CHAPTER: 3

RESEARCH METHODOLOGY
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3.1 INTRODUCTION
Research is usually recognized to be exploring for acquaintance. It is an art of systematic investigation for precise information. According to Clifford Woody, “Research means amplifying research problems, formulating hypothesis or suggested solutions, gathering, classifying, assessing data, making inferences, attaining conclusion and further testing the conclusion whether they fit into formulating hypothesis.”

According to D. Slesinger and M. Stephenson, “Research includes manipulation of things, theories or symbols for the determination of simplifying to extend, accurate or authenticate knowledge, whether the information supports in construction concept.”

P.M Cook defines research as “it is an authentic, exhaustive, intellectual searching for evidences and their sense or inference with reference to a given problem. It is the method of inward at dependable solution to problem over and done with the strategic and organized collection, analysis and interpretation of data.”

Methodology is the main part of any systematic and scientific research. Methodology usually means to guide and help the system to identify the research problem, techniques, tools and methods to solve those research problems. Research methodology does not only discusses the logics of the research methods those are generally used in research study but also discusses the reasons for adopting and not adopting any meticulous Techniques and methods. Methodology not only helps the researcher to evaluate the research results but also indicates the realistic way in which the whole research project has been organized.
To achieve the objectives of the study, this chapter comprises the research problem, objectives, hypothesis, design of questionnaire, data collection method and the statistical tools employed for analysis and interpretation of the research data.

3.2 STATEMENT OF THE PROBLEM

Social media sites have become the most visited sites from the last few years. It has become the most popular platform to share personal & professional likes & dislikes, views & news, photographs & videos. It has, in-fact, become the most important medium of communication & to stay connected. Thus these sites provide an opportunity for the retail marketers including apparel retailers to promote their brands through this alternate media. But to what extent these apparel retailers feel triumphant, especially in Rajasthan, is a matter of research and analysis. Since the outcome of the research can prove to be a very important marketing tool for apparel retailers in Rajasthan, this study is focused on finding out its effect. Therefore the problem statement is:

“Effect of social media on buyer’s behavior in organized apparel retail market in different cities of Rajasthan.”

3.3 SIGNIFICANCE OF THE STUDY

The present study will be a very important guide for the organized apparel retailers of Rajasthan. Retailers will able to design their sales promotions in a better and more effective manner. Even they will also able to decide on the type of media to be used for sales promotion, being equipped with enhanced information regarding decision making over target market combinations i.e. what are the types of media that can be used for a particular target market. Thus a proper media planning can be done by the companies/organizations.

Subsequently, the organized retailers, through the findings of this research study, will be able to comprehend the trends in the social media, which in turn can be very helpful in target and action planning and forecasting.
The importance of the research study is purely for the Apparel Retail Industry in Rajasthan, who can use the same as a marketing tool in their overall marketing planning.

### 3.4 SCOPE OF STUDY

This research study has tried to make an effort to study the social media’s effect on apparel buying behaviour in Rajasthan state. However, the study is limited to organized apparel retail only. Social media has wide spread connotations and hundreds of social media sites are available to the customers of apparel retail in India. Despite of escalating growth of social media sites, researcher has limited this study to Facebook, Twitter, YouTube, Blogs, Google+, & Pinterest for the purpose of this research.

Social media may be used for creating the awareness about products and services, to induce purchase of the products and services, to increase the frequency of purchase, for selecting the product/brand/store for apparels, to increase the average amount of sales. However social media can have varying degrees of effect on various customers and thus a demographic study of the varying degree of effect of social media is also part of the research.

Hence, the effect of social media during pre-purchase, purchase and post purchase defines the scope of the research. During pre-purchase, creating awareness about products is largely affected by social media, during purchase social media may be used to induce purchase, increase the frequency of purchase, and for selecting the retail store to buy the product. Similarly, post purchase satisfaction or dissatisfaction may be triggered through social media.

### 3.5 OBJECTIVES OF THE STUDY

- To find out the growing awareness of apparel sales promotion through Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest.
- To explore the relationship between demographic characteristics of the population and the effect of Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest on the buying behaviour of apparel retail consumers.
- To find out the significant difference of social media sites Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest on online and offline apparel buying behaviour.
• To identify the changes in the frequency of purchase of apparels as a result of sales promotion through social media.
• To find out the changes in brands preferences for apparels as a result of sales promotion through social media.
• To ascertain the average amount (in Indian Rupees) spent on the purchase of apparels by customers exposed to social media sales promotions.

3.6 HYPOTHESIS OF THE STUDY

• $\text{HO}_1$: There is no significant impact of the apparel sales promotions through Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest on the consumer awareness.
• $\text{HA}_1$: There is a significant impact of the apparel sales promotions through Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest on consumer awareness.

• $\text{HO}_2$: There is no demographically significant difference of social media sites Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest on buying behaviour of apparel retail consumers.
• $\text{HA}_2$: There is a demographically significant difference of social media sites Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest on buying behaviour of apparel retail consumers.

• $\text{HO}_3$: There is no significant difference of social media sites Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest on online and offline apparel buying behaviour.
• $\text{HA}_3$: There is a significant difference of social media sites Facebook, Twitter, YouTube, Blogs, Google+ & Pinterest on online and offline apparel buying behaviour.

• $\text{HO}_4$: Sales promotions through social media have no significant impact on the frequency of purchase of apparels.
• $\text{HA}_4$: Sales promotions through social media have a significant impact on the frequency of purchase of apparels.
• **HO$_5$:** Sales promotion through social media has no significant impact on the brand preferences for apparels.

• **HA$_5$:** Sales promotion through social media has a significant impact on the brand preferences for apparels.

• **HO$_6$:** Social media sales promotions have no significant impact on the average purchase amount of apparels by customers.

• **HA$_6$:** Social media sales promotions have a significant impact on the average purchase amount of apparels by customers.

### 3.7 RESEARCH DESIGN

Research Design provides an overview of research study, including formulation of hypothesis and its operational insinuation, to the ultimate data analysis. Research design defines the collection and analysis of data in such a manner so that the relevance of research purpose can be combined with its procedure. It provides all the reasons for conducting a study.

The Present study is based on **descriptive and exploratory research**. The research design has been adopted so as to analyze the social media effect on Apparel buying behaviour in Rajasthan. Under this research study, a comprehensive questionnaire has been prepared and primary data has been collected by researcher. **Stratified random sampling** has been used to conduct the survey. According to Census 2011, the Rajasthan state has been divided into seven different zones i.e. Jaipur, Jodhpur, Udaipur, Ajmer, Kota, Bikaner, and Bharatpur. These seven cities have been considered as different strata’s. Under these stratum, the respondents have been selected through random sampling. The findings from these cities will be generalized to the entire Rajasthan State.

To conduct this research study, 700 respondents have been surveyed among the different representative cities of Rajasthan. 100 respondents have been surveyed from each city respectively. Data has been collected from different localities of Jaipur, Jodhpur, Udaipur, Ajmer, Kota, Bikaner, and Bharatpur.
3.8 UNIVERSE OF STUDY

Universe of this research study is restricted to seven cities of Rajasthan. The sample plan criteria is as under-

Table 3.1 - Universe of Study

<table>
<thead>
<tr>
<th>Universe of the study</th>
<th>Social media users of Rajasthan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling Method</td>
<td>Stratified Random sampling</td>
</tr>
<tr>
<td>Sample Size</td>
<td>700 Respondents</td>
</tr>
<tr>
<td>Area of Survey</td>
<td>Jaipur, Jodhpur, Udaipur, Ajmer, Kota, Bikaner, and Bharatpur</td>
</tr>
</tbody>
</table>

The break up is as below-

Table 3.2 - Area of Survey

<table>
<thead>
<tr>
<th>Area</th>
<th>Jaipur</th>
<th>Jodhpur</th>
<th>Udaipur</th>
<th>Ajmer</th>
<th>Kota</th>
<th>Bikaner</th>
<th>Bharatpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Respondents</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>700</td>
</tr>
</tbody>
</table>

3.9 QUESTIONNAIRE DESIGN

On the behalf of available concern literature, research questionnaire has been developed. The research questionnaire has been divided in two different sections. The first section contains general demographic information of respondents i.e. Age, income, gender, Occupation and the monthly expenditure on apparels.

The second part of the questionnaire comprises questions related with research objectives i.e. social media awareness, online, offline and post purchase behaviour of consumers regarding apparel buying through social media. All the research questions were formed in five point Likert scale, where 5 reflect “most important”, 4 the lesser one and so on till 1 reflecting “least
important”. This form of questionnaire gives the respondents an ease in response and since is less time taking so respondents are less reluctant to answer. The questionnaire was prepared in English as it was assumed that all the respondents were well versed in this medium of language and will not face any communication challenges. The questionnaire was reviewed by various people comprising different industry experts and various academicians. After accommodating the views and inputs of these experts, final questionnaire has been organized for data collection.

3.10 PRE-TESTING OF QUESTIONNAIRE & RELIABILITY TEST

Before collection of the final data for this research study, a pilot study has been also executed for social media users in Rajasthan state. A Sample of 100 respondents has been selected randomly for this purpose. Pre-testing helped the researcher to develop and modify the research questionnaire in more comprehensive manner. This qualitative study provides the views of different demographic in Rajasthan. Some respondents suggested few modifications and were pleased to reveal their experiences with researcher.

After requisite modifications in Questionnaire, reliability test has been carried out to identify internal consistency. Alpha was recognized in 1951 by the Lee Cronbach. It varies between 0 to 1. If Cronbach alpha value is more than 0.700 that means there is a high level of internal consistency for scale with this specific sample. The value of Cronbach Alpha is as below -

<table>
<thead>
<tr>
<th>Table 3.3: Reliability Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability Statistics</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
</tr>
<tr>
<td>0.959</td>
</tr>
</tbody>
</table>

From the above table it was found that the value of Cronbach's alpha is 0.959 which is more than 0.700 that indicated a high level of internal consistency for our scale with this specific sample. After performing reliability test final data has been collected.

3.11 DATA COLLECTION

For the purpose of this study, both primary and secondary data sources have been used. Overall emphasis remains on primary data. Questionnaire method is the most important source of collection of primary data. In this study primary data of 700 respondents have been collected.
through structured questionnaire from the seven representative cities of Rajasthan. **Stratified random sampling** has been used for data collection. Prior collection of data reliability and validity has been checked. Researcher has tried to avoid ambiguity from the questionnaire.

### 3.12 RESEARCH STRATEGY

Following research strategy has been carried out for this study:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Objectives</th>
<th>Hypothesis</th>
<th>Test</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To find out the growing awareness of apparel sales promotion through Facebook, Twitter, YouTube, Blogs, Google+, &amp; Pinterest.</td>
<td><strong>HO₁:</strong> There is no significant impact of the apparel sales promotions through Facebook, Twitter, YouTube, Blogs, Google+, &amp; Pinterest on the consumer awareness.</td>
<td><strong>ANOVA</strong></td>
<td>-Social Media Sales Promotions, -Consumer Awareness</td>
</tr>
<tr>
<td>2.</td>
<td>To explore the relationship between demographic characteristics of the population and the impact of Facebook, Twitter, YouTube, Blogs, Google+, &amp; Pinterest on the buying behaviour of apparel retail consumers.</td>
<td><strong>HO₂:</strong> There is no demographically significant difference of social media sites Facebook, Twitter, YouTube, Blogs, Google+, &amp; Pinterest on buying behaviour of apparel retail consumers.</td>
<td><strong>Independent t-test, ANOVA</strong></td>
<td>Age, Gender, Occupation, Expenditure, City, Consumer Buying Behaviour</td>
</tr>
<tr>
<td>3.</td>
<td>To find out the significant difference of social media sites Facebook, Twitter, YouTube, Blogs, Google+, &amp; Pinterest on online and offline apparel</td>
<td><strong>HO₃:</strong> There is no significant difference of social media sites Facebook, Twitter, YouTube, Blogs, Google+, &amp; Pinterest on online and offline apparel</td>
<td><strong>Independent t-test</strong></td>
<td>Online Buying Behaviour, Offline Buying Behaviour</td>
</tr>
<tr>
<td></td>
<td>buying behavior.</td>
<td>offline apparel buying behavior.</td>
<td></td>
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<tr>
<td>4</td>
<td>To identify the changes in the frequency of purchase of apparels as a result of sales promotion through social media.</td>
<td><strong>HO₄</strong>: Sales promotions through social media have no significant impact on the frequency of purchase of apparels.</td>
<td><strong>Correlations Analysis, Regression Analysis</strong></td>
<td>Sales Promotion, Frequency of Apparel Shopping</td>
</tr>
<tr>
<td>5</td>
<td>To find out the changes in brands preferences for apparels as a result of sales promotion through social media.</td>
<td><strong>HO₅</strong>: Sales promotion through social media has no significant impact on the brand preferences for apparels.</td>
<td><strong>Correlations Analysis, Regression Analysis</strong></td>
<td>Sales Promotion, Brand/Dealer Preference in Retail Apparel</td>
</tr>
<tr>
<td>6</td>
<td>To ascertain the average amount spent on the purchase of apparels by customers exposed to social media sales promotions.</td>
<td><strong>HO₆</strong>: Social media sales promotions have no significant impact on the average purchase amount of apparels by customers.</td>
<td><strong>Correlations Analysis, Regression Analysis</strong></td>
<td>Sales Promotion, Average Purchase Amount of Apparels</td>
</tr>
</tbody>
</table>

### 3.13 TOOLS USED IN DATA ANALYSIS

After the data collection, data is placed in tabular format and thus analyzed to get requisite results. Bar charts and Pie charts have been evolved to represents the data, their relations and comparisons. In this study, first reliability test has been performed to know whether data is reliable or not, than KMO and Bartlett's Test have been used to check the Validity of the questionnaire. To cross check the validity of the predefined factors, factor analysis has been performed.
Rank analysis has been performed to improve the understanding of the researcher that which is more preferable way of doing apparel shopping between online and offline buying behavior, and within online apparel buying behavior which factor is assumed to be more important by social media users.

Following tests have been performed for testing the Hypothesis-

- ANOVA
- Independent t-Test
- Correlation Analysis
- Regression Analysis

3.13.1 Reliability Test (Cronbach’s Alpha)

Alpha was recognized in 1951 by the Lee Cronbach, to deliver a measure of the internal reliability of a test or scale. It varies between 0 to 1. “Cronbach’s Alpha is a constant of internal stability. It is generally used as an evaluation of the reliability of psychometric test for an example of examinees. It was first called alpha by Lee Cronbach, as he had envisioned enduring with further coefficient in 1951.”

Streiner, A. (2003) defined internal reliability “the extent to which all the items in a test measure the similar theory or paradigm and therefore it is associated to the inter-relatedness of the items within the test. Internal reliability should be resolute before a test can be working for research or investigation purposes to confirm validity. In additional, reliability evaluation indicates the amount of dimension error in a test. Cronbach’s Alpha can be engraved as a purpose of the number of test items and the average inter-correlation between the items.”

3.13.2 Factor analysis

Factor analysis is combination of variables that assess different factors among the variables. These new entities are themselves variables, hypothetical variables, which are fewer than the raw variables. The purpose of the factor analysis is to find out these common factors which provide the shape of real structure hidden in the multiplicity of the variables. In other words “it’s not only explaining the observed relationship among a number of variables, but also explains the basis of influences and the development of classificatory schemes. It is thus, a methodology for classifying manifestations or variables.”
3.13.3 ANOVA

ANOVA is basically a procedure for analyzing the dissimilarity between different groups of data for homogeneity. “The essence of ANOVA is that the total amount of variation in a set of data is broken down into two types, that amount which can be attributed to chance and that amount which can be attributed to specified causes.” In the present study ANOVA is carried out to identify awareness for social media sales promotions and differences in demographic characteristics of population towards social media sales promotions.

3.13.4 Independent t- Test

The independent t test is used to assess the difference among the means of two independent/unrelated groups. Under this test we assess the significant difference between two independent group means. This test is generally referred to as a between groups design and can also be used to analyze a control and experimental group error. This evaluates whether the mean value of the test variable for one group is significantly different from the mean value of the test variable for second group. In this study Independent t-test has been carried out to evaluate the significant difference of social media sales promotions between online and offline apparel buying behavior and to assess the significant difference between Gender.

3.13.5 Correlation Analysis

Correlation analysis has been used in present study to find out the relationship among the variables. The magnitude of the association or relationship between the two variables can be measured by calculating correlation analysis. Correlation can be defined as a “quantitative measures of strength of relationship that exist between two variables.” In this study the correlation analysis was used to assess the relationship of social media sales promotions with brand preferences, frequency of purchases and average amount spend on apparels.

3.13.6 Regression Analysis

When it is estimated by using the methods of correlation that two variables are correlating with each other and it is also tested that expression of such relationship between the considered variables is theoretically permissible, then the next step in the process of analysis is of predicting and estimating the value of one variable from the known value of other variable. This task is called the regression analysis. In this study step wise regression analysis was carried out to study
the influence of social media sales promotions on frequency of purchase, brand preferences and monthly average amount spend on Apparels.