CHAPTER IV

RESULTS AND DISCUSSION

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The study on the 'Management of Stress and Depression and Enhancement of Well-being in Kidney Patients through Positive Therapy' was conducted in Sri Ramakrishna Hospital, Coimbatore. Thirty two patients, 20 male and 12 female, with kidney failure, who had just started dialysis, were selected by 'Purposive Sampling' method. The methods adopted to collect the data included interview, case study and psychological testing.

The age of the sample ranged from 28 - 55 years. With regard to education, majority of them had passed matriculation. All were married except one male subject. Majority of the subjects were from nuclear families and were from urban areas.

The first assessment (Assessment I) of the entire sample using Case Study Schedule, SI, BDI, and WBI was done before the psychological intervention. The second assessment (Assessment II) using the same tools (instead of Case Study Schedule, Case Study Re-assessment Schedule was used) was done after the 8 sessions of Positive Therapy. At the end of the 4th month, the entire sample was re-assessed (Assessment III) using the Case Study Re-assessment Schedule, SI, BDI and WBI. Only 30 subjects were available for Assessment III, as one patient had passed away due to heart failure and another had undergone kidney transplantation and was not available for re-assessment.

The results of the study are analysed, tabulated and discussed below:

TABLE I

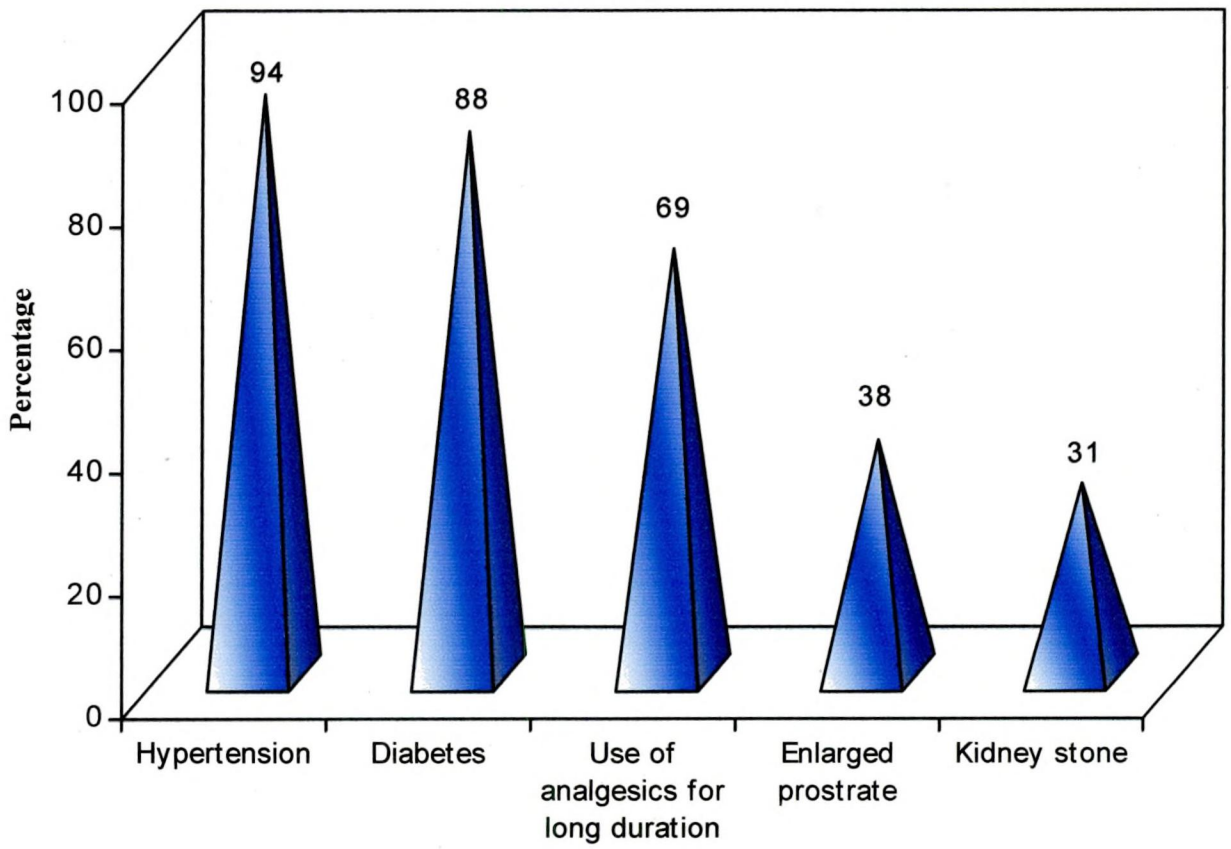
Causes of Kidney Failure of the Sample (N=32)

S. No.	Causes	N	%
1	Hypertension	30	94
2	Diabetes	28	88
3	Use of analgesics for long duration	22	69
4	Enlarged prostrate	12	38
5	Kidney stone	10	31

(Percentages are rounded off)

FIGURE I

Causes of Kidney Failure of the Sample (N=32)



"Nothing gives one person so much advantage over another as to remain always cool and unruffled under all circumstances"

Thomas Jefferson

In a study conducted by Goldin (2005) on chronic kidney disease patients, it was found that, high blood pressure (hypertension) was related to chronic kidney disease (CKD) in a number of ways. Hypertension can independently cause CKD, contribute to its development in the setting of other potential causes or even be the result of CKD. Regardless of the circumstances, hypertension was present in approximately 80 % of patients with CKD. Studies show that as kidney function worsens, the likelihood that a patient will have hypertension increases. Furthermore, the risk of having hypertension in CKD patients is increased with advancing age.

In the present study on Kidney patients, 30 out of 32 patients had hypertension, as shown in Table I. Most of the sample reported long history of hypertension. High blood pressure or hypertension occurs when the pressure of the blood against the walls of blood vessels increases. If uncontrolled or poorly controlled, high blood pressure can be a leading cause of chronic kidney disease. Also, chronic kidney disease can cause high blood pressure.

University of Pennsylvania (2006) researchers have discovered that diabetic kidney failure is triggered by the transforming growth factor-beta (TGF-beta) protein, which stimulates the development of scar tissue within the kidneys and ultimately prevents the kidney from properly filtering toxins.

In a study conducted by Agarwal (2005) on chronic renal failure patients in India, it was revealed that diabetes and hypertension are responsible for 40% to 50% of all cases of chronic renal failure.

The result of the study reveals that 88% of the sample had previous history of diabetes. One cause of kidney failure is diabetes mellitus, a condition characterised by high blood glucose levels. Over time, the high levels of sugar in the blood damage the millions of tiny filtering units within each kidney. This eventually leads to kidney failure. Around 20 to 30% of people with diabetes develop kidney disease (diabetic nephropathy or diabetic glomerulosclerosis), although not all of these will progress to kidney failure. A person with diabetes is susceptible to nephropathy whether insulin is used or not. The risk is related to the length of time the person has diabetes. There is no cure for diabetic nephropathy and treatment is lifelong. People with diabetes are also at risk of other kidney problems including narrowing of the arteries to the kidneys, called renal artery stenosis or renovascular disease. With diabetes, the small blood vessels in the body are injured. When the blood vessels in the kidneys are injured, the body will retain more water and salt than it should, which can result in weight gain and ankle swelling. As a result, one may have protein in the urine and waste materials too will build up in the blood. Diabetes also may cause damage to nerves in the body. This can cause difficulty in emptying the bladder and the pressure resulting from full bladder can back up and injure the kidneys. Also, if urine remains in the bladder for a long time, one can develop an infection from the rapid growth of bacteria in urine that has a high sugar level.

A study done by Sakhaee (2006) on chronic kidney patients revealed that the drug topiramate (Topamax), commonly prescribed to treat migraines and seizures, can boost users' risk of kidney stones. The widespread and escalating use of topiramate emphasizes the importance of considering the long-term impact of this drug on kidney stone formation. The study found that patients who took topiramate on a long-term basis (about a year) experienced systemic metabolic acidosis, a buildup of excessive

acid in the blood as a result of the inability of the kidney to excrete acid. Long-term use of topiramate also increased urine pH and lowered urine citrate, which inhibits kidney stone formation.

It was found that 69% of the sample of this study had resorted to analgesics for long and that was considered one of the reasons for their kidney failure. Over-the-counter analgesics include aspirin, acetaminophen, ibuprofen, naproxen sodium and others. These drugs present no danger for most people when taken in the recommended dosage. But some conditions make taking even these common painkillers dangerous for the kidneys. Also, taking one or a combination of these drugs regularly over a long period of time may increase the risk for kidney problems. Most drugs that can cause kidney damage are excreted only through the kidneys. Analgesic nephropathy is a chronic kidney disease that over years gradually leads to irreversible kidney failure and the permanent need for dialysis or a kidney transplant to restore renal function. Longstanding daily use of painkillers composed of two or more analgesics (particularly aspirin and acetaminophen together) with caffeine or codeine are most likely to damage the kidneys. These mixtures are often sold as powders or tablets. Recent studies have suggested that longstanding daily use of single analgesics such as acetaminophen or ibuprofen may also increase the risk of chronic kidney damage.

According to findings by Rule (2005), men who experience signs and symptoms of a prostate obstruction resulting from benign prostatic hyperplasia (BPH) are three times more likely than other men to develop chronic kidney disease.

In the present study, 38% of the subjects had enlarged prostate gland, which obstructed the free flow of urine. The prostate gland is located just below a male's bladder and surrounds the top portion of the urethra, the tube that drains urine from

the bladder. Growth of the prostate gland can lead to a bladder outlet obstruction and it can cause inability to or discomfort in emptying the bladder, a slowed stream of urine, frequent urges to void during the night or an enlarged, damaged bladder.

In a study done by Vupputuri et al (2004) it was revealed that kidney stones may play a role in the development of chronic kidney disease. Their study suggested that the prevention of kidney stones may be a means of delaying the onset of chronic kidney disease.

Among the sample of this study, 31% had kidney stones, which could have caused kidney failure. Kidney stones are one of the most painful of the urologic disorders. A kidney stone is a hard mass that develops from crystals that form in the urine and build up in the kidney. Kidney stones may contain various combinations of chemicals; the most common type contains calcium and either oxalate or phosphate. Urinary tract infections, as well as certain kidney and metabolic disorders are also linked to stone formation. Some rare hereditary diseases can also cause kidney stones. Other causes of kidney stones include gout, excess intake of vitamin D and blockage of the urinary tract. Certain diuretics or calcium-based antacids may increase the risk of forming kidney stones by increasing the amount of calcium in the urine.

In short, the most important causes of kidney failure of the sample were hypertension, diabetes, use of analgesics for a long duration, enlarged prostate and kidney stone.

TABLE II

Symptoms of the Sample

S. No.	Symptoms	Before Treatment Assessment I (N=32)		After Treatment			
				Assessment II (N=32)		Assessment III (N=30)	
		N	%	N	%	N	%
1	Oedima	31	97	_	_	20	67
2	Loss of appetite	31	97	_	_	20	67
3	Persistent sadness	31	97	26	81	10	33
4	Frequent urination	30	94	_	_	15	50
5	Headache	30	94	22	69	15	50
6	Anaemia	28	88	_	_	21	70
7	Vomitting	28	88	_	_	15	50
8	Irritability	28	88	20	63	16	53
8	Sleep disturbance	25	78	18	56	6	20
9	Low level of energy	25	78	20	63	7	23
10	Fatigue	24	74	20	63	8	27
11	Restless legs	22	69	_	_	13	43
12	Itching	22	69	_	_	12	40
13	Aches and pains	20	63	20	63	19	63
14	Social withdrawal	20	63	18	56	8	27

(Percentages are rounded off)

Table II shows the physical and psychological symptoms of kidney failure patients, who served as the subjects of the study. In the beginning of the study, the objective was to find the symptoms of the sample as kidney patients, symptoms of stress and depression. But eventually it was found that, some of the symptoms such as headache could be due to both the illness and stress; loss of appetite could be due to illness and depression. Hence, all the symptoms were clubbed together.

At the commencement of the action research, it was thought that the physical symptoms of the subjects were solely due to the poor condition of the kidneys, whereas, the psychological symptoms of kidney failure alone were expected to decrease with Positive Therapy. As the Assessment II was done soon after the administration of Positive Therapy for 8 sessions, only the psychological symptoms were re-assessed. With the progression of the research, it was observed that, there was a decrease in the number of subjects who experienced even the physical symptoms. So Assessment III was done after 4 months to find the long-lasting effects of Positive therapy on both the physical and psychological symptoms of the sample.

It was found that, initially, most of the subjects (97%) experienced oedima and loss of appetite. When the kidney fails, there is water retention in the body, which causes oedima. Loss of appetite is due to the accumulation of toxins in the body following kidney failure. Research done by Gregario et al (2002) revealed that persons with chronic kidney conditions have clinical manifestations of uremia such as oedima, poor appetite, nausea, vomitting, anemia and pruritis. Uremic syndrome consists of an array of complex symptoms and signs that occur when advanced kidney failure prompts the malfunction of virtually every organ system. However, the onset of uremia is slow and insidious, beginning with rather nonspecific symptoms such as malaise, weakness, insomnia and a general feeling of being unwell.

The research group at Healthy-Holistic-Living (2007) observes that chronic illness like kidney failure and depression go hand in hand. Depression is a natural part of dealing with a chronic illness. When the body is challenged physically, it often affects the brain chemicals, which can lead to depression. Not to mention that with a chronic illness a person is dealing with an avalanche of new experiences both physical and emotional that can affect the emotional health. Depression is an illness in itself and combined with other medical issues makes for a truly challenging situation. Researchers hold that persistent sadness is the hallmark of depression, especially in a person with chronic condition. In the present study too, as shown in Table II, 97% of the subjects reported of persistent sadness. The knowledge that there is no permanent cure for their condition was the main reason for the persistent sadness. The other reasons for sadness as reported by the subjects were that the illness affected them physically, psychologically and financially. Some even complained about their plight of not being able to drink enough water when they were thirsty. Some felt so helpless and hopeless that they even contemplated on discontinuing the treatment.

In the study conducted by Finkelstein and Finkelstein (2007) on depression in chronic dialysis patients, it was revealed that the syndrome of clinical depression consisted of the presence of a constellation of symptoms including anhedonia and feelings of sadness, helplessness, guilt, hopelessness etc. accompanied by changes in sleep, appetite and libido.

Medifocus (2007) also found that majority of the patients with end stage renal disease experienced feelings of helplessness, hopelessness, inadequacy and sadness. Loss of interest or pleasure in life, changes in appetite and sleep pattern, decreased energy and fatigue were also found in the patients.

Frequent urination was reported by 94% of the subjects. An infection of the bladder can lead to more serious infections further up the urinary tract. Symptoms include fever, frequent urination, sudden and urgent need to urinate and pain or a burning feeling during urination.

Studies done at Kidney Research, UK (2006) reveals frequent urination as one of the early signs of kidney failure. As the disease progresses, apart from frequent urination, the urine production is reduced, it has red tinge, has foamy appearance and offensive odour.

It was observed that headache was experienced by 94% of the subjects. Researchers at Kidney Research, UK (2006) identified headache as one of the initial symptoms of kidney failure. Physicians belonging to American Society of Nephrology (2006) observed that the drugs used to treat anemia can cause headache in chronic kidney disease patients. Headache could also be one of the symptoms of stress in chronic kidney disease. As analgesics were strictly prohibited by the nephrologists, patients would dare not take them for pain relief.

Many of the subjects of the study (88%) suffered from anemia and vomiting. One of the key functions of the kidneys is to assist with the production of red blood cells. The kidneys are responsible for producing a hormone called erythropoietin. This is the hormone, which stimulates red blood cell production. If kidney disease causes damage or shrinking of the kidneys, the production of red blood cells is affected.

Luthi et al (2006) in their extensive research on kidney patients found anemia as a common consequence of chronic kidney disease. In persons with kidney failure,

the urea in the gastric juices may upset the stomach and can lead to nausea and vomitting and eventually to malnutrition and weight loss.

Having a chronic illness means living within limits. Depending on severity, the limitations might be anywhere from about 50% to nearly total. In any case, the bottom line is that one cannot do as much as before or as much as a healthy person might. This made a large percentage (88%) of the subjects feel irritated. The subjects were irritated by the fact that they had a life long dependency on others and on dialysis. Sometimes, irritation was also due to the physiological effects of illness.

In a research conducted at Medifocus (2007), it was observed that upto 73% of persons with end-stage renal disease had difficulty in sleeping. Complaints included trouble falling asleep, numerous awakenings during the night and awakening after a few hours of sleep with inability to fall back to sleep. Underlying reasons may include issues such as restless legs syndrome (RLS) or periodic leg movements during sleep (PLMS), sleep apnea or depression.

It is of concern that 78% of the subjects had sleep disturbance. Many of the subjects' sleep patterns were disturbed by frequent urination and restless legs syndrome. Disturbance in sleep were also due to the negative and depressing thoughts that constantly run through their minds. When thoughts run rampant, the reticular activating system is activated continuously, thus keeping the person awake.

In a study done by Eduard et al (2004) aimed to measure the prevalence of 'poor sleep' in CKD patients and to examine the association between quality of sleep and the degree of renal impairment in the population, it was found that decreased quality of sleep is common in dialysis patients and is associated with decreased health-related quality of life.

Weakness and increased fatigue experienced by 84% of the patients of this study may be due to anemia, malnutrition and sleeplessness. When the physiological, psychological and sociological effects of chronic kidney condition bog down the subjects, they are bound to feel weak and fatigued. Khullar (2006) found lack of appetite, anemia, weakness, irritation and vomitting as some of the symptoms of kidney failure.

Restless leg syndrome was reported by 69% of the subjects. The subjects felt an uncomfortable sensation in their legs and were compelled to move them. Some people reported itchy feeling, while others reported crawling or 'creepy' sensation. Restless leg syndrome can also be painful, like burning, aching or pricking. Some health conditions that are associated with restless leg syndrome are nerve damage from diabetes, chronic kidney disease and iron deficiency or lack of erythropoietin.

Extensive studies done at National Institute of Neurological Disorders (2007) observed that people with low iron levels or anemia might be prone to develop restless leg syndrome. Once iron levels or anemia is corrected, patients may see a reduction in symptoms. Research also revealed that chronic diseases such as kidney failure and diabetes could also cause restless leg syndrome. More recently, studies have shown that restless leg syndrome may be associated with low levels of parathyroid hormone.

Itching was reported by 69% of the sample. Phosphorus, which is eliminated in the urine, accumulates in the blood of patients with kidney failure. The build up of phosphorus levels may cause the skin to itch. Many people treated with hemodialysis complain of itchy skin, which is often worse during or just after treatment. Itching becomes worse by wastes in the bloodstream that current dialyzer membranes cannot remove from the blood.

Research done by Nordal (2007) identified itching as one of the most distressful and sometimes disabling symptom of persons with chronic kidney failure. It was also revealed that several cytokines that may contribute to development of the disease are released during haemodialysis. Optimal quality of the dialysis is important; well dialysed patients seem to experience less itching. In a study to ascertain the clinical significance of physical and emotional symptoms in patients who are on maintenance hemodialysis, Weisbord et al (2005) found that dry skin, fatigue, itching and bone/joint pain each were reported by > or =50% of patients.

Aches and pains were experienced by 63% of the subjects. Aches and pains of joints and muscles are the symptoms of kidney failure. Further, the treatment procedures of kidney disease are such that they give a lot of stress and pain to the patients. Body pain is common in persons with anemia. Aches and pains could also be the symptoms of stress.

Studies by Gregario et al (2002) revealed that metabolism of calcium and phosphorus is abnormal in patients with chronic kidney disease and is associated with the development of bone disease. Patients with such a condition experience severe body pain and also pain in the joints and muscles.

Social withdrawal found in 63% of the subjects reveals the combined effects of their poor health condition and the symptoms of depression. The constrains imposed by the illness can be difficult to accept, leading to a vicious cycle of 'push and crash'. Intense symptoms forced them to rest, but as symptoms waned, frustration increased. Frustration had compelled them to do more than their bodies could sustain, which led to another crash. Further, the many losses brought by illness triggered powerful feelings such as anger in response to the fact that life had changed for no apparent reason. They also felt guilty, blaming themselves for becoming sick or being

a burden on others. So they had tendencies to avoid contacts and communication with others and keep to themselves, ruminating the negativities of life.

It was heartening to note that, after 8 sessions of Positive Therapy, in Assessment II, there was a marked decrease in the number of the subjects experiencing most of the symptoms that were assessed. The numbers still decreased considerably in Assessment III with regard to almost all the symptoms except one, that is, aches and pain.

Relaxation Therapy involving Deep Breathing Practice, Relaxation Training and Autosuggestion had helped the subjects get relieved off the symptoms of stress. Many of the subjects reported that the dialyses done just after the Relaxation Therapy sessions were 'different' in the sense that they could feel a sense of relaxation and calmness, which helped them even sleep peacefully during dialyses.

In the counselling sessions, it was found that most of the subjects had negative and critical self-evaluation. They considered themselves responsible for their condition and thought that they deserved only unhappiness. Such thoughts fed low self-esteem and sense of failure in them. Since they considered unworthy of any happiness in life, they expected only negative outcomes of the treatment. They ruminated the past and considered themselves responsible for everything that went wrong in their lives. They evaluated their entire life experiences as negative. Their thoughts were almost always negative. These made their beliefs about themselves, their future and others, negative. Using the technique of Rational Emotive Therapy, the irrational, maladaptive, negative thoughts and beliefs of the subjects were discussed and refuted with facts by appealing to their reason. Cognitive Restructuring helped in replacing their negative cognitions with positive ones. This helped the subjects view the emotional impact of the illness in a different way and

thereby feel less sad and less fatigued. When they could change their attitude, they felt socially less withdrawn. As most of the patients were senior citizens, they also had the maturity and openness to face the stark realities of life.

We find that, the symptom that had responded well with the psychological intervention was persistent sadness. Sadness is considered one of the characteristic features of depression. It is often the result of self-pity, low self-esteem and a sense of hopelessness and helplessness. These feelings decreased due to change in their attitudes and perception after undergoing Positive Therapy, thereby minimizing their sadness. When the subjects were less sad with fewer negative thoughts, their sleep patterns improved, saving much of their energy, making them less fatigued and reducing the episodes of headache. Frequent urination, which is due to the kidney failure, also had decreased due to the combined effects of the medical treatment and the psychological intervention. As the mental health of the subjects had improved, they were socially less withdrawn and less irritable.

Oedima, loss of appetite and vomitting reduced when the subjects responded better to the medical treatment with regular practice of Positive Therapy. Itching, restless leg syndrome and anaemia also had decreased, but not much when compared to other symptoms. This is clearly an indication that, these symptoms have more to do with the physiological aspects of kidney failure.

Unfortunately, the same percentage (63%) of subjects continued to have the symptom of aches and pains in all the 3 assessments. Probably, the aches and pains were due to kidney failure. It can also mean that the subjects continued to report of aches and pain to get the secondary gain of seeking attention.

TABLE III

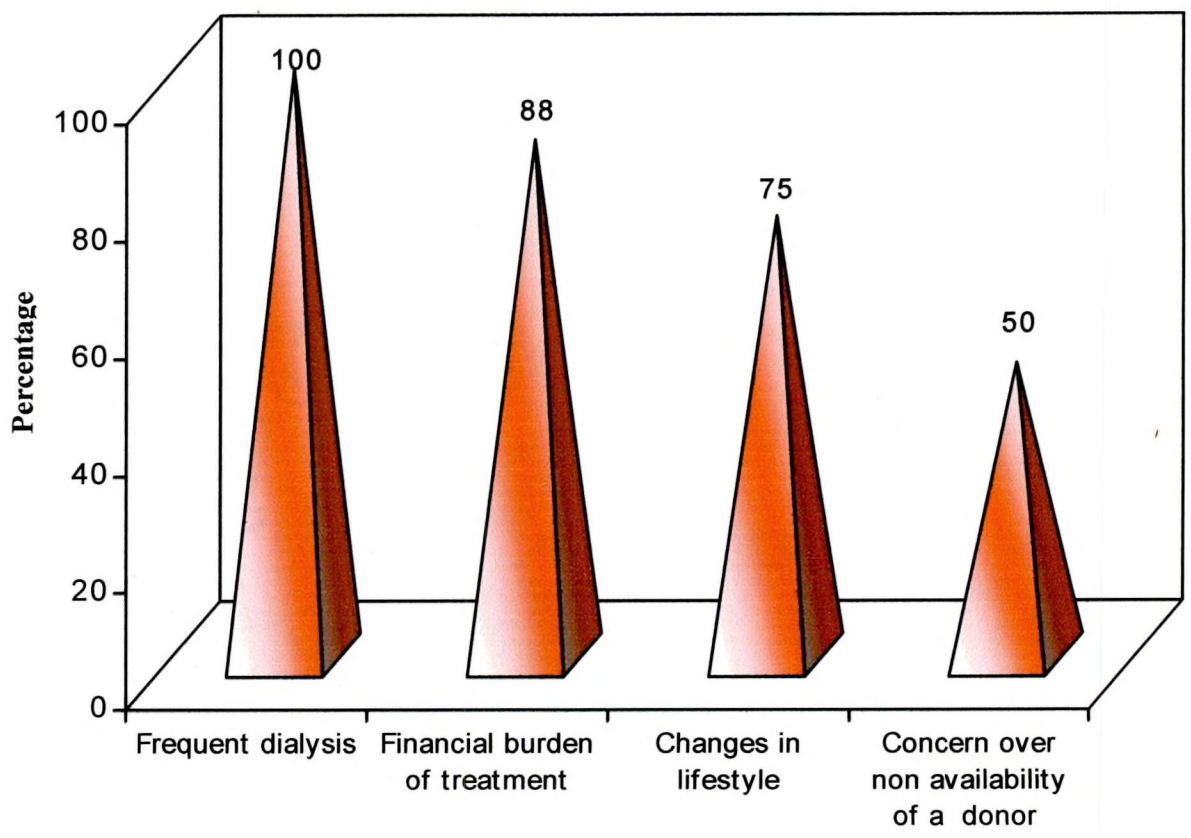
Causes of Stress of the Sample (N=32)

S.No.	Causes	N	%
1	Frequent dialysis	32	100
2	Financial burden of the treatment	28	88
3	Changes in lifestyle	24	75
4	Concern over non availability of a compatible donor for transplantation	16	50

(Percentages are rounded off)

FIGURE II

Causes of Stress of the Sample (N=32)



"Slowing the mental chatter while neutralizing the emotional clatter and stress allows the high speed refined intelligence of intuition to be heard. The heart has the power to neutralize runaway mental missiles and disarm the emotional stress grenades"

Childre and Cryer

Being ill causes great stress because sickness is painful and tiresome. Unfortunately, stress, in turn, can make symptoms worse. Even moderate amount of stress can greatly intensify symptoms, creating a feedback loop in which, symptoms and the patients' reactions to them intensify one another.

In a study done by Cristavao (1999) on 75 patients aged 18-65 years and on regular hemodialysis for at least for one year, it was found that patients perceived high levels of stress and that psychosocial stressors are as problematic as the physiological ones.

Table III clearly shows that the entire sample (100%) had stress due to dialysis. They felt that the visits were affecting their day-to day ways of life. The fact that the attendants (usually their spouses or children) had to sacrifice their time and energy waiting outside the dialysis unit gave them a lot of tension.

The results of the study are in line with that of Gurklis and Menke (1995) who, based on 129 haemodialysis patients in the age range of 20 to 87 years, found that perceived stressors were physiological complications, psychosocial concerns about haemodialysis and restrictions.

In an investigation done by Mani (1997) on the annual expenditure of dialysis, it was found that, haemodialysis at hospital entails an annual expenditure of about Rs.1.75 lakhs; haemodialysis at home requires an initial cost of Rs.4.5 lakhs and a recurring cost of Rs.1 lakh a year; a CAPD home unit entails an initial expenditure of

about Rs.10,000 but the annual recurring expenditure varies from Rs. 1.5 lakhs to Rs. 4.5 lakhs, depending on the specific unit.

Financial burden of the treatment had caused of stress in 88% of the sample of this study. Just as one's prognosis for improvement is affected by the severity of the chronic disease, it is affected also by one's life circumstances, especially the finances and the support one has. Some of the patients had ESI coverage for their treatment. A few were financially well off to meet the medical expenses. For some, financial pressures were overwhelming; meeting the expenses of dialysis twice a week was an ordeal. A few even revealed that they had missed some dialysis, as they were unable to manage the expenses.

Changes in life styles were the cause of stress for 75% of the sample. Some of the cases of the study had taken voluntary retirement from their jobs due to illness, some had retired and a few still had their careers. Those who were on jobs were irregular at their work due to the pain and discomforts of the illness and the time-consuming medical procedures. Some patients reported the changes in diet as something they could never accept but had to comply. Some patients expressed concern over the low protein diet, which had affected their physical appearances, making them less attractive.

In a study conducted by Fadem (2005), it was found that changes in life style, after the diagnosis of chronic kidney failure, causes undue stress and depression in many patients. Most often this results in non-adherence and non-compliance to treatment and dietary regimen.

Hemodialysis and peritoneal dialysis are treatments that help replace the work the kidneys did. These treatments help one feel better and live longer, but they do not

cure kidney failure. Although patients with kidney failure are now living longer than ever, over the years, kidney disease can cause problems such as heart disease, bone disease, arthritis, nerve damage, infertility and malnutrition. These problems would not go away with dialysis. Transplantation is the closest thing to a cure. Though transplantations are not devoid of complications, transplanted kidney works like a normal kidney, there are only fewer diet restrictions, one need not continue with dialysis and those who successfully go through the selection process, have a higher chance of living a longer life. For these reasons, many, especially younger and well-to-do subjects would prefer to go for transplantation.

Non-availability of compatible donors for transplantation caused stress in 50% of the sample. When the patients said 'compatible', a few meant the medical aspects of being physiologically compatible and a few meant that they could not meet the financial requirements insisted by the donors and the expenses of the transplantation procedure. Further, with the news of exposure of kidney sale racket involving tsunami survivors in some private hospitals in Madurai and Chennai and several such cases, the subjects were quite apprehensive about the ethical issues and the legal issues of transplantation.

On the whole, the main causes of stress of the sample were frequent dialysis, financial burden of the treatment, changes in lifestyle and concern over non-availability of a compatible donor for transplantation.

TABLE IV

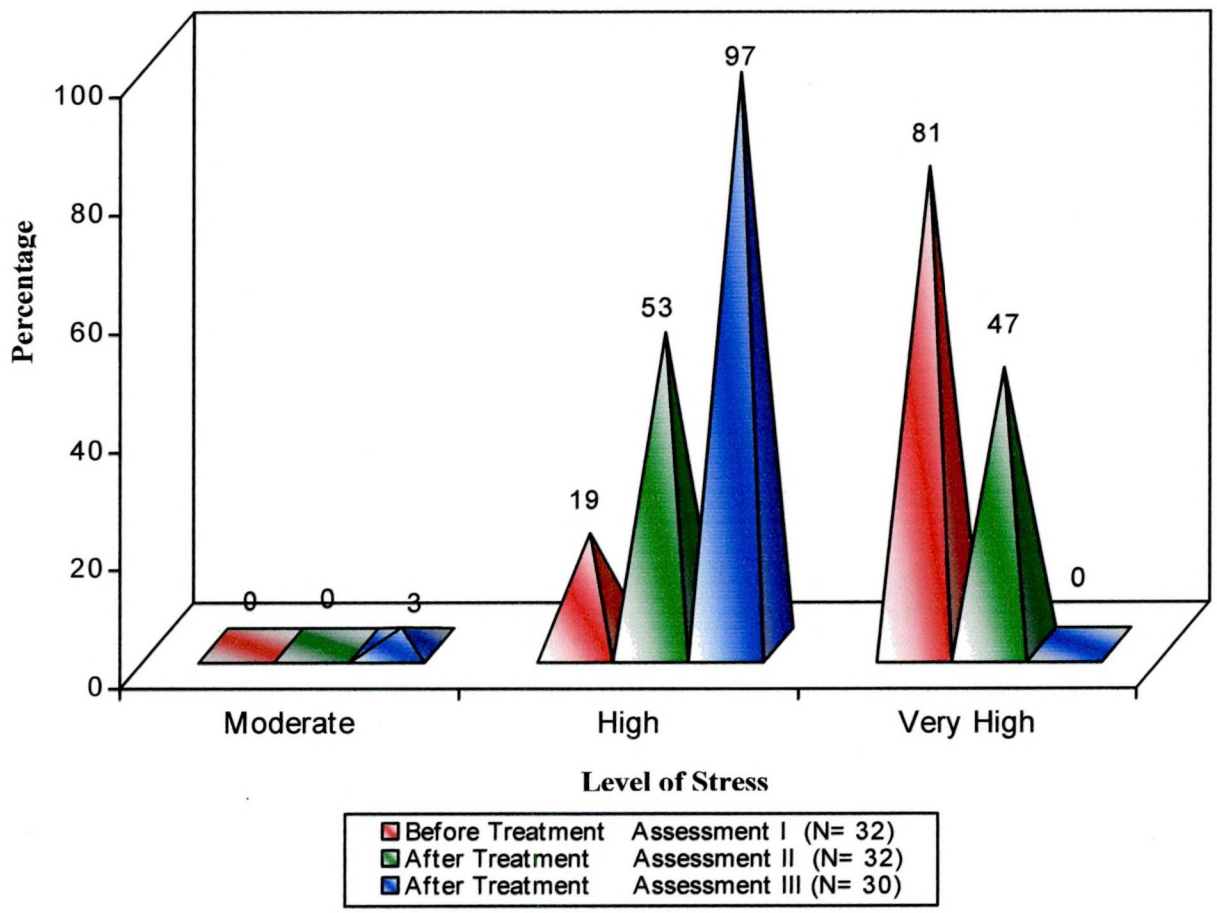
Level of Stress of the Sample

Level of Stress	Before Treatment		After Treatment			
	Assessment I (N=32)		Assessment II (N=32)		Assessment III (N=30)	
	N	%	N	%	N	%
Very High (20 and above)	26	81	15	47	0	0
High (10-19)	6	19	17	53	29	97
Moderate (5-9)	0	0	0	0	1	3

(Percentages are rounded off)

FIGURE III

Level of Stress of the Sample Before and After Treatment



"The mind acts like an enemy for those who do not control it"

Bhagavad Gita.

Research conducted by McClellan (2001) on emotional trauma and stress associated with renal disease proved that end stage renal disease (ESRD) is an irreversible, progressive loss of renal function that results in emotional trauma as with any natural disaster such as fire, flood, earthquake, accidents, war, bombings and life-threatening disease. It requires artificial methods of hemodialysis, peritoneal dialysis or transplant, which require learned coping skills.

Table IV reveals that the kidney failure patients who served as the sample were under tremendous stress. Most of the sample (81%) had 'Very High' stress and the remaining (19%) had 'High' stress. Before the treatment, none of the subjects had even 'Moderate' level of stress. Hence, the Null Hypothesis, 'There is no stress in kidney patients' is rejected.

When one becomes ill, one might think that one had come down with a lingering short-term illness, another temporary interruption of life. But at some point, one realizes that one had entered a new realm: the world of chronic illness, a confusing labyrinth in which all the rules of life have been changed and there is no obvious way out. Instead of resuming one's previous life after a brief interruption, one is faced with the prospect of adjusting to a different life. The specific causes of stress have already been discussed under Table III.

It is satisfying to note that, after 8 sessions of Positive therapy, only 47% had 'Very high' stress and the rest (53%) had 'High' stress in Assessment II. It is amazing to note that in Assessment III none of the subjects had 'Very high' stress; 3% had 'Moderate' stress and the rest (97%) had 'High' stress. Fear of death is the most important cause of stress. As the sample was kidney patients, they were aware that kidney failure is a chronic illness, which cannot be cured. This is the

reason probably the subjects continued to have high stress inspite of the psychological intervention. Probably, if Positive Therapy were given for a longer duration, it would have helped to bring down the stress further.

In the course of time, many subjects had befriended whom they met during dialyses and that acted as their support group. A study done by Patel et al (2005) demonstrated that social support is associated with improved outcomes and improved survival in end stage renal disease. The mechanism by which social support exerts its salutary effects are unknown, but practical aid in achieving compliance, better access to health care, improved psychosocial and nutritional status and decreased levels of stress may all play key roles. Social support can be obtained from family, friends, coworkers, spiritual advisors, health care personnel or members of one's community or neighborhood.

Deep Breathing Practice, done before Relaxation Training, ensures the intake of oxygen to the optimum level. Similarly, breathing out slowly helps release carbon dioxide to the maximum level. As the focus is on the breathing, unwanted and stressful thoughts are eliminated, helping the person to relax. Deep Breathing Practice also improves thinking and reasoning. The physiological responses to stress are easily controlled by Deep Breathing Practice. Relaxation Training that follows deep breathing ensures complete relaxation of the whole body from head to foot, which facilitates physical and mental relaxation. It helps the subject to get rid of stress, mute the effects of stress on the immune system and increase the level of stress tolerance.

Thus we find that, the combined effect of the compliance and adherence to medical treatment, dietary regimen and the regular practice of Positive Therapy helped the subjects cope better with the stresses in their lives.

TABLE V

Significance of Difference between Mean Stress

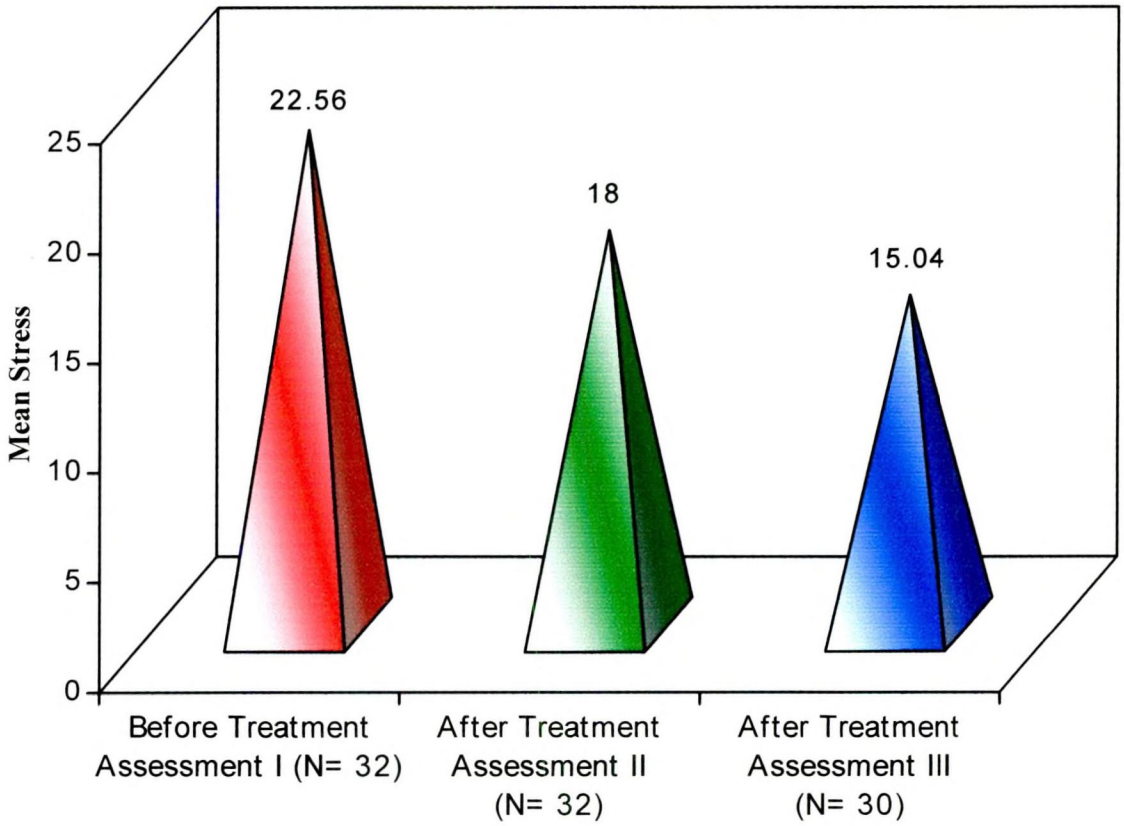
Before Treatment (BT) and After Treatment (AT)

Condition	N	Mean	Standard Deviation	Critical Ratio
Assessment I (BT)	32	22.56	2.6	*6.35
Assessment II (AT)	32	18	2.34	
Assessment II (AT)	32	18	2.34	*4.29
Assessment III (AT)	30	15.04	3.02	
Assessment I (BT)	32	22.56	2.6	*10.59
Assessment III (AT)	30	15.04	3.02	

*Significant at 0.01 level

FIGURE IV

Mean Stress of the Sample Before and After Treatment



"A man who suffers or stresses before it is necessary,
suffers more than is necessary"

Seneca

Table V shows the mean stress of the sample, before and after the treatment. As per the norms, the mean stress of the sample is 'Very High', before the treatment.

A study by Kumar (2003) on 50 end stage renal disease patients also revealed that they had high stress.

One of the main causes of stress is change. A person with renal failure will have to deal with more changes than most people do. Not just the initial change of lifestyle that comes with the diagnosis, but ongoing change as one deals with alterations in the diet, medication and forms of treatment. All these changes will mean that one has to take in a great deal of new information, make decisions and learn new practical skills. One also has to adjust to new ways of doing things, doing less than one would like to do and asking for help. This is all extremely stressful and it comes in addition to coping with the physical effects of kidney failure.

It is gratifying to note that, though the subjects continued to have 'High' stress after the psychological intervention, there is a considerable reduction in the mean stress of the subjects in Assessment II and III, as shown in Table V. The differences in mean stress before (Assessment I) and after the treatment (Assessment II and Assessment III) are statistically significant at 0.01 level. The reduction in the mean stress can be attributed to the effect of Positive therapy involving Relaxation Therapy, Counselling and Behavioural Assignments. Therefore, the Null Hypothesis, 'Positive Therapy does not have any effect on the level of stress in kidney patients' is rejected.

The subjects practiced Relaxation Training regularly and that helped them have a positive state of mind throughout the day. The Relaxation Therapy given to them before dialyses helped them have stress-free dialysis. The subjects were asked to lie down still, after the Relaxation Training, focussing on and enjoying the relaxed state. They were told that such a state with total awareness and relaxation is akin to a meditative state.

Regular practice of Deep Breathing and Relaxation Training helped the subjects combat the initial edginess and stress. The subjects were educated on the need for adherence to dialysis and the prescribed dietary regimen. They were asked to think rationally about the advantages of having dialysis in order to ward off the toxins and fluid accumulation in the body. After counselling, they could understand that without dialysis they have nausea, oedima and loss of appetite. While having dialysis, they were asked to have deep breathing and tell themselves that, by the process of dialysis, their bodies are cleansed and they felt light, fresh and energetic. Rational Emotive Therapy and Cognitive Restructuring were helpful in reducing the subjects' worry, anxiety and fear regarding the debilitating nature of their condition. Though their physical health condition continued its own course, the perception of the subjects towards the illness had changed, resulting in an attitude of acceptance with awareness.

King (2006), who studied the mental health in chronic kidney disease patients, had also found that Relaxation Training brings positive effects upon the stress responses to illness.

TABLE VI

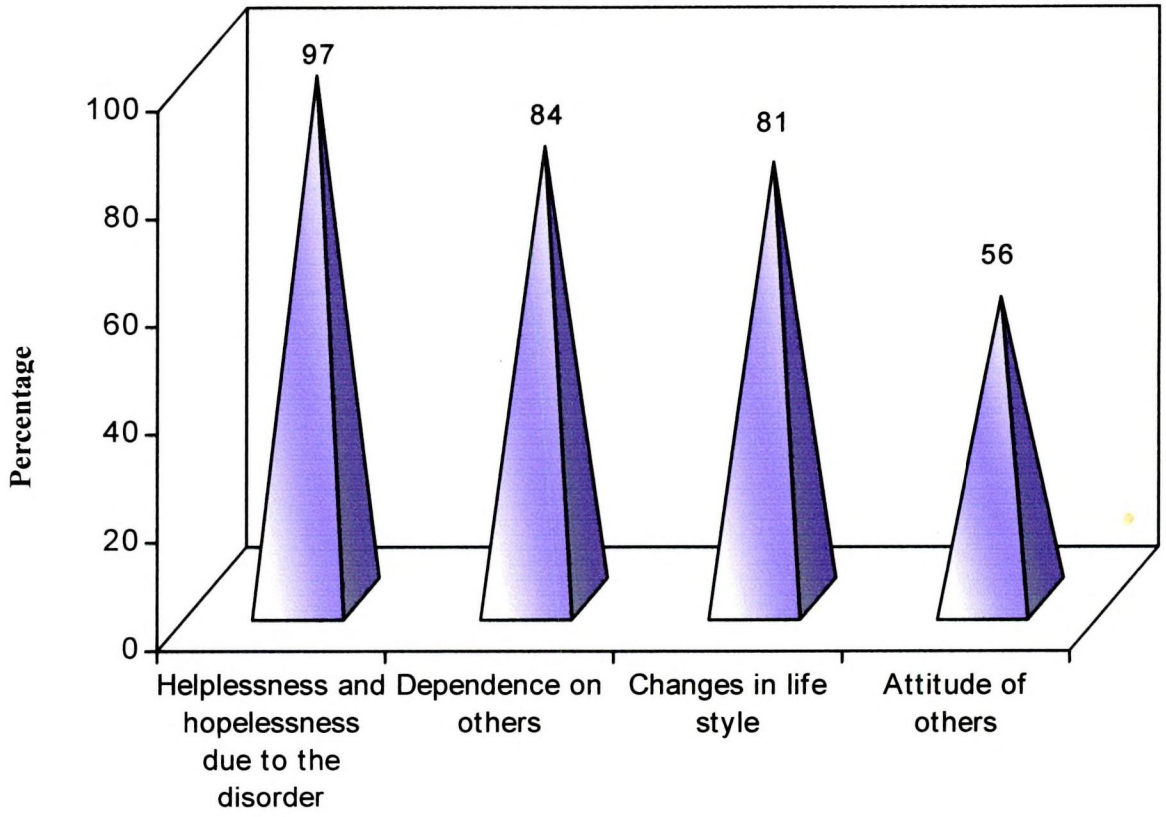
Causes of Depression of the Sample (N=32)

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)

FIGURE V

Causes of Depression of the Sample (N=32)



"We must accept finite disappointment
But we must never lose infinite hope"

Martin Luther King

A WHO study has examined data on 2,50,000 patients in 60 countries and found that on a scale of 0 to 100, with zero indicating worst health and 100 indicating the best, sufferers of depression had an average score of 72.9. Experts believe that one in every four adults will suffer from depression sometime in their lifetime and in 2000, scientists rated depression as having the fourth greatest public health impact. It was found that depression is not only emotionally debilitating but physically damaging too than many chronic diseases. One finding is that people who suffer from depression along with a chronic disease fare worse than if they only had the physical condition. The study identified high levels of co-morbidity and the depressed patients were less able to manage their physical ailments (ABC, 2007).

The helplessness and hopelessness due to the disorder was reported by the subjects as the foremost reason for being depressed, as revealed by Table VI. 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. In a study exploring the perceptions of patients with diabetes and kidney failure, Ravenscroft (2005) observed their psychosocial issues as dependency, burden, fear, loss, uncertainty, depression and guilt.

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.

Ravenscroft (2005) observed that the attitudes of significant others were considered crucial by the patients as most of them were financially, socially and emotionally dependent on their families.

TABLE VII

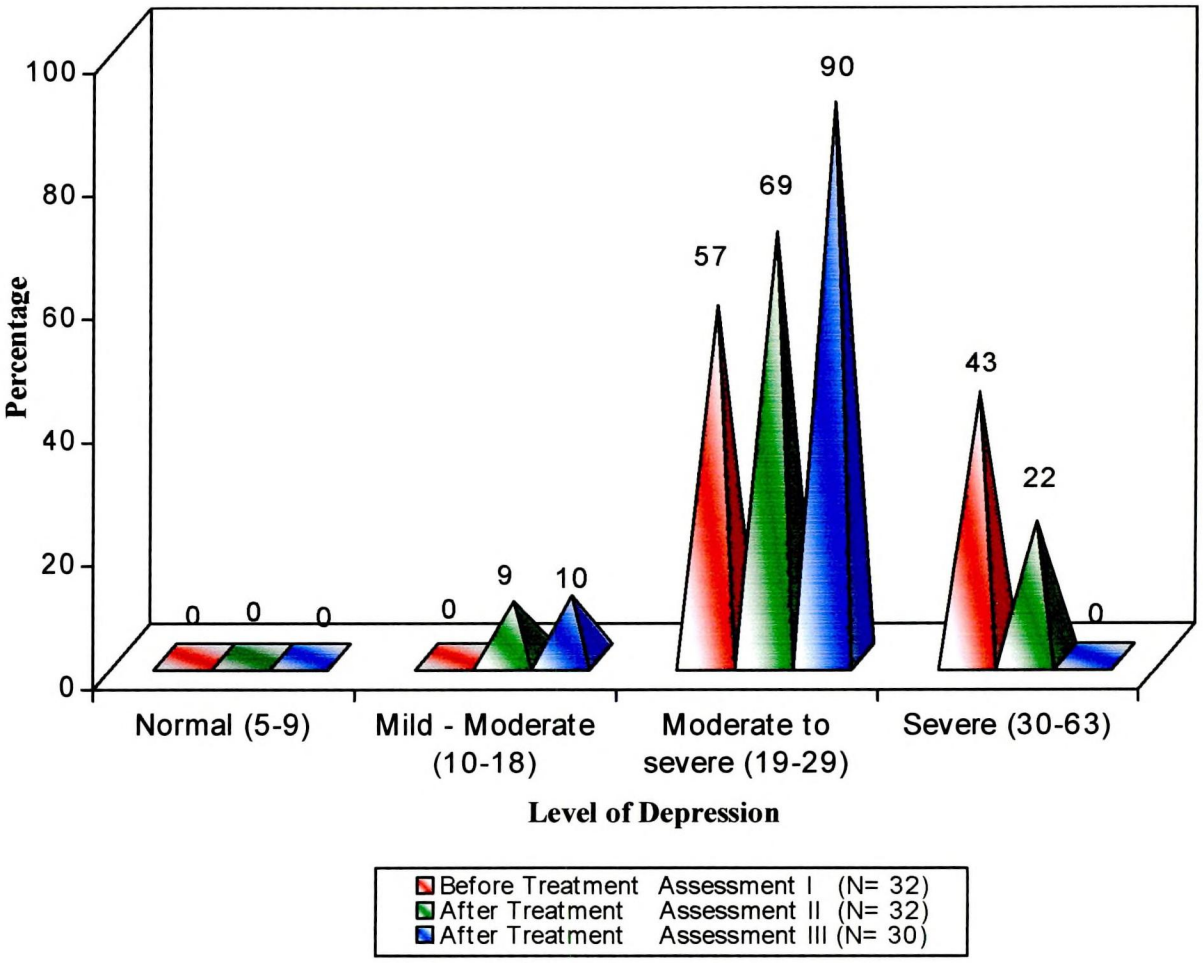
Level of Depression of the Sample

Level of Depression	Before Treatment Assessment I (N=32)		After Treatment			
			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)

FIGURE VI

Level of Depression of the Sample Before and After Treatment



"Depression loses its power when fresh vision pierces the darkness"

Peter Sinclair

The study done by Finkelstein and Finkelstein (2000) had proved that BDI is an easily administered questionnaire that is a useful screen for potentially treatable clinical depression in chronic kidney disease patients. In the present study, Beck Depression Inventory (BDI) was used to assess the level of depression in the subjects. Table VII 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. So, the Null Hypothesis, 'There is no depression in kidney patients' is rejected.

In a study done by Tossani et al (2005), it was found that major depressive disorder (MDD) is a highly prevalent disease, frequently characterized by recurrent or chronic course and by comorbidity with other medical illnesses. They also observed that MDD worsens the prognosis, quality of life, treatment compliance of patients and the outcome of kidney disease patients by increasing both morbidity and mortality.

As we know, a considerable percentage of subjects (88%) of the study suffer from diabetes. Numerous studies have proved that patients with chronic kidney disease and diabetes are prone to depression. In a cross-sectional comparative study done by Nizam et al (2005), it was found that the diabetic patients with kidney disease have 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 Positive Therapy, 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 comorbid disorder is an example of 'dysfunctional thinking' and that belief was amenable to Cognitive Restructuring, a technique used in Positive Therapy. 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".

Research studies by Sagawa et al (2001) proved that Cognitive Behavior Therapy helps chronic hemodialysis patients cope more effectively with problems by providing a framework of thinking and behaving, which enables them to lead more fulfilling lives.

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.

In short, the different strategies of Positive Therapy helped the subjects manage their depression effectively.

TABLE VIII

Significance of Difference between Mean Depression

Before Treatment (BT) and After Treatment (AT)

Condition	N	Mean	Standard Deviation	Critical Ratio
Assessment I (BT)	32	28.26	3.40	*4.78
Assessment II (AT)	32	23.62	4.34	
Assessment II (AT)	32	23.62	4.34	*3.64
Assessment III (AT)	30	20.56	1.82	
Assessment I (BT)	32	28.26	3.40	*11.16
Assessment III (AT)	30	20.56	1.82	

*Significant at 0.01 level

FIGURE VII

Mean Depression of the Sample Before and After Treatment

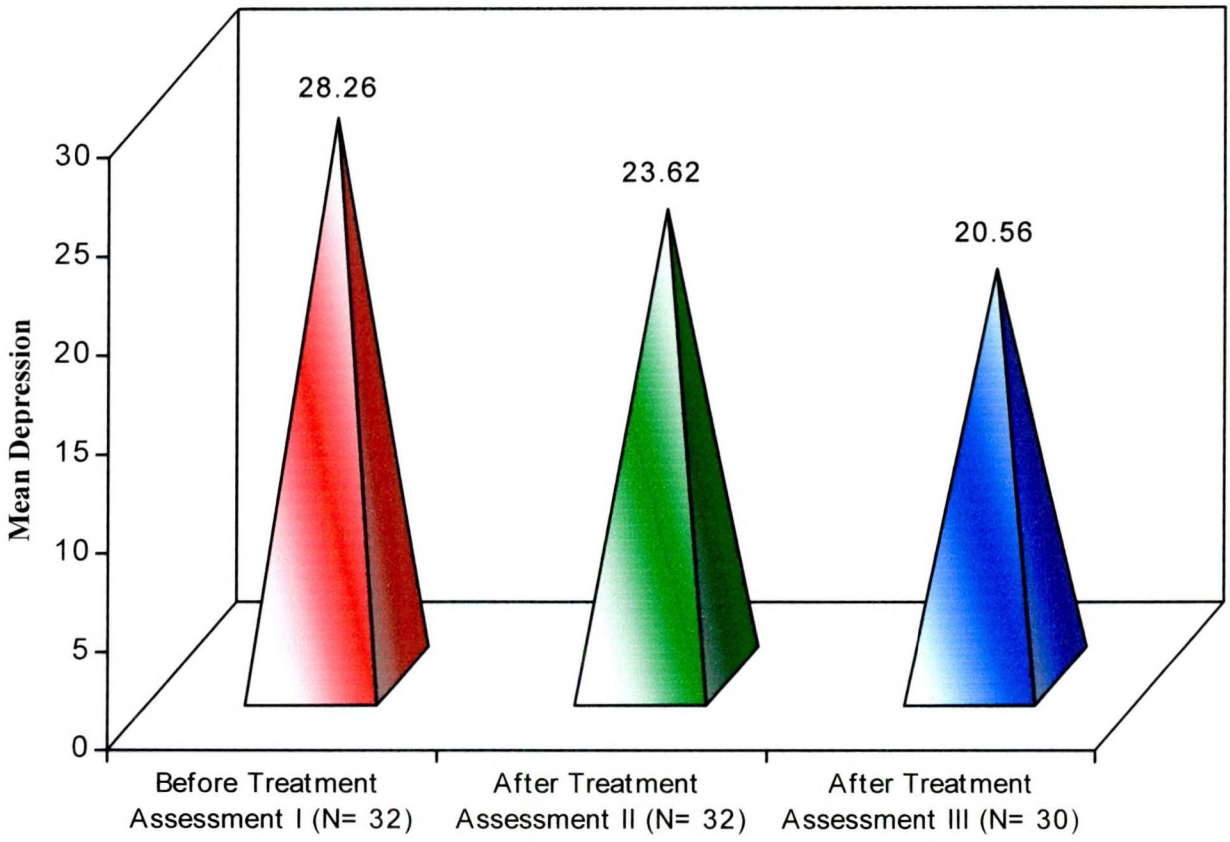


Table VIII shows the mean depression of the sample before (Assessment I) and after treatment (Assessment II and Assessment III). As per the norms, the mean depression of the sample before and after treatment is 'Moderate to Severe'. In a study conducted by Finkelstein and Finkelstein (2000), it was found that clinical depression is commonly encountered in patients with end-stage renal disease.

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. Hence, the Null Hypothesis, 'Positive Therapy does not have any effect on the level of depression in kidney patients', is rejected.

As discussed under Table VII, the techniques of Positive Therapy was helpful in identifying and removing their irrational thoughts, beliefs and fears and instilling positive, self-enhancing thoughts, which changed their perception towards self, life and the illness. They were also given Behavioural Assignments to deal with future problems.

According to researchers in Cleveland Clinic (2007), more than 80 % of the ESRD patients with depression can be treated successfully with medicine, psychotherapy or a combination of both.

TABLE IX

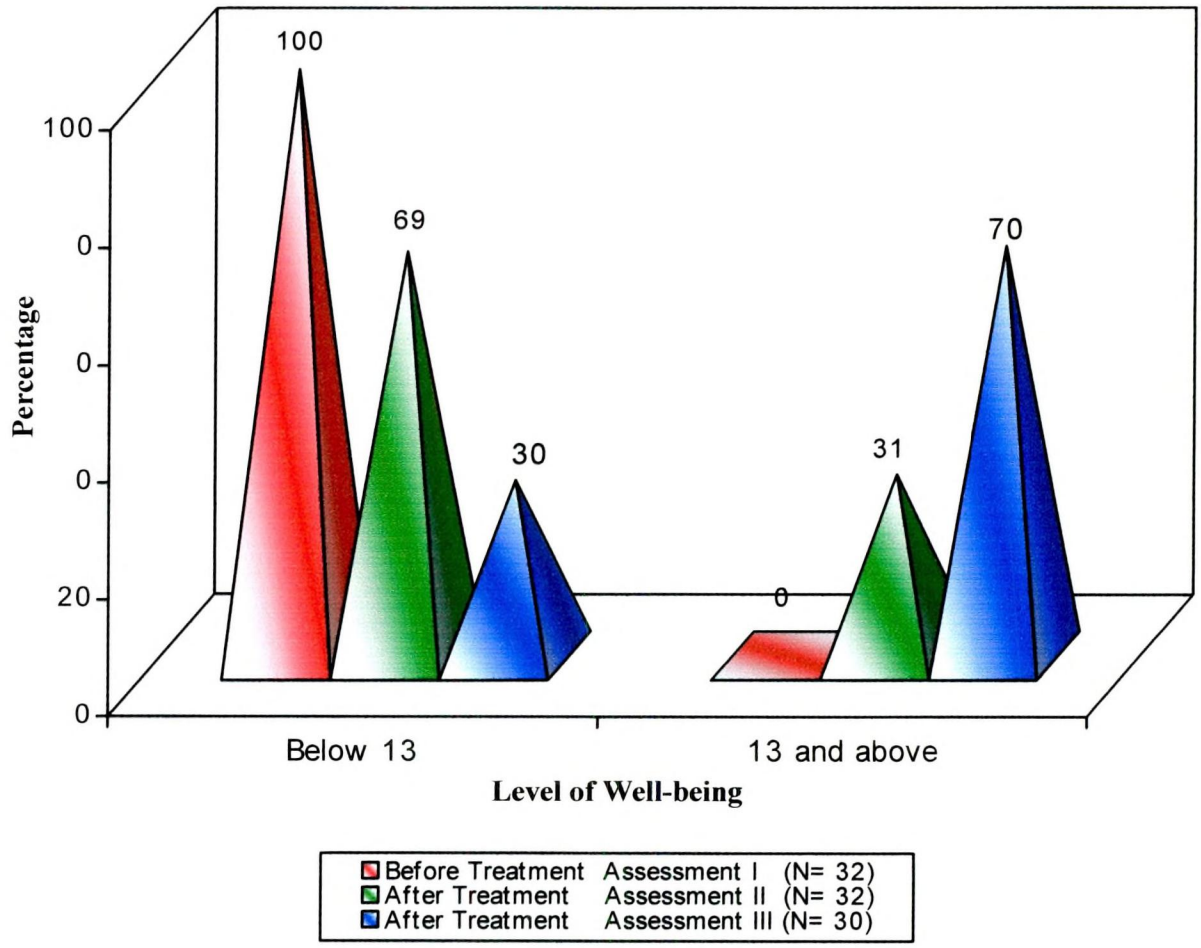
Level of Well-Being of the Sample

Level of Well-being	Before Treatment Assessment I (N=32)		After Treatment			
			Assessment II (N=32)		Assessment III (N=30)	
	N	%	N	%	N	%
13 and above	0	0	10	31	21	70
Below 13	32	100	22	69	9	30

(Percentages are rounded off)

FIGURE VIII

Level of Well-being of the Sample Before and After Treatment



"Man is made by his belief,

As he believes, so he is"

Bhagavad Gita

The well-being of the subjects was assessed using Well-being Index (WHO, 1998). It is alarming to note from Table IX that, in Assessment I, all the subjects had well-being scores below 13. According to WHO, a score below 13 indicates poor well-being and is an indication for testing for depression under ICD-10. Therefore, the Null Hypothesis, 'The well-being in kidney patients is not affected' is rejected.

Quality of life in the subjects encompassed four distinct areas that covered their total experience of illness. They were the physical condition and the symptoms, functional status and activities of daily living, mental well-being and social role functioning and social support. Impairment in the above stated areas translated as diabetes, hypertension, complications like anemia and malnutrition and reduced kidney functioning associated with increased symptoms such as fatigue, oedima, loss of appetite etc. and resulted in poor well-being in the subjects.

The results of the present study are in line with the study done by Acaray and Pinar (2005). They studied the Quality of life perceived by 100 hemodialysis patients and found that, the quality of life scores, perceived by patients, usually ranged between average and below average.

It is gratifying to note that, after 8 sessions of Positive Therapy, in Assessment II, 31% of the subjects had well-being scores of 13 and above, indicating an improvement in their well-being. But in Assessment III, it is amazing to find that 70% of the subjects had well-being scores of 13 and above. This notable improvement in well-being could be attributed to the effect of the various strategies of Positive Therapy. Most of the subjects did realize that the concept of adaptation was central to

wellness. During the initial assessment (Assessment I), before the psychological intervention, many subjects reported that, they have no reason for living as they were living only to experience pain. To be psychologically well while physically sick involves the belief that one's personal worth transcends physical limitations and needs positive self-esteem and self-efficacy for betterment.

Regular contacts with the subjects ensured adherence to the Positive Therapy and the tailor-made Behavioural Assignments given to the subject. The subjects responded well to the medical treatment when they practiced Positive Therapy regularly. The Deep Breathing Practice helped the subjects focus on the breathing, eliminating unwanted thoughts. The Relaxation Training that followed the Deep Breathing Practice ensured complete relaxation of the whole body, which facilitated physical and mental relaxation. It helped to increase their stress tolerance and facilitated sound sleep. The Autosuggestion helped to instill confidence and optimism, removing their negative traits such as pessimism, low self-esteem and self-pity. Regular practice of Positive Therapy could bring about a major shift in the attitudes of the subjects, ensuring a pervading positivity in their lives, thus enhancing their well-being.

TABLE X

Significance of Difference between Mean Well-Being of the Sample

Before Treatment (BT) and After Treatment (AT)

Condition	N	Mean	Standard Deviation	Critical Ratio
Assessment I (BT)	32	9.56	1.00	*4.33
Assessment II (AT)	32	11.12	1.80	
Assessment II (AT)	32	11.12	1.80	*6.41
Assessment III (AT)	30	14.90	2.74	
Assessment I (BT)	32	9.56	1.00	*10.08
Assessment III (AT)	30	14.90	2.74	

*Significant at 0.01 level

FIGURE IX

Mean Well-being of the Sample Before and After Treatment

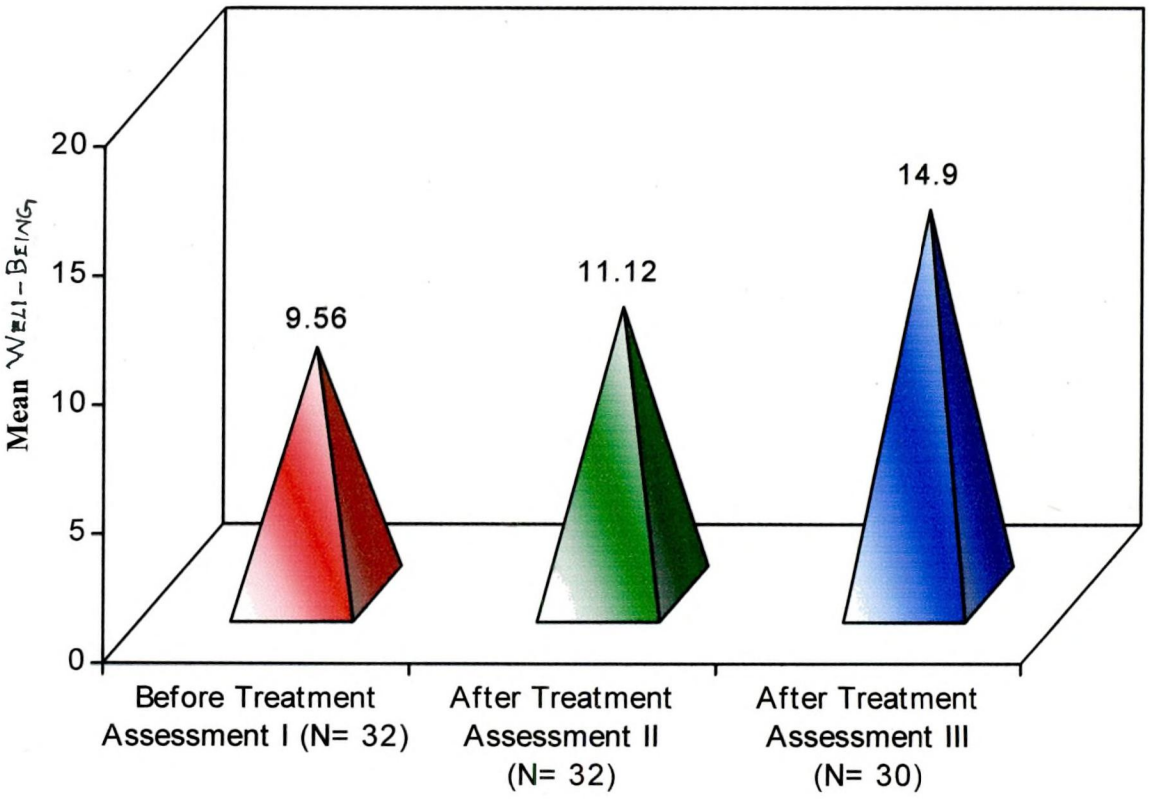


Table X clearly depicts that, on the average, the subjects had 'Low' well-being before treatment (Assessment I) which improved in Assessment II and Assessment III after treatment. There is a notable increase in the mean well-being score from Assessment I to Assessment III (from 9.56 through 11.12 to 14.90). The mean differences in well-being between the 3 assessments were significant at 0.01 level. Hence, the Null Hypothesis, 'Positive Therapy does not have any effect on the well-being of kidney patients' is rejected.

It is an indisputable fact that people with chronic illness will have low well-being. Chronic kidney disease affects all areas of life-physical, emotional, social, marital, occupational and financial. Physically, the subjects experience pain, reduction in strength and activity levels resulting in dependence. They also manifest a change in skin colour, which affects their physical appearance. They tend to experience and express negative emotions such as, sadness, worry, anger, irritability etc. Due to all these, they are unable to maintain normal social relationships. As chronic illness interferes with their work, hobbies and leisure time activities, the self-concept and self-esteem are lowered. The increase in expenditure, because of prolonged medication and treatment, transportation and hospitalization cause a financial crunch. The result of all these is a sense of low well-being among the subjects. The research by Acaray and Pinar (2005) has indicated low or below average well-being in chronic kidney patients.

The shift in level of well-being of the subjects could be well attributed to the effect of Positive Therapy. The subjects were counselled to distance themselves from their kidney disease. They were also asked to have a positive attitude towards self, life and others. The Autosuggestions like "I am happy", "I am getting healthier day by day" and "I love everyone and everyone loves me" generally improved their attitude

toward themselves, others and their health condition. Behavioural Assignments which were designed for individual subjects depending on their concerns, helped to reinforce positivity towards life. Behavioural Assignments such as having deep breathing, as and when possible, throughout the day, diligently practicing Relaxation Therapy for 20 minutes in the morning and 20 at night, before going to sleep, living in the present, concentrating on and enjoying what one is doing and going for walks for 20 minutes in the morning and 20 minutes in the evening helped the subjects combat the symptoms of depression and stress like persistent sadness, irritability, sleep disturbance, low energy etc.

Studies done by Estes (2004) have shown that a positive attitude is important in maintaining happiness and that attitude influences one's health. Individuals who are optimists are less bothered by daily aches and pains and recover faster from surgery. Optimism can combat infection and reduce chronic pain. It shortens recovery time, as well. Based on one's experiences and thought processes, one may choose to view more things in a negative light. The more one chooses negativity, the more it becomes comfortable, thus, the belief of being a natural pessimist. However, continuous negative thinking can perpetuate poor health and minimise overall satisfaction of life.

TABLE XI

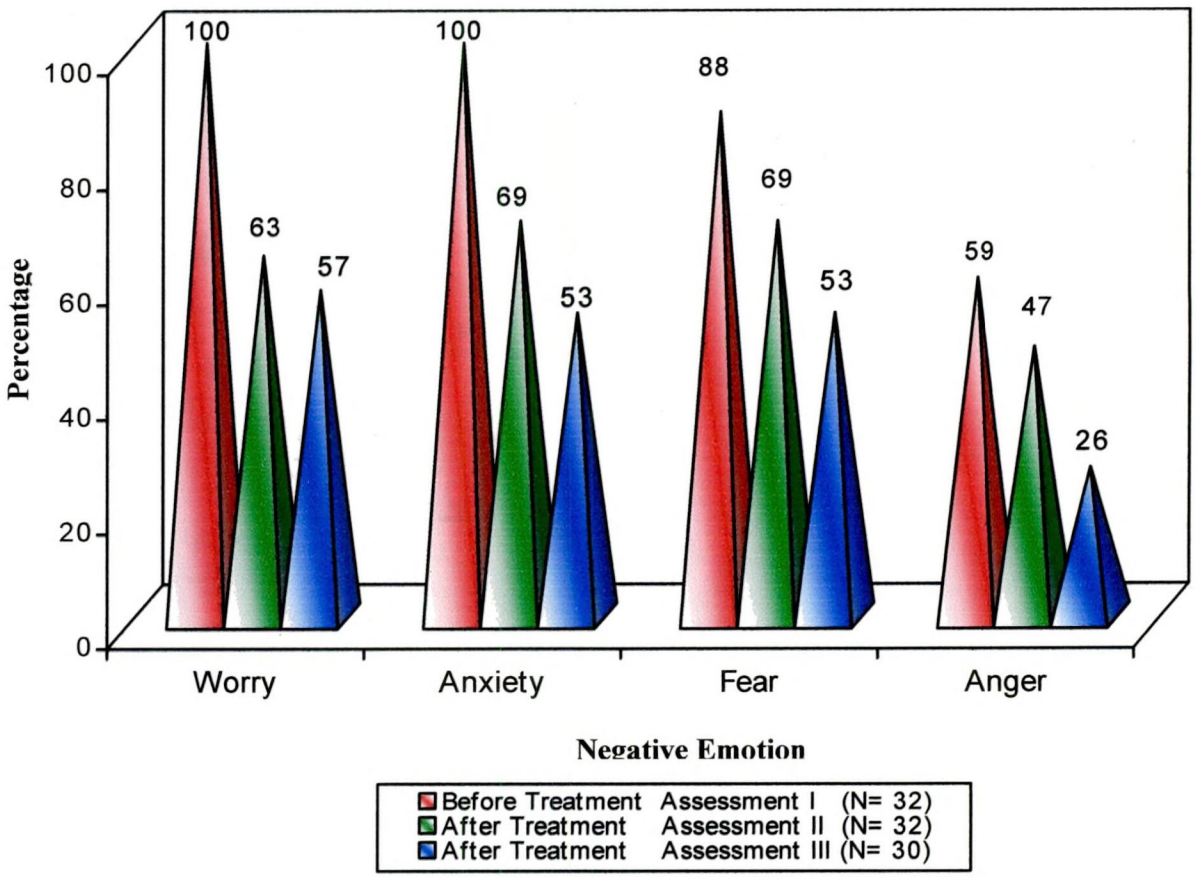
Negative Emotions of the Sample

S.No.	Negative Emotions	Before Treatment		After Treatment			
		Assessment I (N=32)		Assessment II (N=32)		Assessment III (N=30)	
		N	%	N	%	N	%
1	Worry	32	100	20	63	17	57
2	Anxiety	32	100	22	69	16	53
3	Fear	28	88	22	69	16	53
4	Anger	19	59	15	47	8	26

(Percentages are rounded off)

FIGURE X

Negative Emotions of the Sample



"Delusion arises from anger. The mind is bewildered by delusion. Reasoning is destroyed when the mind is bewildered. One falls down when reasoning is destroyed"

Bhagavad Gita

In a study conducted by Alvarez et al (2001) on 58 chronic hemodialysis patients, more than half of the subjects had fear and anxiety. Table XI reveals that the entire sample of the study experienced worry and anxiety. Fear was experienced by most of the sample (88%) and anger by more than half (59%). Hence, the Null Hypothesis, 'Kidney failure patients do not experience negative emotions', is rejected.

It is understandable that, the unpredictable course and the high degree of uncontrollability of chronic kidney disease are bound to put the subjects under constant worry and anxiety. The subjects were worried about the expenses of the treatment when they had to depend on their families. Many had expressed their anxiety about the treatment procedures, as they involved long duration, pain, restrictions in diet and expenditure.

Schrag (2003), in his study on chronic kidney patients, had obtained similar results. The study revealed that along with the physical aspects of chronic kidney disease (CKD), myriad of emotions can impact one's life. When diagnosed with CKD, it is quite common to experience shock, anger and depression. But along with these classic reactions to grief and loss, other emotions like desperation, fear, uncertainty, shock, denial, depression, self-doubt, frustration, anxiety, fear of the future and loss of control were also found by the author.

One of the most common fears of the subjects was the uncertainty associated with the chronic condition. Some even felt that death is round the corner. They feared

that their condition could be permanent, gradually worsening over time. They felt that their own bodies have betrayed them. Functioning kidneys are something they had taken for granted. Now, they are no longer in control of their renal process and have to rely on dialysis. They had a lot of apprehension about the outcome of their disease and those who were the breadwinners, feared as to how they would take care of their families.

More than half of the sample reported that they experienced and expressed anger. When enquired about the reasons for anger, almost all of them reported that they were just angry about falling prey to the illness. Initially, their anger was not essentially directed towards anything or anyone. Some even cursed their fate for their ill health. When frustrated, they directed their anger on their family members, more often, on their spouse.

Positive Therapy had helped the sample to manage their negative emotions as revealed by Table XI. Initially, all the subjects had experienced worry and anxiety. But after Positive Therapy, there was a reduction in the number of subjects experiencing worry and anxiety. Worry was reported by 63% and 57% in Assessments II and III respectively. Fear and anxiety were reported by the same percentage of subjects in both Assessments II and III (69% and 53%). Anger had also reduced after Positive Therapy (from 59% to 47% to 26%). Therefore, the Null Hypothesis, "Positive Therapy does not have any effect on the negative emotions of kidney patients", is rejected. Regular practice of Positive Therapy involving Relaxation Therapy, Counselling and Behavioural Assignments had helped to reduce their negative emotions and thereby improve their mental health.

During the counselling sessions, the subjects reported that they were worried and anxious about the things that they really did not have a control over. Counselling

helped them to understand the futility of such worries and anxieties. This shift in their perception brought about a tremendous calmness and peace in the subjects. The subjects were asked to rely more on Autosuggestion to seek confidence and courage to overcome fear. The importance of living in the present and accepting the inevitable was discussed as a skill that the subjects had to learn, to help them neither worry about the past nor about the future. If one uses all the emotional energy considering how things were before the illness and comparing it to how things are now, one is being very self-punishing. If the subjects are not stuck in the past or tormented by distant future images, they have the opportunity to manage every day with awareness. Living in the present with consciousness, patience, and appreciation for themselves and others let them get on in a better way, in spite of the pain of their losses.

During the counselling sessions the subjects were encouraged to express freely about the things that made them angry. Using the technique of Rational Emotive Therapy, the subjects identified the irrationality of some of their beliefs, which formed the basis of their anger. The subjects were made to understand that, if not checked, anger and resentment can build to the point where it strains their relationship with family members and their health care team. This is detrimental to the subjects' compliance and adherence to the treatment, which in turn, can have an adverse effect on the prognosis of the disease. Cognitive Restructuring, which was aimed at changing the cognitive distortions of the subjects, had effectively been incorporated into their repertoire of understanding. Unless there is such an understanding on the part of the subjects, there would hardly be any change.

On the whole, the results of this study have proved that, Positive Therapy had helped to reduce the stress and depression and to improve the well-being of the kidney

patients who served as the sample. Positive Therapy had also helped them to identify their negative cognitions and modify them accordingly, to help them stay positive and to adhere to the treatment and dietary regimen, expecting good medical outcomes.

Regular contacts were maintained with the subjects to ensure adherence to Positive Therapy. When the subjects were re-assessed after 4 months of Positive Therapy, there was a noticeable improvement in the mental health of the subjects as indicated by the lower mean scores in stress and depression and higher mean score in well-being. Thus, it can be inferred that, adherence to and compliance with the medical treatment and the dietary regimen, along with the persistent practice of Positive Therapy, resulted in reduction in their stress and depression and enhancement of their well-being, thus improving the subjects' overall quality of life.