

# Methodology

## CHAPTER - III

### METHODOLOGY

*“Knowledge and timber shouldn’t be much used till they are seasoned.”*

– Oliver Wendell Holmes

#### 3.0 Introduction

Research methodology is a collective term for the structured process of conducting research. There are many different methodologies used in various types of research and it is usually considered to include research design, data gathering and data analysis.

Research methodologies can be quantitative or qualitative. The current research incorporates both quantitative and qualitative methodologies.

Methodology is concerned with how one goes about actually conducting research. The particular procedure one might employ in the given investigation will however depend upon the nature and objectives of the study. The purpose of this chapter is to outline some of the possibilities, to provide a rationale for the research methodology which was ultimately chosen, and to discuss the process for applying that methodology.

The study basically aims to help adolescents in identifying their destructive emotions and thereby empowering them with life skills to combat for the same.

To achieve the objectives defined as a part of the research program, two sets of empirical information were collected – the qualitative data and the quantitative data.

For objective one, i.e. to identify the adolescents with various destructive emotions, the researcher used, the Bar – on Emotional quotient – Inventory, youth version, aged 7 to 18 years as well as constructed a scale with items assessing the negative emotions of an adolescent called “Neuro-affliction Scale”. All the activities from ice breaking games to problem solving techniques and self awareness exercises gave the students an experiential insight to recognize their own sets of emotions (both negative emotions as well as positive emotions.)

For objective two, i.e. to develop a therapeutic intervention programme for the management of the identified destructive emotions in adolescents, a comprehensive program of 24 hours was spread over 24 sessions over a period of one month and 15 days. This time period is excluding the time that was spent on administering the tools (pre test and post test) and in depth interviews with the teachers, students and their parents.

For the third and last objective, namely, to study the effectiveness of the prepared therapeutic intervention programme for the management of destructive emotions in adolescents, data was collected through researcher’s observation made for each student, logs of significant learning through student’s own diary entries, in-depth interviews of students and feedback from the class teachers. Parents reporting about Adolescent’s maladjusted behavior pattern were used as a part of case study method.

### **3.1 Design of the Study**

Design is the blue print of the procedure that enables the researcher to test hypothesis by reaching valid conclusions. Kerlinger (1973) defined research

design as “the plan, structure and strategy of investigation and control variance”. Thus the plan includes an outline of what the researcher will do from writing the objectives to the final analysis of the data. The selection of a particular design is based upon the purpose of an experiment, the type of variable to be manipulated, and the condition or the limiting factors under which it is to be conducted. There are a number of combinations of the experimental procedure. The basic designs are the single group design, the parallel group design, the rotation group design and the factorial design (Mouly 1963).

The present study is a Qualitative Intervention study following pretest – Intervention – posttest single group of subjects. Both the quantitative and the qualitative methodologies were utilized for data collection.

For qualitative data, Case Study Methods were used. The Case Study method helped the researcher to have an in-depth look at the adolescent. It provided a narrative and detailed description of the events that took place in an adolescent’s life.

For quantitative data the Paired – Sample ‘t’ test was used. The changes seen in the emotional quotient scores between the pretest and posttest of Bar – on Emotional Quotient – Inventory, youth version, were indicative of management of destructive emotions. Both the qualitative as well as the quantitative data supported in understanding the extent of destructive emotions in the growing adolescent.

### **3.2 Population**

The whole of Gujarat has CBSE Schools which include middle school students from class VII to Class IX. Population in the present study involves

the middle school students of class 9 studying in Navrachana Higher Secondary School, Vadodara (Gujarat). The school consists of three sections:

- 1) Primary school – class I to VI
- 2) Middle School – class VII to IX
- 3) Higher Secondary School – class IX to XII.

### **3.3 Sample and Sample Selection**

1. It is a purposive sampling. One school was selected for the study. The students from Navrachana School, Sama road, Vadodara, India were selected as they readily agreed to the study being done. The researcher selected class 9 students who were part of the Middle School of Navrachana School.
2. A Co-educational English Medium School, Navrachana School is regarded as one of the premier schools of Gujarat. The school has a child friendly atmosphere that facilitates in enhancing the overall personality of the students through motivation and reinforcement. The students who are admitted to this school basically come from upper – middle class.

### **3.4 Procedure of Data Collection**

After the administration of the Bar – On Emotional Quotient – Inventory on 135 students across five different sections of class 9, there were 19 students who were chosen for therapeutic intervention program. Two groups, containing 10 students in each who reported Average Emotional Intelligence

and Low Emotional Intelligence on Bar – On Emotional Quotient – Inventory were administered the therapeutic intervention program. All 19 students irrespective of the two levels of emotional intelligence were put together in groups of ten for therapy based intervention.

After post-testing, the 3 students who were maximally benefitted by the therapy based program and other 3 students who were minimally benefitted by the therapy based program were taken for in-depth case study with respect to management of destructive emotions.

### **3.5 Tools and Techniques of Data Collection**

To fulfill the objectives of the study, the data was collected through various tools. Individual scores of respondents on the Bar – On Emotional Quotient – Inventory, the “Neuro - Affliction Scale” constructed by the researcher, teacher’s observation format, student’s own log books containing their significant learning during the intervention program, in-depth interviews of students along with researcher’s observations and case study methods along with information collected by parents and feedback from teachers were used as sources.

#### **3.5.1 Bar-On EQi YV Scale**

The Bar – On Emotional Quotient – Inventory: Youth Version (Bar-On EQ-i:YV) developed by Dr. Reuven Bar-On and Dr. James D.A. Parker is a self-report instrument designed to measure emotional intelligence in young people aged 7 to 18 years. It is based on the Bar – On model of emotional and social intelligence, measuring emotional personal and social dimensions of intelligence.

Emotional Intelligence comprises abilities related to understanding oneself and others, relating to people, adapting to changing environmental demands, and managing emotions.

This inventory consists of 60 items that are distributed across 7 scales.

**The following is a brief description of the 7 scales :**

	Scale	Descriptions
1	Total EQ -	The scale measures the individual's general levels of effectiveness in dealing with daily demands and their typical level of happiness.
2	Interpersonal Scale	The scale measures the individuals satisfying level of interpersonal relationships. Good listening skills and their understanding and appreciating the feelings of others are also indicative on this scale.
3	Intrapersonal Scale	The individual's level of understanding oneself with respect to his/her emotions. And their ability to express and communicate their feelings and needs are suggested through this scale.
4	Adaptability Scale	The individual's flexibility, realistic and effective levels in managing the change is measured through this scale. Positive ways of dealing with everyday problems are also indicated here.
5	Stress Management Scale	The individual's level of calmness and working well under pressure is indicative on this scale. Impulsivity and emotional outburst in stressful events can also be indicated on this scale.
6	General Mood Scale	The individual's level of optimism and positive outlook towards life is measured by this scale
7	Positive Impression Scale	The individual's positive self impression is measured by this scale.

The Bar – On EQi YV uses a 4-point Likert- style format in which students are asked to rate each item as to the extent that they relate to them. The response options are “Very Seldom True of Me”, “Seldom True of Me”, “Often True of Me”, “Very Often True of Me”. The various Bar-On EQi YV scales were developed so that higher scores indicate increased levels of emotional intelligence.

After the calculation of raw scores on all the seven scales, each of these scales is plotted on the profile form with respect to standard scores. These are certain ranges marked in each form. Depending on where the raw scores fall, standard scores can be obtained.

**Standard Scores are under 7 Categories :**

	<b>EQ Category</b>	<b>Interpretive Description</b>
1	130 + Markedly High	a typically well developed emotional and social capacity.
2	120 – 129 Very high	extremely well developed emotional and social capacity.
3	110 – 119 High	well developed emotional and social capacity.
4	90 – 109 Average	adequate emotional and social capacity.
5	80 – 89 Low	under developed emotional and social capacity, with some room for improvement.
6	70 – 79 Very Low	extremely under developed emotional and social capacity, with considerable room for improvement.
7	Under 70 Markedly Low	a typically impaired emotional and social capacity.

The test also helped in assessing the pattern of emotional intelligence dimensions.

*(Refer to Appendix I)*



The total EQ score gives a general indication of how emotionally and socially intelligent the student is in general. One could assess the specific strengths and weaknesses by examining the individual scale scores.

### **3.5.2 The ‘Neuro-Affliction Scale:**

The scale was developed by the researcher to measure destructive emotions of adolescents. The term Affliction has been taken from the book “Destructive Emotions and how we can overcome them” by the Dalai Lama and Daniel Goleman. According to Buddhism the mental events are called “Afflictions” and are seen as “Conceptual” – a broader term that includes what in English are called thoughts, mental images, and emotions. The inventory was designed to measure the destructive emotions of adolescents aged 7 – 18 years. The inventory was constructed on the basis of Bar-On Eqi YV scale. The questionnaire had 60 items which indentified the student’s score on Low Self Esteem, over confidence, Harboring Negative Emotions, Envy and Jealousy, Lack of compassion and Inability to have close interpersonal relations.

The scale was reviewed for items by 3 judges from the field of Psychology and Education. The suggestions and changes brought in by the judges were incorporated before the students were given the questionnaire.

The details about the scale and scoring pattern are mentioned in Chapter-4 Materials developed for intervention.

*(Refer to Appendix II)*

### **3.5.3 Student's logs of significant learning:**

The Students Logs of significant learning was maintained in their diary entries. Session after session, each student was asked to keep a log of learning. It is a progressive learning intervention program. They were given an EQ learning and progress chart developed by the researcher. Also they were given worksheets after every activity that had questions about their new learning, how they planned to use the new learning. The EQ learning and progress chart were filled on a day-today basis to keep a close check by the student himself/herself with respect to identifying destructive/negative emotions and using techniques towards the management of destructive emotions. (*Refer to Appendix III*)

A sharing on their new learning and behavioural changes were held, at the beginning of each session. The student's own diary entries helped the investigator in knowing the changes coming up with respect to how they managed destructive emotions on a daily basis. It also provided feedback on how much the student had understood from the activities of the intervention program and utilized it in further course of action.

### **3.5.4 Investigator's Observation:**

The researcher after few initial sessions on rapport establishment continued a close interaction with all the students both at the individual as well as group levels. She maintained the interaction during the intervention and post-intervention stages of the study.

The researcher made her observation for each student before and after the activity. After each activity, the learning happening for each child was closely observed and entered remarks for the same in the researcher's observation notebook.

Using the observation the researcher kept field notes during the entire study.

#### **3.5.5 Feedback and observations from teachers:**

The feedback and observations from teachers was taken twice during the entire study. The subject teachers along with the class teachers who had taught them in last 2 academic years were interviewed, both before and after the intervention program conduction. The teacher's referral form was filled for each student in the beginning of the intervention program for understanding the child from the teacher's perspective. After the intervention, the changes noted in the students were also reported by the teachers. (*Refer to Appendix IV*).

A few incidents which happened in school as well as at home were reported in the form of anecdotal evidences collected by teachers and parents over a period of time for the students.

The new behavior shown by the students during the intervention program and after the intervention program was reported by teachers. Teachers had reported certain real changes of behavior.

### **3.5.6 Interview of students:**

All the 19 students were interviewed with respect to their areas of concern and the progress through the intervention techniques by the researcher.

The purpose of using in-depth interview was to trace the path of social and emotional learning for the six students. Also how they started managing themselves with respect to their own set of emotions as well as emotions of others in day to day dealings was to be experientially narrated by the students in the personal interviews. Initially all the 19 students were interviewed with respect to their areas of concerns and the progress through the intervention techniques.

### **3.5.7 Case Study Methods:**

Case study methods involve the collection and recording of data about a case. In Case Study, an individual is taken as the unit of analysis. The focus is upon the individual case recognizing the need. Case Study includes a real life context in which multiple sources like medical history, social history and family history are taken into account. (*Refer to Appendix V*)

Using Case Study, the researcher was able to have an in-depth look at the adolescent. In the present study, the researcher took into account the case studies of adolescents identified with destructive emotions.

The six students, 3 from each category, i.e. 3 students maximally benefitted by the intervention program and 3 students minimally benefitted by the intervention program after pre and post testing on Bar – On EQi YV and Neuro – Affliction Scale were taken up for in-depth interview. These interviews were unstructured and provided very useful information about the

child's background, emotional state, interpersonal relationships and his or her interest's areas along with the changes reported in their social and emotional learning after the intervention program. These interviews were conducted at the post intervention phase of the program.

With the help of case profile sheet, in-depth interviews were conducted with parents of the six respondents selected. The parents were interviewed individually to gather behavioral evidence about their child's social and emotional learning processes. Throughout the data collection process the investigator maintained a chain of evidence linking the various data sources having bearing on the research questions.

### **3.6 Procedure of the Study**

The researcher explained the purpose and objectives of the study to the section co-ordinator of the Middle School of Navrachana School, Sama, Baroda. A copy of the proposal and a detailed time table for both testing and intervention program were separately submitted.

The researcher introduced herself to students of class VIII and class IX along with their teachers and explained them the purpose of the study.

The study was conducted in three stages: - pre-intervention phase, intervention phase and post-intervention phase.

#### **3.6.1 Pre-Intervention phases:**

During this phase, the researcher developed an intervention program, keeping in mind the skills of social and emotional literacy to manage destructive emotions among adolescents. The activities chosen were all experiential in

nature and were based on components of Life Skills Education Program. The random pick of 10 Boys and 10 Girls were administered on both the Bar - On EQi YV Scale and on the newly prepared 'Neuro-affliction Scale' for identifying the destructive emotions. The activities chosen for the intervention was basically to enhance emotional intelligence of students.

The emotional intelligence enhancement program (EI) talks about: Higher the emotional intelligence, higher the social emotional development and better adjustment of students. If the EI is higher the students will shun from destructive emotions. Based on this the researcher carried out a pilot study on 10 boys and 10 girls who were for a shorter period of time put through the various activities designed for the intervention program. Based on their responses on both the Neuro – Affliction Scale and the various activities designed for EI enhancement, the researcher brought changes to suit the present study.

### **3.6.2 Intervention Phase:**

During this phase, a random pick up of 19 students identified under the category of average and low levels of emotional quotient were put through the new scale 'Neuro-affliction Scale'. They were later then taken up for the intervention program which was spread over 24 sessions, a total of 24 hours, excluding the time spent on administering the tools (pre-test and post-test) and the in-depth interviews with parents, teachers and students. The therapeutic intervention program of 24 sessions was named by the researcher as 'HAPPINESS PROGRAM FOR ADOLESCENTS'. These sessions were designed at various time intervals to elicit emotional responses in students.

The program consisted of activities designed to enhance the following parameters of emotional intelligence:

- i. Enhancing of Constructive States of Mind with respect to:
  - a. Self Esteem
  - b. Self Confidence
  - c. Self Respect
  - d. Friendship
  - e. Compassion
  - f. Feelings of Integrity
- ii. Reducing the Destructive States of Mind with respect to
  - a. Low Self Esteem
  - b. Over Confidence
  - c. Harboring Negative Emotions
  - d. Jealousy and Envy
  - e. Lack of Compassion
  - f. Inability to have close interpersonal relations.

The following skills were enhanced throughout the intervention program.

- a. Self awareness
- b. Self regulation
- c. Management of Emotions
- d. Problem Solving

- e. Empathy
- f. Social Skills
- g. Educating the Heart
- h. Social and Emotional literacy.

Students were required to fill their diary entries of significant learning after each part of the intervention was over. Detailed notes of observations were also kept by the investigator throughout this phase.

### **3.6.3 Post-intervention phase:**

After the intervention program was completed, the 19 students were put through the post - testing on Bar-On EQ i YV test and 'Neuro-affliction Scale'. The teacher's feedback was collected for all. The student's in-depth interviews and the case studies was carried out for 6 students only, 3 students maximally benefited from by the intervention program and 3 students minimally benefited by the intervention program. Their parents were interviewed as a part of the case study. This was done to quantitatively and qualitatively measure the difference between the pre-intervention and post intervention phase.

### **3.7 Procedure of Data Analysis**

The objective of the present study was to determine the effectiveness of an intervention program developed for management of destructive emotions. The intervention program was conducted on a group of students. The effectiveness was measured by the difference in student's total Emotional quotient before



and after the intervention program. The data was calculated as paired sample test. Mean, 't' value, significance and mean difference was calculated as a part of quantitative analysis. Quantitative analysis was done on pre – post testing of Bar – On EQi YV Scale and Neuro – Affliction Scale.

**Paired Sample 't' Test:**

Paired sample 't' test is a statistical technique that is used to compare two population means in the case of two samples that are correlated. Paired sample 't' test is used in 'before-after' studies, or when the samples are the matched pairs, or the case is a control study.

The Paired Samples 't' test compares the means of two variables. It computes the difference between the two variables for each case, and tests to see if the average difference is significantly different from zero.

By using the paired sample 't' test, the researcher will statistically conclude whether or not intervention program has brought improvement in the student's management of destructive emotions.

This study is mainly a qualitative study. Each case-study was prepared for in-depth analysis of destructive emotions in an adolescent.

Qualitative analysis is a broad field of enquiry that uses unstructured data collection methods, such as observations or documents to find themes and meanings to inform our understanding of the world. It also tends to uncover the reasons of behaviors, attitudes and motivations, instead of just the details of what, where and when.

In the present research various qualitative methods were used for categorizing the emotions:

***Case Studies: -***

Case study research excels at bringing us to an understand of a complex issue or object and can extend experience or add strength to what is already known through previous research. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships.

In the present study the case studies were conducted to identify the level of destructive emotions and the effect of therapeutic intervention program on the students. These case studies were done on three students who were maximally benefited and three students who were minimally benefited by the intervention program.

***Content Analysis: -***

It is a method of systematic examination of communications or of current records or documents. The researcher has used unit of analysis for the present study. Responses of students were put into understandable category. Also the contents were categorized into areas of topics for e.g. 'I helped somebody'. This explains about the students 'co-operative behavior'.

As a part of qualitative analysis the researcher has made use of the data available from Neuro – Affliction Scale, Teacher's Observation and Feedback, In-depth Interviews with students, Investigators own Observations and Student's Logs of Significant Learning.