact on urge for impulsive Buying.
H1g1: Having Credit card has significant impact on urge for impulsive Buying.

H1h0: Consumer Hedonic Feelings has no significant relation with urge for impulsive Buying.
H1h1: Consumer Hedonic Feelings has significant relation with urge for impulsive Buying.

H1i0: Impulsive Buying Tendency has no significant relation with urge for impulsive Buying.
H1i1: Impulsive Buying Tendency has significant relation with urge for impulsive Buying.

3.2.2. Impulsive Buying Tendency and Demographic
The second hypothesis deals with the influence of the demographic variables like Age, Gender, Marital Status, income on the impulsive buying Tendency. Through this hypothesis it may be tested whether there is a significant difference in impulsive buying tendency among consumers with regard to various demographic variables.

**H20: There is no significant difference across different demographic segments (Gender, age, income, Marital Status) and the Impulsive Buying Tendency**

H2a0: There is no significant difference in gender and Impulsive Buying Tendency.
H2a1: There is significant difference in gender and Impulsive Buying Tendency.

H2b0: There is no significant difference in age and Impulsive Buying Tendency
H2b1: There is significant difference in age and Impulsive Buying Tendency.

H2c0: There is no significant difference in income and Impulsive Buying Tendency
H2c1: There is significant difference in income and Impulsive Buying Tendency

H2d0: There is no significant difference in marital status and Impulsive Buying Tendency
H2d1: There is significant difference in marital status and Impulsive Buying Tendency
3.2.3 Urge for Impulsive Buying and Demographics

Hypothesis deals with the influence of the demographic variables like Age, Gender, Marital Status, income on the urge for impulsive buying. Through this hypothesis it may be tested whether there is a significant difference in urge for impulsive buying among consumers with regard to various demographic variables.

**H30**: There is no significant difference across different demographic segments (Gender, age, income, Marital Status) and the Urge for impulsive Buying.

**H3a0**: There is no significant difference in gender and urge for impulsive buying.
**H3a1**: There is significant difference in gender and urge for impulsive buying.

**H3b0**: There is no significant difference in age and urge for impulsive buying.
**H3b1**: There is significant difference in age and urge for impulsive buying.

**H3c0**: There is no significant difference in income and urge for impulsive buying
**H3c1**: There is significant difference in income and urge for impulsive Buying.

**H3d0**: There is no significant difference in marital status and urge for impulsive buying.
**H3d1**: There is significant difference in marital status and urge for impulsive buying.

3.3 Research Methodology

3.3.1 Research Design

A research design is framework or blueprint for conducting the research study. **Single Cross Sectional Descriptive Research Design** will be adopted to determine customers 'Impulsive Buying Behavior.

3.3.2 Sampling Plan

Sampling design is one of the main components of a research design. Sampling technique and sample size determination are main components of sampling design.

- **Sampling method**

Non probability Quata sampling method will be used to elicit information regarding consumer impulse Buying Behavior in organized Retail Stores.
• **Sampling unit;element( Universe of the Study)** The consumers, who shop in general stores, departmental stores, shopping malls, hyper markets etc, in the area of Gujarat will be taken as the population for this study.

• **Sample size Determination**

A survey is being planned to determine customers’ Impulsive Buying Behavior in organized retail stores. It is believed that approximately 70% customers purchased various products from the organized retail stores impulsively .95% confidence interval and 5% Confidence Interval is desired to calculate sample size.

Now using the formula given below:

\[
 n = \frac{Z^2pq}{d^2}
\]

Here \(Z = 1.96\), \(p = 0.70\), \(q = 0.30\), \(d = 0.04\)

\[n = 504.21 \approx 505\]

Further, In Gujarat majority of the organized retail stores exist in cities like Ahmedabad, Surat, Baroda, Rajkot etc. The population of these cities and towns will be studied and accordingly sample size will be drawn from population size with the help of appropriate statistical method. Relative frequency has been calculated and based on those samples from each city is determined. Samples from various cities have been mentioned below.

| Table 3.1 Population of various cities of Gujarat |
| --- | --- | --- |
| City | Total Population(lacs) | Relative Frequency |
| Ahmedabad | 63 | 0.456 |
| Surat | 45 | 0.326 |
| Baroda | 17 | 0.123 |
| Rajkot | 13 | 0.09 |
| Total | 138 | |

(Source: http://www.census2011.co.in/census/city)
The sample for the present study was chosen using the method of quota sampling. A total of 570 consumers who purchase from organized retail stores in Gujarat has been taken into consideration for the study. Out of that able to get response from 510 customers out of which 35 consumers were discarded due to insufficient or incorrect information provided. Finally a total of 475 responses were found to be correct which have been used for this study. The sample size was considered robust by Nunnelly (1978).

3.3.3 Distribution of the Sample according to Demographic

### Marital Status

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>311</td>
<td>65.5</td>
</tr>
<tr>
<td>Unmarried</td>
<td>164</td>
<td>34.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>475</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>247</td>
<td>52</td>
</tr>
<tr>
<td>Female</td>
<td>228</td>
<td>48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>475</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Age

<table>
<thead>
<tr>
<th>Table 3.5 Frequency Distribution based on Age</th>
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<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Frequency Percent</td>
</tr>
<tr>
<td>20 TO 30 Years</td>
</tr>
<tr>
<td>31 TO 40 Years</td>
</tr>
<tr>
<td>40-50 Years</td>
</tr>
<tr>
<td>&gt;50 years</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Income

<table>
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<tr>
<th>Table 3.6 Frequency Distribution based on Income</th>
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</thead>
<tbody>
<tr>
<td>Income</td>
</tr>
<tr>
<td>Frequency Percent</td>
</tr>
<tr>
<td>less than 3 Lac</td>
</tr>
<tr>
<td>3-5 lac</td>
</tr>
<tr>
<td>5-10 lac</td>
</tr>
<tr>
<td>&gt;10 lac</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

3.3.4 Data Collection

For this study both primary as well as secondary data sources are used.

3.3.4.1 Primary data

A detailed questionnaire was prepared and administered on consumers in selected cities in the State of Gujarat, namely Ahmadabad, Vadodara, Surat and Rajkot. Structured questionnaire was used for the data collection. With help of the questionnaire, personal (face to face) interviews of the respondents were performed, because of the advantages of this method over other methods. By personal interviewing, the researcher gets some other information pertaining to the respondent. Sometimes if the respondent has any query/doubt, it can be traced by the researcher or interviewer. After the collection of primary data all the filled questionnaire were evaluated and questionnaire were not filled up properly or any other problem were discarded.
3.3.4.2 Secondary data
The information was collected from various secondary data sources like research papers, Research articles, Journals, Books, News Papers, Websites and others.

3.3.5 Research Instrument

Primary data are the most important source for this study for collecting primary data. Questionnaire was developed. Questionnaire is used to collect the response from the respondents regarding impulsive buying in organized retail stores. Initially, preliminary questionnaire was developed based on expert opinion and literature review. Pilot testing of this preliminary questionnaire was performed with the very few number of respondents. Based on the pilot survey result preliminary questionnaire was modified and final questionnaire was prepared to study the impulsive buying behavior. Open ended and closed ended questions were asked.

Questionnaire will be divided in two parts. First part will for to study effect of personal attributes on impulsive purchase and second part will be developed to identify the effect of in store environment on impulsive Purchase.

3.3.6 Data Preparation

Data preparation begins with preliminary check of all the questionnaires for its completeness. The collected data was edited, coded, tabulated, grouped and organized according to the requirement of the study and then entered into SPSS (statistical package for social sciences) for analysis.

3.3.7 Data Analysis

For data analysis raw data collected through questionnaire needs to be converted in to suitable forms so meaningful findings can be obtained. Data collected through questionnaire need to be coded and transferred from questionnaires to the designed format. Any mistake in this process can seriously hamper the statistical results and the interpretations. Once the data are transferred properly, data analyses can be initiated. The
data obtained from 475 valid respondents were properly coded and transcribed into the designed format.

Through Analysis is the process through which able to convert raw data into to the useful information. Raw data as collected from questionnaire cannot be used unless it is processed in some way to make it amenable to drawing conclusions. Various data analysis techniques were used to get the meaningful outcome from the data collected through questionnaire. Decisions as to which of the statistical techniques should be used were made on the basis of the various criteria like (a) the scales and other characteristics of data, (b) objectives of the study, (c) characteristics of the research design etc. Following paragraphs explain in brief about various data analysis techniques, which had used for further analysis. Detailing of these techniques has been done in Analysis and Interpretation chapter at appropriate places for better understanding. Gathered data has been analyzed with the help of SPSS and Smart PLS software to get some meaningful result.

Suitable statistical analysis tools were used to analyze the data. Broadly, data analysis techniques are divided into three categories

- Univariate, involving a single variable at a time,
- Bivariate, involving two variables at a time, and
- Multivariate, involving three or more variables simultaneously.

3.3.7.1 Univariate Analysis

Univariate analysis refers to the analyses in which there is a single variable. In this study, univariate analyses were used for identifying the descriptive characteristics of the data. (Malhotra Naresh). To study which product purchase more impulsively by the respondents, for studying demographic characteristics like age, gender, marital status and income level of respondent’s univariate analysis were used.

Frequency distribution is most widely used Univariate technique (Rubin, L)². For this study, where one variable was to be considered at a time, frequency distribution was
carried out, to obtain a count of number of responses. Bar charts, pie charts, clustered column charts; percentages etc. were used for further analysis of such questions. Other statistics (associated with frequency distribution) like mean, mode, variance, Skewness, kurtosis, and standard derivations were also used to find the central tendency and the variance of the data.

### 3.3.7.2 Bivariate Analysis

Bivariate techniques are appropriate when the researcher wants to analyze two variables simultaneously. This technique is also used to find out the association between two variables (Malhotra Naresh)\(^3\). Some bivariate techniques like Mann Whitney U test, Wilcoxon test, K-S test, Correlation were performed to study impulsive buying behavior of the customer.

### 3.3.7.3 Multivariate Analysis

Multivariate techniques are suitable for analyzing data when there are three or more measurements of each element and where the variables are analyzed simultaneously (Rubin, L.)\(^4\). In this study, the multivariate analyses used were multiple regressions and Structure equation Modeling.

### 3.4 Scale Development

The scale development was divided in three stage The first step was to define the constructs of the study which were impulse buying, factors Influencing for impulsive buying by identifying the dimensions which formulate these constructs. A pool of items were generated which Measured the dimensions under the study. Expert opinion was taken for development of the scale. Based on the expert opinion scaled is revised. Second stage, pilot studies were conducted for the entire impulse buying scale. In the third stage, reliability and validity of the scale was checked using cronbach’s alpha. The reliability and validity tests are reported later in this chapter.
3.5 Final Questionnaire Scale Design
The questionnaires had two different sections. The first section includes the questions related to demographics detail of the respondent like age, Income, Marital Status and Gender. The second section which included the questions to measure urge for impulsive buying and Factors responsible for impulsive buying like Promotional offer, Price, Having Credit Card, Impact of peers, Window Display, Proximity and others. 5 Point likert scale was used where 1 means respondents are strongly agree with the statement and 5 means respondents are strongly disagree with the statement. The ratings in between ranged from agree, neutral, disagree with the statement.

3.6 Measures used for Impulsive buying

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<tr>
<td>2</td>
<td>Window Displays</td>
<td>Han (1991) (^7), Rook and Fisher (1995) (^8)</td>
</tr>
<tr>
<td>4</td>
<td>Impulsive Buying Tendency</td>
<td>Rook(1987) (^12).</td>
</tr>
<tr>
<td>5</td>
<td>Having Credit Card</td>
<td>Karbasivarand Yarahmadi(2011) (^13)</td>
</tr>
<tr>
<td>6</td>
<td>Price</td>
<td>Self Developed</td>
</tr>
<tr>
<td>7</td>
<td>Window Display</td>
<td>Han (1991) (^14), Rook and Fisher (1995) (^15)</td>
</tr>
<tr>
<td>8</td>
<td>Shopping with Peers</td>
<td>Self Developed</td>
</tr>
<tr>
<td>9</td>
<td>Hedonic Feelings</td>
<td>Babin, Darden, and Griffin (1994) (^16)</td>
</tr>
<tr>
<td>10</td>
<td>Proximity</td>
<td>Jiyeon Kim (2003) (^17)</td>
</tr>
</tbody>
</table>

3.7 Limitations of the study
The nature of current study presented certain unavoidable limitations that impacted on the interpretation of the results.

- The method used for data collection is survey by using a structured questionnaire as a tool. This type of data collection method also presents certain limitations. This occurs due to low rate responses, complex and confusing questions and surveys that might be too long (Cooper and Schindler, 2003).
The language used for preparing the questionnaires is English. Some of the respondents did face a problem towards this survey as they were not so fluent in the English language used in the survey.

Geographical location is one of the limitation of this study. The study is limited only to the geographical location of Gujarat, India and the results may or may not be applicable to the entire world. Hence, the generalization must be made with caution.

The number of respondents surveyed were varied in terms of the age groups, gender and income level. This may have influenced on the results of the differences between two groups. Hence, this may have led to some biases in the study.

References


