Procedure of the study

Chapter IV

4.0.0 Introduction

Procedure of the study can be thought of as the logic or master plan of a research that throws light on how the study is to be conducted. It shows how all of the major parts of the research study– the Samples, Method, Measures and Statistical Design, etc– work together in an attempt to address the research objectives. Procedure of the study is similar to an architectural outline. The Procedure of the study can be seen as actualization of logic in a set of procedures that optimizes the validity of data for a given research problem. According to Mouton (1996, p. 175) the research design serves to "plan, structure and execute" the research to maximize the "validity of the findings". It gives directions from the underlying philosophical assumptions to research design, and data collection. Yin (2003) adds further that “colloquially a research design is an action plan for getting from here to there, where ‘here’ may be defined as the initial set of questions to be answered and ‘there’ is some set of (conclusions) answers” (p. 19)

Research Procedure is needed because it facilitates the smooth sailing of the research operations, thereby making research as efficient as possible yielding maximal information with minimal expenditure. Preparation of this is done with great care as any error in it may upset the entire project. This procedure, in fact, has a great bearing on the reliability of the results arrives at end as it constitutes the firm foundation of the entire edifice of the research work. The significance of research procedure at times not realized by many. The importance which this problem deserves is not given to it. As a result many researches do not serve the purpose for which they are undertaken.
In fact, it may even give misleading conclusions. Thoughtlessness in designing the research project may result in rendering the research exercise futile. It is, therefore, imperative that an efficient and appropriate design must be prepared before starting research operations. The design helps the researcher to organize his ideas in a form whereby it will be possible for him to look for flaws and inadequacies. Such a design can even be given to others for their comments and critical evaluation. In the absence of such a course of action, it will be difficult for the critic to provide a comprehensive review of the proposed study.

The present chapter is organized keeping in mind the basic objectives of the study and it gives the judicious look at the operational planning and processing of the Population, Sample, method, the tools and the statistical techniques etc.

4.1.0 Method of the Study

In the planning of the study, the investigator attempts to select the method most appropriate to the problem under consideration. The quality of research depends not only in the accuracy of design but also on the fruitfulness of the method of the study keeping the nature and objectives of the study in views. Descriptive Survey method of research was used.
Descriptive survey method explains what exists at present by determining the nature and degree of existing conditions. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). Descriptive studies report summary data such as measures of central tendency including the mean, median, mode, deviance from the mean, variation, percentage, and correlation between variables. Survey research commonly includes that type of measurement, but often goes beyond the descriptive statistics in order to draw inferences. In the present study Peer Pressure and Ragging were considered as Independent Variables and Suicidal Ideation as the Dependent Variable. Peer Pressure, an independent variable in the present study was studied by dividing its effect into three categories such as High, Average and Low; the other independent variable i.e. Ragging was also investigated by dividing its effect into three categories such as Low, Average and High.

4.2.0 Sample of the Study

Selection of sample is an integral part of every research project and its success depends upon the selection of the sample. Lowry (2013), “A 'sample' is a relatively small window through which the investigator hopes to see the outlines of some larger, more inclusive reality. In some cases, the glimpse provided by the sample might truly represent the larger reality, while in other cases it might misrepresent it, leading the investigator to erroneous conclusions”. Therefore it is vital that the study has an adequate sample size. A study that has an adequate sample size will have a high probability of detecting a statistically significant result and therefore represents a rescue of valuable resources. The procedure of sample selection is laid down in the next paragraph.
4.2.1 Selection of Sample Unit

The sample of the study was consisted of the students of under graduation courses. Professional courses - Medical, Engineering, Management and Non-Professional courses; undergraduates of Arts, Commerce and Science were taken into consideration. The chits of colleges providing the above course were prepared. For each course, one college was chosen through lottery method then the number of students enrolled in each course in chosen college was identified. It was then decided that from each course equal number of male and female students i.e. 30 and whose age range was varying from 18-20 years would be selected. These data producing units were chosen by using random numbers from a random number table. Only the first year students were taken. In this way the investigator has used Stratified Random Sampling Method. Stratified random sampling is a probabilistic sampling method. The first step in stratified random sampling is to split the population into strata, i.e. sections or segments. The strata are chosen to divide a population into important categories relevant to the research interest. Stratification is the process of dividing members of the population into homogeneous subgroups before sampling. The strata should be mutually exclusive: every element in the population must be assigned to only one stratum. Then simple random sampling is applied within each stratum. This often improves the representativeness of the sample by reducing sampling error. Kerlinger (1986) described “randomization as the assignment of objects (subjects, treatments, groups, etc.) of a population to subsets (sample) of the population in such a way that, for any given assignment to a subset (sample), every member of the population has an equal probability of being chosen for that assignment. Randomization is essential for probability samples which are the only samples that can generalize results back to the population.”
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Undergraduation Courses

Professional Course

Engineering
Anand Engineering College
M=315 F=165 N=30

Medical
S.N. Medical College
M=97 F=53 N=30

Management
Anand Engineering College
M=78 F=42 N=30

Non-Professional Course

Arts
Balikunthi Devi Girls College & Agra College
M=150 F=280 N=30

Commerce
St. Johns College
M=160 F=140 N=30

Science
Balikunthi Devi Girls College & Agra College
M=554 F=83 N=30

180 students of Professional Courses + 180 Students of Non-Professional Courses = 360
Total Sample Size = 360

Fig 4.2: Exhibiting Sample Distributing Units in Professional & Non-Professional Course
4.3.0 Selection and Description of the tools

After selection of the sample, the next task was to choose the tools for collection of data.

Success in research depends on the availability of instruments and techniques of sufficient precision to measure the phenomena under study. The selection of research instruments or tools is critical steps of any investigation which demands a deep insight and perspective of all fields of the investigation. The selection of the tools for a particular study depends upon various considerations such as the objectives of the study, the amount of time available at the disposal of researcher, availability of suitable test, personal competence of the researcher to administer, score and interpret the test results etc. According to Best (1977), “Skill in choices and use of research instruments is crucial to the success of the study and validity of its result and conclusion.” The selection of a tool depends upon the several criteria which are illustrated as follow:

Fig.4.3: Exhibiting the Criteria for Tool Selection

<table>
<thead>
<tr>
<th>Researcher’s Quality</th>
<th>Technical Quality</th>
<th>Practical Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resourcefulness</td>
<td>Standardization</td>
<td>Representativeness</td>
</tr>
<tr>
<td>Amount of time</td>
<td>Objectivity</td>
<td>Acceptability</td>
</tr>
<tr>
<td>at the disposal</td>
<td>Discrimination</td>
<td>Causability</td>
</tr>
<tr>
<td>of research</td>
<td>Reliability</td>
<td>Economical</td>
</tr>
<tr>
<td>Financial</td>
<td>Validity</td>
<td>Comprehensiveness</td>
</tr>
<tr>
<td>considerations</td>
<td></td>
<td>Purposiveness</td>
</tr>
<tr>
<td>Personal competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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4.3.1 Selection of the Peer Pressure Scale

For the selection of the Peer Pressure test, the investigator firstly surveyed the related literature and found some test on Peer Pressure. Few of them are being presented here in a tabular form.

Table 4.1: Exhibiting various tools to measure Peer Pressure

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Tool</th>
<th>Author</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Peer Pressure Inventory</td>
<td>Brown <em>et al.</em> (1986)</td>
<td>Adolescents</td>
</tr>
<tr>
<td>2</td>
<td>Peer Pressure and Popularity</td>
<td>Santor <em>et al.</em> (2000)</td>
<td>Adults</td>
</tr>
<tr>
<td>3</td>
<td>Peer Pressure Scale</td>
<td>Kiran (2002)</td>
<td>Adolescents</td>
</tr>
<tr>
<td>4</td>
<td>Susceptibility to Peer Pressure Scale</td>
<td>Sim &amp; Koh (2003)</td>
<td>Secondary school students</td>
</tr>
<tr>
<td>5</td>
<td>Peer Pressure Scale</td>
<td>Singh and Saini (2010)</td>
<td>Adolescents (undergraduate)</td>
</tr>
</tbody>
</table>

4.3.1.1 Peer Pressure Scale (2010)

Peer Pressure Scale (2010) by Singh and Saini was selected to measure the level of peer pressure among students. The criteria for the selection of this scale were; the scale is mainly designed to measure the levels of Peer Pressure, suitable in the Indian Conditions, Further this test is standardized mainly on the undergraduate students.

Peer Pressure Scale is a five point scale consisted of 25 items for measuring the peer pressure in adolescents aged 16 to 20 years (See Annexure -XIII). As the investigator has selected the Peer Pressure Scale and for giving detail about tool here the researcher has given a tool profile in the table as given below:
4.3.1.2 Description of the Scale

The Peer Pressure scale is a self report five point Likert Scale. Peer Pressure scale is a uni-dimensional scale which gives estimate of peer pressure in adolescents. It was developed mainly for the reason that youth problems are increasing day by day and peer pressure is one of the major factors influencing such problems among them. According to the Singh and Saini (2010), a peer is a person who belongs to the same societal group based on age, grade, or status while a friend is a person who we are attached to by affection or esteem. Peer Pressure is feeling pressure from other age-mates to do something harmful for self and others. Peer pressure is associated with many antisocial activities and risky behavior among youths, e.g. smoking, drinking, rape, ragging, drug abuse, traffic accidents, rule violation at public places, risky sexual behavior, robbery, kidnapping, even murder and development of diseases like HIV infection that ultimately result into either suicide or legal punishment. The scale focuses on peer pressure related to drinking, gambling, violence, risky behavior and gang activities.
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4.3.1.3 Reliability of the Scale

The Peer Pressure Scale is a reliable scale. There are two basic concerns with respect to reliability, consistency of items within a measure and stability of the measure over time.

a) **Internal Consistency:** The internal consistency of the scale was established by using cronbach’s alpha coefficient and a reliability of 0.79 was obtained for the final 25 items.

b) **Test-retest reliability:** For the analysis of test-retest reliability (temporal stability coefficient), 25-items scale was used on the same sample after a period of 60 days. The procedure for the retest was identical to that used for the initial data collection. The coefficient of temporal stability was measured by using Pearson product-moment correlation method, and internal consistency of the scores was measured by using Cronbach’s alpha. The results obtained indicated high test-retest reliability ($r=0.33^{* *}, p<.01$) and internal consistency ($=0.77^{* *}$).

4.3.1.4 Validity of the Scale

a) **Face Validity:** The face validity is established when the items in the instrument are clearly and obviously related to the phenomena being measured, when the items are relevant to the stated condition or purpose of the instrument and when the items are based upon whatever knowledge is available at the time of construction. The items of the Peer Pressure Scale satisfy these conditions.

b) **Content Validity:** Initially 62 items were constructed for the Peer Pressure Scale. Both Positive and Negative worded items were included in the initial version. For subject experts, senior professors with psychometrics background evaluated the face and content validity of the scale. These experts were selected on the basis of
their expertise in psychological test construction. The experts opined that the scale has good face and content validity.

c) **Criterion Validity:** For the current scale the authors have assessed both predictive and concurrent validity as follows;

i) **Predictive Validity:** To determine the Predictive Validity, the authors have conducted a pilot study and found that peer pressure have highly significant relation with the variables like HIV risk perception ($r=.22^{**}$), alcohol and drug attitude scale ($r=.22^{**}$).

ii) **Concurrent Validity:** Peer Pressure subscale of Peer Pressure and Conformity Scale (Brown *et al.*.) was used to check the concurrent validity of the measure. There was a significant positive correlation ($r=.38^{**}$, $p<.01$) between two measures.

### 4.3.1.5 Scoring of the tool

It is a self report 5-point scale measured on five categories, i.e., Strongly disagree (5), Disagree (4), Can’t Say (3), Agree (2), Strongly Agree (1). The score 1 represented the opinion ‘strongly disagree’ while option 5 on the scale represented the category ‘strongly agree’. Positive items are scored from 1 to 5 and negative or reverse items scored from 5 to 1. The minimum and maximum score range in 25-125. High score is interpreted as high peer pressure and low score indicates less peer pressure. On the basis of norms the author has decided the categories of the scores. Individual Scoring up to 55 are identified as low level of Peer Pressure, scoring between 56-72 average level of Peer Pressure and score greater than 72 will fall under the category of high Peer Pressure.
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4.3.2 Selection of the Suicidal Ideation Test

Accurate assessment of Suicidal Ideation is of major importance in research settings. Students’ suicide occurs usually in the context of an active, often treatable, but unrecognized or untreated mental illness. There are numerous indicators that one can look for when trying to detect suicidal ideation. There are also situations in which the risk for suicidal ideation may be heightened. For the selection of the Suicidal Ideation Test, the investigator firstly surveyed the related literature and found some tests on Suicidal Ideation. Few of them are being presented here in a tabular form.

Table 4.3: Exhibiting various tools to measure Suicidal Ideation

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Tool</th>
<th>Author</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Suicide Intent Scale</td>
<td>Beck (1974)</td>
<td>Clinical Patients</td>
</tr>
<tr>
<td>2</td>
<td>Suicidal Ideation Questionnaire (SIQ)</td>
<td>Reynolds (1987)</td>
<td>Early Adolescents</td>
</tr>
<tr>
<td>4</td>
<td>The Kessler Psychological Distress Scale (K10)</td>
<td>Kessler R (1992)</td>
<td>Clinical Patients</td>
</tr>
<tr>
<td>5</td>
<td>Columbia Suicide Severity Rating Scale</td>
<td>Posner et al. (2008)</td>
<td>Clinical Patients</td>
</tr>
</tbody>
</table>

4.3.2.1 The Beck Scale for Suicidal Ideation (1991)

The Beck Scale for Suicidal Ideation (1991) is selected by researcher to measure the magnitude of Suicidal Ideation among students. The criteria for the selection of this scale were; this scale has been found suitable for administration on Non-clinical sample, accessible and one of the most widely used scale in several studies.
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This test has 19 items based on Suicidal Ideation. Each item consists of three options graded according to suicidal intensity on a 3-point scale ranging from 0 to 2. As the investigator has selected the Beck Scale for Suicidal Ideation and for giving detail about tool here the researcher has given a tool profile in the table 4.3:

Table 4.4: Showing the Tool Profile of Beck Scale for Suicidal Ideation

<table>
<thead>
<tr>
<th>The Beck Scale for Suicidal Ideation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors</td>
</tr>
<tr>
<td>Nature</td>
</tr>
<tr>
<td>Gp/Indi</td>
</tr>
<tr>
<td>Duration</td>
</tr>
<tr>
<td>Structure</td>
</tr>
<tr>
<td>Reliability</td>
</tr>
<tr>
<td>Validity</td>
</tr>
</tbody>
</table>

4.3.2.2 Description of the Scale

The Beck Scale for Suicidal Ideation (BSI; Beck and Steer, 1991) is a self-report measure. The BSI is an easy-to-administer 19-item self-report questionnaire that has promise for greatest use with adolescents. The authors of the BSI suggest that the instrument is best used to detect and measure severity of suicidal ideation, which is considered to be an indication for suicide risk (Beck and Steer, 1991). The scale is based on five dimensions viz.: intensity of suicidal ideation, active suicidal desire, suicide planning, passive suicide desire, and concealment.
4.3.2.3 Reliability of the Scale

The BSI has highly internal reliability with Cronbach alpha coefficients ranging from .87 to .97 (Beck et al., 1988; Beck & Steer, 1991; Steer et al., 1993). The BSI has moderate test-retest reliability ($r = .54$) over a one week period with psychiatric inpatients (Beck & Steer, 1988).

4.3.2.4 Validity of the Scale

The BSI is highly correlated with the clinically rated SSI with correlation coefficients ranging from .90 for psychiatric inpatients to .94 for outpatients (Beck, Steer, & Ranieri, 1988). The data suggest that patient responses to the self-report and clinician-administered versions are consistent regardless of the mode of administration. In addition, the BSI is moderately correlated with the Beck Depression Inventory Suicide Item with correlation coefficients ranging from .58 to .69. Furthermore, the BSI has been found to be moderately correlated with the Beck Depression Inventory (.64 to .75) and the Beck Hopelessness Scale (.53 to .62; Beck, Steer, & Ranieri, 1988). This ensures concurrent validity of the scale.

4.3.2.3 Scoring of the tool

The scale of suicidal ideation consists of 19 items, scored 0 to 2, which can be used to evaluate a person's suicidal intentions. The minimum and maximum score range in 0-38. High score is interpreted as high suicidal ideation and low score indicates low or no suicidal ideation. Individual Scoring up to 10 are identified as low level of Suicidal Ideation, scoring between 11-27 average level of Suicidal Ideation and score greater than 28 will fall under the category of high Suicidal Ideation.
4.4.0 Statistical Techniques Employed

After administrating the tool, the next step was the analysis and interpretation of the collected data, statistical techniques were applied to manage the large corpus of data and present finding in an understandable and intelligent manner.

In the present study the investigator has used descriptive as well as inferential statistics for the analysis of data. The reason of using of statistical techniques can be displayed as follow:

![Diagram showing reasons of using statistical analysis](image)

Fig. 4.4: Exhibiting the reasons of using of the Statistical Analysis

In order to arrange and thrash out the essence from collected data and to make data meaningful, the following statistics techniques were used:

![Diagram showing types of statistical techniques](image)

Fig. 4.5: Showing Types of Statistical Techniques
4.4.1 Descriptive Statistics

Certain Descriptive statistics were computed in order to describe the nature and contribution of scores obtained through various scales.

4.4.1.1 Mean

In the present study, mean value was computed as the measure of central tendency of the scores of Peer Pressure, Ragging and Suicidal Ideation prevailing among students and to describe the average scores of various groups as well as to deal with objective which aims at studying the trend of above mentioned variables among students.

4.4.1.2 Percentage

Percentage was computed in order to highlight the distribution of students into different categories of Peer Pressure, Ragging and Suicidal Ideation and also to find out the most popular style of Ragging.

4.4.1.3 Mode & Median

Mode and Median were calculated to ensure to normalcy in the distribution of the variables of the study as it is believed that in a normal distribution Mean, Median and Mode lie on the same point.

4.4.1.4 Skewness and Kurtosis

These values were computed in order to study the amount of divergence of the scores form the normalcy as well as to study its significance in distribution of scores of various variables in the universe and also to ensure about the nature of distribution for the computation of higher level statistical methods.
4.4.1.5 Standard Deviation

Standard deviation of the scores of variables was computed to study the variance of scores of Peer Pressure, Ragging and Suicidal Ideation. This was also helpful in computation of other statistical measures.

4.4.1.6 Coefficient of Variance

This was used to see the nature of the groups in terms of homogeneity and heterogeneity. It was also used to see the relative variability of the various groups.

4.4.2 Inferential Statistics

In the present study in order to test the various hypotheses of the study as well as to draw certain conclusion following inferential statistics were used;

4.4.2.1 Multiple Regression

Multiple Regression was computed to see the relationship between independent variable and dependent variable and also to see whether Peer Pressure and Ragging served as the Determinant of Suicidal Ideation?

4.4.2.2 t-Test

t-Test was computed to find out the significance of difference among the students of different Courses (Professional Courses and Non- Professional Course) and male and female student in relation to their Peer Pressure and Ragging and suicidal ideation scores. t- Test was also applied to see the significant difference with reference to suicidal ideation in the High, Average and Low Peer Pressure Group and also in High Ragged, Average Ragged and Low Ragged Group
4.4.3 Graphical Representation

Graphical representation was done to show the obtained results from various groups.

The following graphs were used to highlight the obtained results:

4.4.3.1 Histogram Curve

This was used to represent nature of distribution of the scores of Peer Pressure, Ragging and Suicidal Ideation.

4.4.3.2 Bar Diagram

Bar Diagram was used to represent the difference in the means and standard deviation of Peer Pressure, Ragging and Suicidal Ideation scores of (i) students of Professional and Non- Professional Courses (ii) Male and Female Students.

4.4.3.3 Pie Diagram

Pie diagram was used to divide the whole domain of variables; Peer Pressure, Ragging and Suicidal Ideation into their levels High, Average and Low.

4.5.0 Overview of the Chapter

The purpose of this chapter was to describe the research method of this study, explain the sample selection, describe the procedure used in selection of the instrument and collection the data, and provide an explanation of the statistical procedures used to analyze the data A sequential schedule of the steps was given and the Stratified Random Sampling Method was used as the sampling method to select the sampling units to investigate the prevalence of Peer Pressure, Ragging and Suicidal Ideation among students of Professional and Non- Professional Courses. The tools such as
Peer Pressure Scale and Back Scale for Suicidal Ideation were employed for measuring the Peer Pressure and Suicidal Ideation respectively. Three scales on ragging were developed by the researcher herself. Descriptive Research (Mean and Standard Deviation), Inferential Statistics (t-Test and multiple Regression) and Graphical Representation (Distribution Curve, Bar diagram and Pie Diagram) were used to analyze the data to drive valid conclusions.