

Effect of brief tailor-made modular psychological intervention on the management of depression in kidney patients

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From a hospital in Coimbatore, Tamil Nadu, 32 patients with renal failure, who had just started dialysis, were selected by Purposive Sampling method. There were 20 male and 12 female in the age range of 28-55 years. The entire sample was assessed using Case Study Schedule and BDI (Beck, 1971). A brief tailor-made modular psychological intervention was administered on the entire sample individually for 8 sessions, 4 sessions before dialysis and 4 sessions after dialysis. They were re-assessed using the same tools soon after 8 sessions of psychological intervention (Assessment II). The subjects practiced the psychological intervention using Relaxation Therapy CD. After 4 months, a follow up assessment, Assessment III was done using the same tools with Case Study Re-assessment Schedule. Only 30 subjects were available for Assessment III as one had passed away and one was not available after transplantation. Though the subjects had 'Moderate to Severe' depression in all the 3 assessments, the differences in mean BDI scores of the subjects (Assessment I=28.26, Assessment II=23.62 and Assessment III=20.56) were statistically significant, indicating a significant reduction in depression.

Keywords: renal failure, dialysis, brief tailor-made modular psychological intervention, depression

It is estimated that there are around 20 lakh patients with end stage renal disease in India, with around 1,00,000 new cases being diagnosed each year. According to WHO, over 2.5 crores of people in India are likely to develop serious kidney ailments in the next two decades (Deccan Herald, 2007). Health experts warn that the incidence of chronic kidney failure is poised to increase sharply as diabetes and hypertension, two of the major causes of kidney failure are rampant. The expensive nature of the treatment and the exploitative and illegal kidney racket are curses on the kidney patients. To make things worse, the disease brings with it, stress, depression and anxiety, which take a heavy toll on the psychological health of the patients. Thus, it becomes imperative that the patients and their families be given psychological counselling to help them cope with such debilitating conditions.

Depression impairs one's ability to adhere to disease management regimens, potentially worsening the course of the chronic illness (Ciechanowski, Katon & Russo, 2000; DiMatteo, Lepper & Croghan, 2000). In addition, depression reduces quality of life (Spitzer et al., 1995), and increases morbidity (Penninx et al., 1999), physical disability (Penninx et al., 1998), medical costs (Katon, Lin, Russo & Unutzer, 2003) and healthcare utilization (Katz, 1996). Treatments aimed at improvement of depressive symptoms, should take the multifaceted nature of depression combined with a chronic illness into account. Therefore, complex interventions are needed that allow for the multifaceted nature and the dependence on social context (Oakley, Strange, Bonell, Allen & Stephenson, 2006).

UT Southwestern Medical Center researchers (2009) have found that one in five patients with chronic kidney disease is depressed, even before beginning long-term dialysis therapy or developing end-stage renal disease. The study, based on a pool of 272 participants, was the first to examine the rate of depression among these patients using the Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM IV), which is considered the gold-standard in evaluating depression. It was also found that chronic kidney disease

patients with depression have poorer health outcomes than those without depression, even after adjusting for other factors that determine poor outcomes in these patients, such as other medical diseases, anemia and low albumin levels (UT Southwestern Medical Center, 2010).

Depression is an important target of psychological assessment in patients with end-stage renal disease because it predicts their morbidity, mortality, and quality of life. Duarte, Miyazaki, Blay and Sesso (2009) assessed the effectiveness of cognitive-behavioral therapy in chronic hemodialysis patients diagnosed with major depression by the Mini International Neuropsychiatric Interview (MINI). It was found that the intervention group which comprised of 41 patients who received 3 months of cognitive-behavioral therapy had significant improvements in the average scores of the Beck Depression Inventory overall scale, MINI scores, and in quality-of-life dimensions that included the burden of renal disease, sleep, quality of social interaction, overall health, and the mental component summary when compared to the control group of 44 patients who received the usual treatment offered in the dialysis unit.

It has been widely observed that the need for counselling is largely overlooked by the medical fraternity. The present action research was an attempt to highlight the immense need for acknowledging psychological counselling, complimentary to medical treatment of patients with kidney failure. It was also an attempt to help the selected kidney patients manage their depression using a tailor made brief psychological intervention, so that they can lead better lives.

Depression in Kidney Patients

Living on dialysis is a perpetual challenge requiring a demanding treatment schedule, dietary restrictions and changes in function and daily routine. While it may be difficult to discern the symptoms of depression from those of uremia, it is important to consider the possibility of depression since appropriate treatment can significantly improve the quality of life of the person with end-stage renal disease (Medifocus.com, Inc., 2007).

Depression can mimic the symptoms of many other illnesses. Symptoms of depression such as fatigue, poor appetite, impaired concentration and insomnia are also common features of chronic medical conditions, adding to the difficulty of deciding whether they are due to depression or to the underlying illness. For those with kidney disease or on dialysis, there could be physical contributors. For example, if a patient is feeling down because he/she is tired all the time, it may be due to anemia, which can be treated with medicines. By reviewing the symptoms and talking about what one is feeling with the doctor, he or she can determine if one is suffering from depression or if there is some aspect of kidney disease that should be treated (Heilman, 2007).

Common symptoms of depression include depressed mood or loss of interest in daily activities, persistent sadness that lasts more than two weeks, sense of hopelessness/helplessness, significant weight loss or weight gain, sleep disturbances (sleeping too much or not able to sleep), problems with concentration, pessimism, distorted thinking, apathy, feelings of worthlessness or guilt, fatigue or loss of energy, repeated thoughts of death or suicide, lack of interest in taking medications/staying on required healthcare regimen, missing doctor's appointments and exacerbation of chronic illness symptoms (Cleveland Clinic, 2007).

The prevalence of depression is thought to be 20-30% among dialysis patients. Depression is responsible for both behavioural and physiological processes that influences early mortality and therefore is considered a mortality risk factor in people with end-stage renal disease (Medifocus.com, Inc., 2007).

Depression can affect how the patients make decisions regarding the treatment. Since a patient on dialysis must be actively involved in the day-to-day treatment regarding fluid intake and diet, he/she must have a clear mind in order to make the best decisions. Depression can make them put off decisions or even purposely make unwise ones. The most dangerous feature of depression is that, if left untreated, it can lead someone to be suicidal (DaVita Inc., 2007).

In time, the acute nature of the illness may abate. But total recovery does not occur and the illness persists. There is a dawning awareness of everyone's part that the situation has become a chronic one. There will be no full recovery. There is so much uncertainty about the future that the patient may not be able to sleep at night and may seem restless and distracted during the day. The lack of an expectable future constitutes a major assault on one's self-image. The patient's anxiety often produces a stiffness or frozenness in dealings with others and oneself. There is a belief, usually partially justified, that no one can understand the devastation of the losses. Isolation most troubles patients who have been the most independent.

The family has often exhausted itself during the acute crisis stage. Family members may become aware that they are angry, fearful and disgusted about the sick member's situation. Both patient and family members retreat into themselves and their thoughts, now haunted by the knowledge that life may never be the same. Friends also tend to give out the idea of chronic illness is really terrifying to most people. After an initial burst of energy, some friends may find it too overwhelming a personal struggle to continue having contact with either patient or family. Some patients have been devastated by an apparent lack of concern shown by people for whom they care. This leads to difficulty in asking for help. The questions begin to surface during the isolation stage but actually they are part of everyday living for most chronically ill people (LeMaistre, 1999).

Objectives of the study

To study the causes of depression, level of depression and to find out the effect of psychological intervention on the sample.

Method

Participants

From a hospital in Coimbatore, Tamil Nadu, thirty two patients, with kidney failure and who had just started dialysis, were selected by Purposive Sampling method. 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.

Instruments

The Case Study Schedule 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 depression. Part III included items on the causes of depression as perceived by the subjects, their negative and recurrent thoughts, information about their illness, its duration and treatment undertaken.

BDI (Beck Depression Inventory, 1971) 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. 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). 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.

Relaxation Therapy CD is the audio version of Relaxation Therapy involving Deep Breathing, Relaxation Training and Autosuggestion.

Case Study Re-assessment Schedule is similar to the Case Study Schedule except for the deletion of Part I. Case Study Re-assessment Schedule has Part II with checklists for 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.

Brief tailor-made modular psychological intervention

The psychological intervention module had Relaxation Therapy involving Deep Breathing and Relaxation Training and Counselling involving Rational Emotive Therapy and Cognitive Restructuring and Behavioural Assignments.

Procedure

To begin with, rapport was established with each of the subject, after which, the Case Study Schedule and Beck Depression Inventory

were administered on the entire sample, individually. After this assessment, all the 32 subjects were given psychological intervention. 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 the techniques at home. After the completion of 8 sessions of psychological intervention, the entire sample was re-assessed (Assessment II) using the Case Study Re-assessment Schedule and BDI. The subjects were contacted individually on a regular basis to ensure adherence to psychological intervention. 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 psychological . 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 the psychological intervention would help the subjects who were kidney failure patients, it seemed less ethical to have a control group.

Table 1: Causes of Depression of the Sample (N=32)

S.No.	Causes	N	%
1	Helplessness and hopelessness due to the disorder	31	97
2	Dependence on others	27	84
3	Changes in lifestyle	26	81
4	Attitude of others	18	56

(Percentages are rounded off)

The helplessness and hopelessness due to the disorder was reported by the subjects as the foremost reason for being depressed, as revealed by Table 1. A positive attitude can contribute to anyone's good health. However, such an attitude can be difficult to develop and maintain when one is faced with a chronic kidney condition. Emotional reactions such as anger, sadness, frustration and fear add to the distress and suffering. When the negative emotions become overwhelming, depression sets in.

The fact that there is no real and permanent cure for chronic kidney disease is reinforced in patients through printed and visual media as found by Researchers at Medifocus (2007). This brings in helplessness and hopelessness in the patients. The Nephrologists too believe in letting the patients know about their health conditions. A few patients might accept their condition without much trouble. But most would consider that as a 'final word' from the physician.

Dependent nature of their lives after kidney failure made most of the subjects (84%) depressed. The entire sample of the study was undergoing dialyses twice a week. Each dialysis took about 3-4 hours. Most of the subjects expressed their displeasure about their attendants, usually their spouses or children, having to wait outside the dialysis unit for about 7 hours a week on an indefinite basis. As most of the subjects had retired from their jobs, they had to be dependent completely on their families for financial support. Though ours is not a culture that considers the aged parents as liabilities, unlike in the west, extended periods of over dependency do bring about a sense of uneasiness and frustration on both the subjects and the family members.

Changes in lifestyle caused depression in 81% of the subjects.

Adjusting to the effects of kidney failure and making drastic changes in their day-to-day activities was not easy. They had to make changes in the work or home life, giving up some activities and responsibilities. Keeping the same schedule they kept when their kidneys were working was very difficult now that their kidneys had failed. Many find the drastic changes in their diets unbearable, especially when they have had the habit of enjoying their food with family and friends. Many felt depressed while starting dialysis as well as after several months of treatment. They had to spend a lot of time on dialysis. Apart from the 'lost time', they had less energy. The physical changes that accompany the chronic kidney condition make them less attractive. This is of more serious concern for younger subjects. Depression, disability and chronic illness form a vicious circle. Chronic kidney disease can bring on bouts of depression, which, in turn, can lead to a progressively degenerating physical condition that interferes with successful treatment of the chronic condition.

More than half of the subjects (56%) were concerned about the attitude of others. Many subjects reported that their family members considered them as completely incompetent and dependent and never let them take any responsibilities. They felt that they were over protected and would never enjoy any freedom over any decisions any more. When asked for clarifications regarding this in the counselling session for the attendants, they reported that they were only concerned about the subjects. Some attendants reported that the subjects felt neglected when they were let to be on their own as it was before the diagnosis. Sometimes we are forced to infer that the negative attitudes of the subjects towards others are due to the cognitive distortions, which are typical of depression.

Table 2: Level of Depression of the Sample

Level of Depression	Before Psychological Intervention Assessment I (N=32)		After Psychological Intervention Assessment II (N=32) Assessment III (N=30)			
	N	%	N	%	N	%
Severe (30-63)	14	43	7	22	0	0
Moderate to Severe (19-29)	18	57	22	69	27	90
Mild to Moderate (10-18)	0	0	3	9	3	10
Normal (5-9)	0	0	0	0	0	0

(Percentages are rounded off)

In the present study, Beck Depression Inventory (BDI) was used to assess the level of depression in the subjects. Table 2 reveals that initially, the entire sample had either 'Severe' (43%) or 'Moderate to Severe' (56%) depression. It is sad to note that, none of them had 'Normal' or 'Mild to Moderate' depression.

Numerous studies have proved that patients with chronic kidney disease and diabetes are prone to depression. All the subjects of the study were undergoing hemodialysis, which imposes severe restrictions on the subjects and their family. The subjects are placed in a situation where they are totally dependent on a machine and medical personnel, two or three times a week. They need strict diet and daily medications. Water intake is reduced to minimum. The cost of the treatment is prohibitive and the loss of working days due to treatment adds to the financial stress. Depressed mood is a common occurrence in these subjects. This is understandable since depression commonly follows loss and these patients felt they had

lost their independence, strength and energy, in addition to their job.

It is gratifying to note that, in Assessment II, after Positive Therapy, depression came down to 'Mild to Moderate' level in 9% of the subjects and to 'Moderate to High' level in 69%. Only 22% continued to have 'High' depression. The subjects showed amazing improvement when re-assessed after 4 months (Assessment III). None of them had 'Severe' depression, 10% had 'Mild to Moderate' and the rest (90%) had 'Moderate to Severe' depression.

This improvement in mood can be attributed to the effectiveness of psychological intervention, which helped the subjects change their perceptions towards their illness, changed life styles and relationships. The subjects believed that depression is a part of the illness and that disability prevented them from enjoying life. Believing that depression is a necessary co morbid disorder is an example of 'dysfunctional thinking' and that belief was amenable to Cognitive Restructuring. The irrational thoughts of the subjects were:

"I will never get better"

"My condition is getting worse day by day"

"I am a burden to all"

"I will not get a compatible donor"

"I will die soon" etc.

The subjects were convinced that they were not gaining anything by having such negative thoughts but were only affected by them. Once the irrational, maladaptive, negative thoughts were identified, they were refuted and replaced by rational, adaptive, positive thoughts during the counselling sessions. For example, the negative thought, "I will never get better. My condition is getting worse day by day" was replaced by "With the help of modern technological developments in health care system, I am getting better day by day".

The subjects had met others undergoing dialysis but were not communicating with one another. As Behavioural Assignment, they were asked to talk to other patients who had dialysis along with them and form support groups and share their views, as sharing prevents suppression of fear, worry etc.

Table 3: Significance of Difference between Mean Depressions Before Psychological Intervention (BPI) and After Psychological Intervention (API)

Condition	N	Mean	SD	Critical Ratio
Assessment I (BPI)	32	28.26	3.40	*4.78
Assessment II (API)	32	23.62	4.34	
Assessment II (API)	32	23.62	4.34	*3.64
Assessment III (API)	30	20.56	1.82	
Assessment I (BPI)	32	28.26	3.40	*11.16
Assessment III (API)	30	20.56	1.82	

*Significant at 0.01 level

Table 3 shows the mean depression of the sample before (Assessment I) and after psychological intervention (Assessment II and Assessment III). As per the norms, the mean depression of the sample before and after psychological intervention is 'Moderate to Severe'.

The subjects became depressed as a result of having to struggle with the chronic stress of their chronic kidney condition. Constant difficulties came in the form of having to juggle multiple roles at home and work, undergoing painful medical procedures, making major changes in lifestyle, financial liabilities etc.

In studying how stressful events may lead to depression, researchers have developed a theory called, 'learned helplessness.'

This theory states that when people experience chronic or repeated stressful events, they learn to feel helpless. This feeling of helplessness is strengthened when a person believes he or she has no control over the stressful situation. Although the research to support this theory was initially done with animals, the effects of learned helplessness may be seen in depressed humans. People who are depressed very often have negative beliefs about their ability to manage aspects of their lives based on perceived failures in the past. This feeling of helplessness may make one vulnerable to developing clinical depression at some point in life. The same thing happens in the case of chronic kidney failure, when the person feels helpless and perceives the illness as something, which is not under his/her control (Price, 2004). The condition of the subjects of the present study too was very similar to this. The subjects reported of often having the feelings of helplessness.

It is heartening to note that there is a considerable reduction in the mean depression of the subjects after the psychological intervention. The mean differences in depression before and after treatment between the three assessments are statistically significant at 0.01 level.

Empirical Findings of the study

- The subjects had either 'Moderate to Severe'/'Severe' depression.
- The mean differences in depression between the 3 assessments were statistically significant. The brief tailor-made psychological intervention had proved to be effective in reducing depression significantly.
- The common causes of depression in the sample were helplessness and hopelessness due to the disorder, dependence on others and changes in life style.

Limitations of the study

Not all hospitals were willing to give permission to conduct action research, as they thought that it would interfere with their treatment procedure. So, the study had to be restricted to one hospital.

As the kidney patients were already strained with the long-term treatment procedures in the hospital, yet another few more hours of stay at the hospital for psychological intervention was not appreciated by many of them. Though they were told that they would benefit from the psychological intervention, many patients expressed their unwillingness to cooperate with the research. Even when patients were cooperative, the continuity in the psychological intervention could not be maintained as some of them had the dialysis done elsewhere. Even when the hospital authorities permitted, they insisted on a time limit for the study. So, the sample size had to be limited to 32.

Double-blind method of re-assessment was not possible as the subjects were not willing to comply with a new investigator. Photographs could not be taken as the subjects expressed their unwillingness to be photographed during psychological intervention. The dialysis process could not be videotaped, as the Management of the Hospital strictly prohibited it.

Recommendations

- In collaboration with WHO/ICMR, longitudinal research applying different modules of psychological intervention can be conducted on larger and representative sample for the management of psychological problems of chronically ill patients with CHD, CKD, cancer, essential hypertension and diabetes.

- Dialysis Units can educate kidney failure patients and their family members on the causes, symptoms, effects, treatment and risk factors of kidney failure.
- The Dialysis Units should employ social workers/psychologists trained in counseling techniques to counsel the kidney failure patients.
- As the nurses in the Dialysis Units have frequent contacts with the kidney failure patients, training them in counseling techniques would prove beneficial to the kidney failure patients in helping them deal with their emotional problems.
- Hospitals can conduct Workshops on psychological counselling to help kidney failure patients and their family members manage their depression and thereby enhance the quality of their lives.
- Research should also be done on the psychological interventions in vogue for the management of emotional problems in end stage renal patients.

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