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CHAPTER III

METHODOLOGY

3.1 INTRODUCTION

This chapter consists of the detailed explanation of the methodology used in this study. It includes operational definitions of the variables studied, hypotheses, sample (i.e. subjects), tools used, the procedure for data collection, the treatment procedure, and the statistical techniques employed to analyze the data.

3.2 VARIABLES, AND HYPOTHESES

This section consists of the variables and hypotheses included in the present study.

3.2.1 Operational Definitions of Variables

The following were the variables in this study:

Homeopathy, REBT, and yoganidra were independent variables. Anger was the dependent variable.

a) Anger: For this study, Spielberger’s(1999) definition was adhered to. He defined it as “psychological state and trait consisting of subject’s feelings that vary in intensity and frequency from mild irritation to intense fury and would fluctuate overtime as a function of frustration, perceived insults or being verbally or physically attacked by others, experienced overtime; it is accompanied by arousal of autonomic, nervous and neuroendocrine process”.

b) Homeopathy: Homeopathy can be defined as system of medical therapeutics based on the ‘law of similars’. This law states that a drug capable of producing a disease state in a healthy individual which is exactly similar to that observed in a diseased individual, acts a curative agent if the disease is in curative stage (Dhawale, 2000).
c) Rational Emotive Behaviour Therapy: “Rational emotive behaviour therapy is a comprehensive, active-directive, philosophically and empirically based psychotherapy which focuses on resolving emotional and behavioural problems and disturbances and enabling people to lead happier and more fulfilling lives”(Wikipedia, 2008).

d) Yoganidra: Yoganidra is a yogic relaxation technique consisting of resolve-making, deep muscle-relaxation, breathing exercise and imagery (Swami Satyanand Saraswati, 1998).

3.2.2 Hypothesis

Based on the objectives of the present study, the following hypotheses were formulated.
1. There is a significant reduction in the post-treatment STAXI-2 scores on Trait-Anger, when treated by homeopathy.
2. There is a significant reduction in the post-treatment STAXI-2 scores on Trait-Anger, when treated by REBT.
3. There is a significant reduction in the post-treatment STAXI-2 scores on Trait-Anger when treated by yoganidra.
4. There is a significant reduction in the post-treatment STAXI-2 scores on Anger-Expression (In and Out), when treated by homeopathy.
5. There is a significant reduction in the post-treatment STAXI-2 scores on Anger-Expression (In and Out), when treated by REBT.
6. There is a significant reduction in the post-treatment STAXI-2 scores on Anger-Expression (In and Out) when treated by yoganidra.
7. There is a significant increase in the post-treatment STAXI-2 scores on Anger Control (In and Out), when treated by homeopathy
8. There is a significant increase in the post-treatment STAXI-2 scores on Anger Control (In and Out), when treated by REBT.
9. There is a significant increase in the post-treatment STAXI-2 scores on Anger Control (In and Out), when treated by yoganidra.
10. There is a significant difference in the degree of effect of homeopathy, REBT
and yoganidra as compared to placebo in treating anger.

3.3 METHOD

This section describes the method employed to test the hypotheses framed to achieve the objectives of the study. This includes the description of the subjects included for the study, the tools included, the procedure that involved interventions, and the statistical procedure used to analyze the data obtained.

3.3.1 Subjects

The subjects for the present study were selected from homeopathic clinics in Pune. Over 200 patients were screened using STAXI-2. Out of these 120 patients, who scored high on STAXI-2 trait-anger score (T-Ang) scale were selected. These 120 (60 males and 60 females) patients met the inclusionary criteria, which were as follows:

- Age:- 25-35 year
- Education:- minimum level was bachelors degree, knowing adequate English.
- Class:- middle-class and upper middle-class
- Marital status:- Married
- Children:- having children
- Occupational status:- employed
- Physical complaints: (headache, changes in blood pressure, acid peptic disorder, etc) that have anger as their main causative factor.

3.3.2 Tools

A test, namely, STAXI-2, and case-history were used in this study. The State-Trait Anger Expression Inventory –2 (STAXI-2) by Spielberger (1999) was used to measure anger. This test consists of three parts: State-Anger, Trait-Anger, and Anger Expression. It consists of 57 item, six scales, and five subscales and an anger expression index. Six Scales:- 1) State Anger 2)Trait Anger 3) Anger Expression-Out 4)Anger Expression-In 5) Anger Control-Out and 6)Anger Control –In.

Five sub scales: 1) State Anger/feeling 2) State Anger/Verbal, 3) State Anger/physical,
4) Trait Anger/Temperament, 5) Trait Anger/Reaction. Alpha-coefficients were uniformly high across all scales and subscales: .84 or higher, median r=.88, except for the 4-item T-anger/R subscales for normal adults which was .76 and .73, for normal females and males, respectively.

The inventory consists of three parts: Part-1 consists of item numbers 1 to 15 on State-Anger (expression), Part-2 consists of item numbers 16 to 25 on Trait-Anger (frequency) and Part-3 consists of item numbers 26 to 57 on the Anger Expression Index. The cut off point used for the present study were the mean and SD of trait-anger used by Konwar (2004):

\[
\text{Mean} + 1 \text{SD: For Males} = 20.92 + 4.9 = 25.82; \text{Females} = 19.94 + 4 = 23.94
\]

So all those males who recorded a score above 25.82(26) and females who scored above 24 on trait anger were included in this study.

Case History: This includes, age, sex, address, occupation, marital status, family history, history of patients past illness, origin, duration and progress of the present complaint, personal history (diet, sleep, dreams, thirst, stool, urine, perspiration, etc), general examination (pulse rate, blood-pressure, temperature, etc), and systemic examination (Appendix A).

### 3.3.3 Procedure

The procedure involved 3 stages: pre-intervention, intervention and post-intervention.

#### 3.3.3.1 Pre-intervention

Over 200 patients were screened using STAXI-2 by Spielberger (1999) at the outpatient department of homeopathic clinics in Pune. 120 of these, who met the criterion of being high on trait-anger of STAXI-2 scale, that is, above the cut-off point used to obtain the high scores on Trait-Anger, where Mean + 1SD, for Males = 20.92 + 4.9 = 25.82 and for Females = 19.94 + 4 = 23.94, as used by Konwar (2004), were retained for therapy. Konwar’s (2004) norms were prepared on Indian sample from Pune city, therefore, the means and SD’s were used for the identification of patients in the present study. The present researcher also collected the data from 662 patients (males=340 and
females=322) from Pune city and the obtained means and SD’s (males=21.41+4.89=26.30 and females=20.47+4.85=25.32) were comparable to Konwar’s (2004).

These 120 also had health complaints arising from anger, where anger was one of the main causative factors. The STAXI-2 scores of these 120 selected subjects were recorded as pre-intervention anger scores. These 120 patients were assigned to one of the four groups in a serial order; namely, patient 1 was assigned to homeopathy group, patient 2 to REBT group, patient 3 to yoganidra group and patient 4 to control group. Thus, patients 5, 6, 7, and 8 were assigned to homeopathy, REBT, yoganidra and control groups, respectively, and so on, till each group had 30 patients. Case histories of all 120 patients were noted.

The patients in homeopathy group were assigned to a homeopathic doctor, who was unaware of the research study. The patients in REBT group were assigned to the present investigator, who was trained in REBT. The patients in yoganidra group were assigned to a doctor who presented yoganidra session through a recorded audio-cassette, exclusively made by a yoganidra expert for the treatment of anger. The doctor was advised to switch on and off the cassette in the beginning and the end of the session, respectively. All 120 patients were provided individual treatment in their groups.

The patients in the control group, that is, the fourth group, were not subjected to any treatment. Their pre-treatment STAXI-2 scores were recorded and were given placebo every time they came on their scheduled visit. This was continued till the end of two months from the commencement of treatment, in which they completed their 10 visits.

### 3.3.3.2 Homeopathy as Intervention

One group of 30 patients was assigned to a homeopathic doctor. He took detailed case histories of patients as per principles of homeopathy. He was unaware of the research process. He was informed that every patient should complete 10 visits in 2 months, with an interval of 4 days between two consecutive visits. No other suggestion concerning the STAXI-2 scores or homeopathic medicines to be used were given. The homeopathic doctor took help of this pattern of history taking: present complaint in
detail, past history of any illness, family history, personal history inclusive of diet, appetite, thirst, desires, aversions, sleep, dreams, perspiration, aggravation, amelioration, etc. Symptoms from the psychological aspect have a considerably higher role than those from the physical aspect in homeopathy, e.g., which is the happiest moment, most depressed moment, how does he/she interact (family, friends, office), what makes him/her weep, how does he/she weep, what makes him angry, how does he express his anger, what are the complaints he gets from anger, etc. In other words, the homeopath explores every aspect of personality of the patient, physical as well as mental. Even significant others related to patient were interviewed (when required) to collect information. After proper scrutiny the selected homeopathic medicine was administered to the patient. The homeopath reported to the investigator when the required duration of two months was over and then the STAXI-2 was administered again to the patient by the researcher.

3.3.3.3 REBT as Intervention

This treatment was given to 30 patients, individually. An introductory session was conducted in the beginning, which gave an insight to the patient about REBT. They were explained how REBT functions. It was also explained that REBT was an active directive therapy, in which the client has to play an active role to solve his problems. The goals of the therapy were decided by keeping their problems in view. The therapy was divided into 3 phases as assessment, rational-emotive working, and termination. The first phase of assessment included understanding the client’s problems and concentrating on the underlying irrational beliefs. These irrational beliefs were the actual reason for the client’s anger. Those problems which where of great concern were given priority. This was the phase where the client’s problems were split into ABC. The clients were made to understand that ‘A’ (activating agent) was not the real cause of ‘C’ (consequence). But it was ‘B’ (belief system), which was responsible for C. It was clarified to the client that these iBs (irrational beliefs) are the causes of C. With the help of disputational strategies the clients were convinced that by changing irrational beliefs to rational beliefs they can get rid of their emotional disturbances. The clients understood that their awfulizing, low frustration tolerance and absolutistic demands had no relevance to their anger.
In the second phase of treatment, through rational emotive working the clients were made to identify and replace their irrational beliefs with the rational beliefs. In this phase the techniques learned by the clients were cognitive, emotive and behavioral with the help of which they could solve their problems. By the end of the second phase the clients got further emotional insight.

The final stage was of termination of REBT was where the therapist inquired if there were any problems which needed solution. Evaluation was made on the basis of information recorded during each session of REBT, based on which it was evaluated that the clients had got some understanding of the actual causes, that is, the irrational beliefs that caused their emotional disturbances.

3.3.3.4 Yoganidra as Intervention

To keep the variable constant yoganidra was given through a recorded cassette exclusively recorded by a yoganidra expert for the treatment of anger. The task of conducting the yoganidra treatment to all 30 patients individually was given to a doctor, who played the role of a monitor. She was also given a brief explanation of how yoganidra works. She was unaware of the purpose of the research project. She was asked to start the cassette at the beginning and switch it off at the end of the session with each patient. She was advised to take care of any interference or disturbance during every session, throughout the period of 2 months. Appropriate precautions were taken to ensure that all patients in the group completed 10 visits with an interval of 4 days between two consecutive visits during the two months. Duration of each session was of 35 minutes. English and Marathi versions of yoganidra instructions were used according to the choice of patient, which was kept constant throughout the duration of intervention. The yoganidra therapy was provided at the hospital in Pimpri, a township adjacent to Pune city. The description of yoganidra is given in Appendix-B.
3.3.3.5: Post-Intervention

At the end of 10 visits over a period of 2 months in their respective groups, STAXI-2 was given to every patient by the investigator. These scores were recorded as post-treatment STAXI-2 scores.

3.3.4 Statistical Analysis

MANOVA (that is multivariate analysis of variance) with Scheffe’s post-hoc test was used to find out the comparative efficacy of homeopathy, REBT and yoganidra in the treatment of anger. MANOVA deals with the condition where there are more than one dependent variable and one or more independent variables. With the help of MANOVA means, SD’s and t-values for each dependent variables (i.e. post-test scores) after respective treatments were evaluated. Then with the help of post-hoc test comparison was done between homeopathy, REBT and yoganidra. Placebo was kept as control or reference group. Dunnette’s post-hoc test helps in performing multiple comparisons between the four groups.

3.4 SUMMARY

This chapter presented the operational definitions of the concepts. It also included the hypotheses formulated, the method used to test the hypotheses, sample, the tools used, the procedure of intervention and the statistical analysis, namely, MANOVA, employed.