

## **CHAPTER III**

### **METHODOLOGY**

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The procedure pertaining to ‘Management of Stress and Depression and Enhancement of Well-being in Kidney Patients through Positive Therapy’ involved the following steps:

- Objectives
- Research Questions
- Null Hypotheses
- Area
- Sample
- Tools
- Procedure
- Analysis of data

### **OBJECTIVES**

- To find out the causes of kidney failure in the selected kidney failure patients.
- To find out the symptoms of the sample.
- To identify the causes of stress of the sample.
- To assess the level of stress of the sample.
- To find out the effect of Positive Therapy in the management of stress of the sample.
- To study the causes of depression of the sample.
- To assess the level of depression of the sample.
- To find out the effect of Positive Therapy in the management of depression of the sample.

- To assess the well-being of the sample.
- To find out the influence of Positive Therapy on the well-being of the sample.
- To identify the negative emotions of the sample.
- To find out the effect of Positive Therapy on the negative emotions of the sample.

## **RESEARCH QUESTIONS**

- What are the causes of kidney failure?
- What are the symptoms of the sample?
- What are the causes of stress of kidney patients?
- What is the level of stress of kidney patients?
- What is the effect of Positive Therapy in the management of stress of the sample?
- What are the causes of depression of kidney patients?
- What is the level of depression of kidney patients?
- What is the effect of Positive Therapy in the management of depression of the sample?
- What is the level of well-being of the sample?
- What is the effect of Positive Therapy in the enhancement of well-being of the sample?
- What are the negative emotions of the sample?
- What is the effect of Positive Therapy on the negative emotions of the sample?

## **NULL HYPOTHESES**

Hypotheses are stated as null hypotheses so that they can be either accepted or rejected, based on the results.

- a. There is no stress in kidney patients.
- b. Positive Therapy does not have any effect on the level of stress in kidney patients.
- c. There is no depression in kidney patients.
- d. Positive Therapy does not have any effect on the level of depression in kidney patients.
- e. The well-being in kidney failure patients is not affected.
- f. Positive Therapy does not have any effect on the well-being of kidney patients.
- g. Kidney failure patients do not experience negative emotions.
- h. Positive Therapy does not have any effect on the negative emotions of kidney patients.

## **AREA**

Sri Ramakrishna Hospital, Coimbatore, Tamil Nadu, was selected to conduct the research. The reasons for selecting this area are as follows:

- a. Easy accessibility as the hospital is situated within the city limits.
- b. Willingness of the hospital authorities to grant permission and provide the necessary facilities to conduct the action research.
- c. Availability of the required sample.
- d. Co-operation of the patients to serve as subjects in the action research.

## **SAMPLE**

Thirty two patients, with kidney failure and who had just started dialysis, were selected by ‘Purposive Sampling’ method. “Purposive sampling is a non-probability sampling in which, the investigator selects the elements to be included in the sample, on the basis of their special characteristics” (Kothari, 2000). The main characteristic for selection of the sample was kidney failure. Out of 32 subjects, 20 were male and 12 were female. The sample was in the age range of 28- 55 years. With regard to education, majority of them had passed matriculation. Except one male subject, all were married. Majority of the subjects were from nuclear families and were from urban areas. All the subjects were assigned to the experimental group.

## **TOOLS**

To collect information from the respondents, the methods of interview, case study and psychological testing were used. The tools used were as follows:

1. Case Study Schedule (Hemalatha Natesan, 2003) (Appendix 1)
2. SI (Stress Inventory) (Hemalatha Natesan and Nandini Menon, Revised, 2005) (Appendix 2)
3. BDI (Beck Depression Inventory) (Beck, 1971) (Appendix 3)
4. WBI (Well-being Index) (WHO, 1998) (Appendix 4)
5. Positive Therapy Handbook (Hemalatha Natesan, 2004)
6. Relaxation Therapy Cassettes (Hemalatha Natesan, 2000)
7. Case Study Re-assessment Schedule (Hemalatha Natesan, 2003) (Appendix 5)

**The Case Study Schedule** (Hemalatha Natesan, 2003) was tailor-made for the present study on kidney patients. The schedule has 3 parts. Part I was designed to collect the personal details of the subjects such as name, age, sex, family background,

educational qualification, occupation, income etc. Part II consisted of checklists for stress, depression and negative emotions. Part III included items on the causes of stress and depression as perceived by the subjects, their negative and recurrent thoughts, information about their illness, its duration and treatment undertaken. The Case Study Schedule supplements the Stress Inventory and Beck Depression Inventory in assessing the data needed from the selected kidney patients.

**SI (Stress Inventory)** was constructed and standardized by Hemalatha Natesan and Nandini Menon in 2003. It was revised in 2005. SI has 40 items, each followed by alternatives 'Sometimes' and 'Usually'. The average time taken by an individual to complete the test is 10 minutes. The test can be administered individually or in groups. The inventory addresses the physiological, emotional, cognitive and behavioural symptoms of stress in four parts. Scoring is done by giving one mark to each 'usually' response. Sum of all the scores is the total score of the subject. The scores of the subjects in Stress Inventory can be interpreted by referring to the norms. The SI has high validity (0.80) and reliability (0.95).

**BDI (Beck Depression Inventory)** original version was introduced by Beck in 1961. The BDI was revised in 1971 and made copyright in 1978. Both the original and revised versions have been found to be highly correlated (0.94). The BDI is a 21 item self-report rating inventory measuring characteristic attitudes and symptoms of depression. Scoring is done by adding up the score for each of the 21 questions. The highest score on each of the 21 questions is 3, the highest possible total for the whole test is 63 and the lowest possible score is zero. The scores of the subjects in BDI can be interpreted by referring to the norms given by the author.

A score below 4 is possible denial of depression, faking good; this is below usual scores for normals. A score over 40 is significantly above even severely

depressed persons, suggesting possible exaggeration of depression; possibly characteristic of histrionic or borderline personality disorders (Stinton, 2005).

The BDI takes approximately 10 minutes to complete, although clients require a V or VI grade reading age to adequately understand the questions. Internal consistency for BDI ranges from 0.73 to 0.92 with a mean of 0.86. BDI demonstrates high internal consistency, with alpha coefficients of 0.86 and 0.81 for psychiatric and non-psychiatric populations, respectively.

Craven (2006) examined the agreement of BDI with DSM-III diagnoses of depression in a sample of renal dialysis subjects ( $n = 99$ ). A threshold of greater than or equal to 15 on the BDI produced optimal sensitivity (0.92), negative predictive value (0.99) and maximized Youden's index of validity (0.72) for the use of the BDI as a screening device for depressive syndromes in dialysis patients.

**WBI (Well-being Index)** (WHO, 1998) was derived from a larger rating scale developed for a WHO project on quality of life in patients suffering from diabetes. During the first psychometric evaluation, 10 of the original 28 items were selected due to the homogeneity they had shown across the various European countries participating in the study. Because positive psychological well-being has to include positively worded items only, these 10 items were then reduced to five items.

Each of the five items is rated on a 6-point Likert scale from 0 (not present) to 5 (constantly present). The theoretical raw score ranges from 0 to 25 and is transformed into a scale from 0 (worst thinkable well-being) to 100 (best thinkable well-being). Thus, higher scores mean better well-being. The raw score is obtained by adding the figures in the boxes in the questionnaire. The score range is from 0 to 25. It is recommended to administer the Major Depression (ICD-10) Inventory if the raw

score is below 13 or if the patient has answered 0 to 1 to any of the 5 items. A score below 13 indicates poor well-being and is an indication for testing for depression under ICD-10. In order to monitor possible changes in well-being, the percentage score is used. The percentage value is obtained by multiplying the score by 4. A 10% difference indicates a significant change (<http://www.who-5.org/> 2007).

In a study conducted by Bonsignore et al (2001), the internal validity of the well-being index was evaluated by calculating Loevinger's and Mokken's homogeneity coefficients. The scale was sufficiently homogeneous (Loevinger's coefficient: version 1 = 0.38, version 2 = 0.47; Mokken coefficient > 0.3 in nearly all items). ROC analysis showed that both versions adequately detected depression. Version 1 additionally detected anxiety disorders, version 2 being more specific for detection of depression. The second version is a stronger scale and was more specific for the detection of depression. The WHO-5 is an useful instrument for identifying elderly subjects with depression.

**Positive Therapy Handbook** (Hemalatha Natesan, 2004) describes in detail, the procedure involved in Positive Therapy, a package which combines the Eastern techniques of Yoga and the Western Techniques of Cognitive Behaviour Therapy. The strategies of the therapy are described clearly and crisply in simple language. With the help of the Handbook, even a layman can practice Positive Therapy. Stating the merits under each of the techniques is a merit of the Handbook. The Handbook throws light on the problems that can be treated by Positive Therapy and the researches conducted to prove the efficacy of Positive Therapy in different areas of human endeavour. The Handbook on Positive Therapy is an asset to students, teachers, psychologists, psychiatrists and researchers.

**Relaxation Therapy Cassette** (Hemalatha Natesan, 2000) is the audio version of Relaxation Therapy involving Deep Breathing, Relaxation Training and Autosuggestion in the author's own voice. It is always advisable to listen to and follow the instructions in the cassette as it keeps away the person from distractions and ensures complete relaxation of the body. One can carry the cassette anywhere and relax using it at anytime. One can even use it in public places as it would not interfere with the activities of the people around.

**Case Study Re-assessment Schedule** (Hemalatha Natesan, 2003) is similar to the Case Study Schedule (Hemalatha Natesan, 2003) except for the deletion of Part I. Case Study Re-assessment Schedule has Part II with checklists for symptoms of stress, symptoms of depression and negative emotions and Part III for collecting information on the subjects' negative and recurrent thoughts and also information about their illness and the treatment undertaken.

## **PROCEDURE**

From Sri Ramakrishna Hospital, Coimbatore, Tamil Nadu, 32 patients with renal failure, who had just started on dialysis were selected by Purposive Sampling method. There were 20 male and 12 female in the age range of 28-55 years. To begin with, rapport was established with each of the subject, after which, the Case Study Schedule, Stress Inventory, Beck Depression Inventory and Well-being Index were administered (Assessment I) on the entire sample, individually.

### **Treatment- Positive Therapy**

All the subjects were given the psychological intervention called, Positive Therapy (Hemalatha Natesan, 2004). It is a package based on the Eastern techniques

of Yoga and Western techniques of Cognitive Behaviour Therapy. It has four strategies, Relaxation Therapy, Counselling, Exercises and Behavioural Assignments.

### **Relaxation Therapy**

One cannot be tensed and relaxed at the same time. In the counselling sessions, subjects respond better to therapy, when they are in a relaxed state. Hence, Relaxation Therapy is given as the first strategy in Positive Therapy. Relaxation Therapy involves three steps namely, Deep Breathing Practice, Relaxation Training and Auto Suggestion.

### **Deep Breathing Practice**

Deep Breathing Practice is usually given to the subjects in a sitting posture. As the subjects of this study were patients with kidney failure, Deep Breathing Practice was given in lying down posture. The subject was asked to lie down on the bed with the body straight. As breathlessness or difficulty in breathing is one of the symptoms found in most of the patients with kidney failure, they were asked to breathe in and breathe out gradually, at a pace comfortable for them, without any jerks and tension on the chest and shoulders while breathing. Deep Breathing Practice was given 5 times with the subjects' eyes open and 5 times with their eyes closed.

### **Relaxation Training**

After Deep Breathing Practice, Relaxation Training was given to the subjects when they were still in lying down posture. They were asked to lie down with the head straight, lips slightly apart, hands comfortably placed on the sides, palms facing upwards and legs stretched, with feet, one foot apart. The subjects were asked to close their eyes and have a folded handkerchief placed on the eyes to ensure complete darkness. The subjects were given the following instructions:

“Breathe in slowly----Breathe out gradually-----” (This was repeated thrice).

“Now, concentrate on the top of the head”. “Breathe in slowly---breathe out gradually--Top of the head, relax--”

This was repeated thrice, followed by the suggestions: \* “Now, the top of the head is light and relaxed, no thoughts, no fears, no worries, no tension, no stress, no pain. Top of the head is light and relaxed, top of the head is light and relaxed, top of the head is completely relaxed. Breathe in slowly----Breathe out gradually-----”.

Similar instructions (\*) were given to the other parts of the body in the order given below:

- Back of the head
- Forehead
- Eyes
- Mouth
- Neck and shoulders
- Back
- Chest
- Stomach
- Hands and
- Legs

The following directions were given to the subjects when they were in a relaxed state:

- Inhale GOOD HEALTH. Breathe out all the aches, pains and sicknesses from the body.
- Inhale HAPPINESS. Breathe out all the worries from the body.

- Inhale POSITIVE THOUGHTS. Breathe out all the negative, useless thoughts from the body.
- Inhale STRENGTH. Breathe out all the weaknesses from the body.
- Inhale COURAGE AND CONFIDENCE. Breathe out all the fears from the body.
- Inhale SUCCESS. Breathe out failures and fears of failures from the body.
- Inhale LOVE. Breathe out hatred and anger from the body.

### **Autosuggestion**

The subjects were asked to continue to have deep breathing, enjoying the relaxed state when the following autosuggestions were given (3 times each):

“I am healthy

I am happy

I love everyone; everyone loves me

I am bold and confident

I can achieve what I want

I enjoy my work

I can face my problems boldly and solve them successfully

I can undergo dialysis comfortably

I can tolerate the pain

I am becoming healthier day by day

All my vital organs are functioning well

I will undergo kidney transplantation successfully

Today is an excellent day; I will enjoy every minute of this day

Thank you God, for giving me all that I need - long life, good health, wealth, happiness and success”.

Thus Relaxation Therapy was given to all the subjects individually, either before or after dialysis.

### **Counselling**

In Positive Therapy, Counselling involves the following techniques:

- Rational Emotive Therapy
- Thought Stopping
- Symptom Stopping
- Cognitive Restructuring and
- Assertiveness Training

In the present study, the following techniques were used:

### **Rational Emotive Therapy**

The irrational beliefs and thoughts of the subjects were as follows:

- “I will never get better”
- “My symptoms will never let me lead a normal life; my life is doomed”
- “I am a burden to everyone”
- “I can never enjoy life; I am bogged down by the pains of my illness”.

These irrational thoughts were refuted by appealing to their reason. They were asked to observe the large number of out patients and in patients in the Nephrology Department of the hospital, who came with a lot of trust in the modern healthcare system. They were also asked to have a strong conviction that they are receiving the

best of the medical care and that their positive state would act complimentary to the treatment they were receiving. This, in turn, helped them to be positive and realistic and face their problems boldly. It was observed that the family members of the kidney patients also had stress and depression as the patients. So counselling was given to the family members who came as attendants with the subjects.

### **Cognitive Restructuring**

In this, the subjects were helped to replace their negative thoughts with positive thoughts. The subjects were asked to breathe in slowly and breathe out gradually; they were asked to say, “I am getting good treatment; my health is improving”. The same procedure was followed for all the following statements:

- I can manage the symptoms
- I love everyone; everyone loves me
- I have a good future, free of pains

The subjects were asked to strongly believe that they had acquired all the positive qualities and start behaving accordingly. Thus they were helped to get rid off their negative, self-defeating thoughts and develop positive, self-enhancing thoughts.

### **Behavioural Assignments**

The subjects were told that Positive Therapy is complimentary to the medical treatment that they received at the hospital, to become holistically healthy. To have motivation to adhere and comply with the medical treatment and to have continuity in Positive Therapy, the subjects were asked to have the following Behavioural Assignments:

- Always have positive thoughts and be cheerful.
- Have positive attitude towards self, life, others and treatment.
- Strictly follow the medication, diet and exercise prescribed by the physician.
- Have deep breathing in the midst of tiring treatment schedule.
- Live in the present, concentrate on and enjoy what you do.
- Share your thoughts with family members and friends. Find some support group when you come regularly for dialysis.
- Practice deep breathing for 5 minutes in the morning, facing East and 5 minutes in the evening, facing West.
- Practice Relaxation Training for 20 minutes in the morning, before breakfast and at night, before going to bed.
- Have sound sleep for 7-8 hours a day.

### **Time and Duration of Positive Therapy**

Many models for the delivery of treatment were piloted, at the outpatient psychology service, at the dialysis center on nondialysis days and before or after the patients' dialysis. Because of patients' medical severity and treatment burden, adding another weekly outpatient appointment was onerous and intervening. So, it was planned to give Positive Therapy before and after dialysis.

The duration of each session was 40 - 50 minutes. Eight sessions were given to each subject, individually. Four sessions were given before dialysis and 4 sessions, after dialysis. The subjects had 2-3 dialyses in a week. The subjects were also asked to practice Relaxation Therapy daily at home. The subjects were provided with Cassettes on Relaxation Therapy to help them practice the same at home.

### **Re-assessment**

After the completion of 8 sessions of Positive Therapy, the entire sample was re-assessed (Assessment II) using the Case Study Re-assessment Schedule, SI, BDI and WBI. The subjects were contacted individually on a regular basis to ensure

adherence to Positive Therapy. At the end of the 4th month, it was intended to have a re-assessment, on the entire sample to verify the sustained effects of Positive Therapy. But out of 32, only 30 subjects were available for Assessment III, as one patient had passed away due to a heart condition and another was not available after kidney transplantation. Hence, Assessment III was done on 30 subjects, using the same tools.

### **Experimental design**

The experimental design employed was, 'Before and after treatment without control group'. As it was expected that Positive Therapy would help the subjects who were kidney failure patients, it seemed less ethical to have a control group.

### **ANALYSIS OF DATA**

The data of the subjects in the 3 assessments were analyzed on the basis of the following:

- Causes of kidney failure
- Symptoms of the sample
- Causes of stress
- Level of stress
- Significance of difference between mean stress in the 3 assessments
- Causes of depression
- Level of depression
- Significance of difference between mean depression in the 3 assessments
- Level of well-being
- Significance of difference between mean well-being in the 3 assessments
- Negative emotions