

Effectiveness of Guided Imagery (GI) in Reduction of Stress among Patients with Chronic Renal Failure (CRF) Undergoing Haemodialysis in Selected Hospital

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ABSTRACT

Introduction: Guided imagery is a frequently used as a relaxation intervention based on image creation. It works on the principle of mind body connection. Conditions that are caused by or aggravated by stress often respond very well to imagery techniques. The emotional aspect of any illness can often be helped through imagery and relieving the emotional distress may in turn encourage physical healing. Imagery in healing is best known for its direct effect on physiology. The aim of the study is to assess the effectiveness of guided imagery in reduction of stress.

Materials and Methods: Quasi experimental, experimental - control-group, pre-post- intervention design. The study sample consisted of 50 chronic renal failure patient undergoing dialysis in a selected hospital, divided 25 patients in each group. Dialysis patients attending dialysis twice in a week. Age group of 18-65, A-V Fistula already developed by one month. Data were analysed by unpaired t- test and fissure exact -test. Result showed there is no significant difference in stress score in both groups during pre-test. Post test score there is changes of both group whereas post-test mean score difference is more in experimental group (t24 value= 2.0629) p<0.05 level of significance. Inference: Guided imagery is effective in stress reduction of CRF patients.

Conclusion: Guided imagery is simple, non-invasive, and cost effective, without side effects intervention for reduction of stress. .

Key words: *guided imagery, chronic renal failure patient, stress.*

INTRODUCTION

Psychiatric nurses who are knowledgeable about non-conventional treatment methods can help the clients in their quest for effective care. The use of these treatments needs to be acknowledged, further explored and ultimately, incorporated into psychiatric nurses' repertoire of healing strategies. When combined with scientific technology and modern medicine, imagery can facilitate the patient's comfort and healing - an outcome both the patient and the nurse may find deeply satisfying. The main aims of dialysis

treatment are to prolong patient survival, reduce morbidity and improve quality of life. However, despite many technical advances made over the last few years, morbidity and mortality of dialysis patients remain unacceptably high and their quality of life is often poor. Imagination is a powerful mental function that allows us to review the past, imagine possible futures, and do things that we sometimes can't do in the outer world. The imagination is the source of creativity, of problem-solving, of planning, and of setting our course in this world if we use it correctly. Aristotle called

it “the window to the soul”, since it always represents our internal reality. The present study was aimed at evaluating the effectiveness of guided imagery (GI) in reduction of stress among chronic renal failure patients undergoing haemodialysis at selected hospitals. Objectives: 1. To determine the level of stress among chronic renal failure patient undergoing haemodialysis. 2. To develop, validate and introduce the audio tape/CD. 3. To compare the pre and post interventional stress levels among haemodialysis patients with and without guided imagery. 4. To find out the association between stresses levels among haemodialysis patients with selected demographic variables.

MATERIALS AND METHODS

An evaluative research approach was adopted to test the main objective of evaluating the effectiveness of guided imagery in reduction of chronic stress. In this study quasi- experimental two-group pre-test - post-test design was adopted.

Group I: Chronic renal failure patients who are undergoing haemodialysis in the experimental group for whom guided imagery was provided.

Group II: Chronic renal failure patients who are undergoing haemodialysis in the control

Age, gender, religion, educational status, marital status, family income, work status, economic background, extent of family responsibility, any supportive treatment, blood creatinine level, duration of dialysis, finance providers, frequency of dialysis and distance travelled from home to dialysis unit were the extraneous variables

The study was conducted in Dialysis unit of a selected Hospital. This Dialysis department runs a 08-bedded dialysis unit and has an average of 50 to 60 patients undergoing dialysis as a rotation in a month. This hospital was selected because sufficient participants will be available; proximity of this hospital, 200 meters from the study centre, made the data collection and also the study process easy. In this study, population comprised of patients with

chronic renal failure undergoing haemodialysis in a selected hospital in a selected city.

The study sample consisted of 50 chronic renal failure patients undergoing haemodialysis in a selected hospital in city. Non-probability purposive sampling technique was used to select the subjects fulfilled the inclusion criteria and group allotment were done to experimental and control group using white opaque envelop consist the allotment group detail. The dialysis unit was with a bed capacity of eight. Three sections of dialysis will be held every day, one in the morning, afternoon and night shift. After explaining the purpose of the study, written consent was obtained from the subjects. Based on the baseline data, subjects who met inclusion criteria were included in the study. Every day, morning and afternoon, patient allotted in experimental and control Group according to the arrival of the patient. Baseline proforma consisted of eleven items for obtaining information regarding age, sex, religion, educational status, occupational status, income, marital status, responsibility towards family and use of any supportive therapy. Stress Scale: A blueprint was prepared prior to the construction of stress scale, which showed the distribution of items according to the content area and the percentage distribution of each item for each content area. A stress scale was prepared by the investigator. It consisted of twenty four items covering psychological, physiological, social and spiritual areas of stress. Positive and negative statements were included in the scale. The response alternatives were always, sometimes, rarely and never. These responses score as 1, 2, 3 and 4 for positive items and 4, 3, 2 and 1 for negative items. Grading of the scores is as follows: Mild Stress-24-48, Moderate Stress-49-72, and Severe Stress-73 and above.

STATISTICAL ANALYSIS

A sample of 50 chronic renal failure patients on dialysis was recruited randomly from the OPD register from a

selected hospital using convenience sampling technique, based on specified criteria. The data on sample characteristics were analysed using descriptive statistic. The baseline characteristics are age, sex, religion, educational status, marital status, family income, work status, family responsibility and use of supportive therapies. Total sample age mean= 43.76, Control group age mean= 43.44, Experimental group age mean= 44.92

Table 1: Frequency and Percentage Distribution of the Baseline Performa
n=25+25

Demographic variable	Experimental		Control	
	Freq	Percentage	Freq	Percentage
Age				
18 - 25 years	3	12.0	3	12.0
26 - 35 years	1	4.0	1	4.0
36 - 45 years	4	16.0	9	36.0
46 - 55 years	14	56.0	11	44.0
56 - 65 years	3	12.0	1	4.0
Gender				
Male	12	48.0	15	60.0
Female	13	52.0	10	40.0
Religion				
Hindu	20	80.0	21	84.0
Christian	2	8.0	3	12.0
Muslim	3	12.0	1	4.0
Educational status				
Illiterate		0.0	1	4.0
Secondary school	10	40.0	14	56.0
Higher secondary	14	56.0	9	36.0
Graduate	1	4.0	1	4.0
Marital status				
Unmarried	2	8.0	1	4.0
Married	23	92.0	24	96.0
Family income (INR)				
< 1,500	1	4.0		0.0
1,501 - 2,500	8	32.0	7	28.0
2,501 - 5,000	12	48.0	13	52.0
5,001 - 10,000	4	16.0	5	20.0
Work status				
Employed - full time	1	4.0	6	24.0
Employed - part time	24	96.0	17	68.0
Unemployed		0.0	2	8.0
Family responsibility				
Yes	24	96.0	24	96.0
No	1	4.0	1	4.0

Table: 1 Showed that total sample age mean is 43.44, majority of patient belonged to the category of 46-55 in both

(56%,44%) the groups. Maximum male (60%) in experimental group and maximum female (52%All) in experimental group. In both groups Hindus were more. In control group maximum (56%) participants were secondary and in experimental group (56%) majority were higher secondary as educational status.

Majority were married in both groups. Majority of participants had 5,000 INR as family income in both groups (52%,48%). Maximum patients were employed part-time (96%,68%). Most of the patient (96%) felt that they had moderate (96%, 88%) family responsibilities in both groups only 4% in experimental group responded to complete responsibility. Maximum patients were not undergoing any supportive therapy other than medicine. All patients in the control group undergoing dialysis twice in a week only 4% in the experimental group undergoing once in a week. In both groups' creatinine level above 6 mg/dl (96%), only 4% had below in both groups. Maximum finance providers were Mahatma Jyoti Rao Phule Jeevandai yojana (92,96%). In both group majority were suffering in Kidney diseases (84%) in compare to (12%) diabetes and hypertension (4%) respectively. Majority of people in both groups Suffering 12-24 months (76,64%). Majority of patient travelled above 20 kms to reach the unit in both groups (100,76%) only 6 (24%) patients travelled 11-12 kms in control group.

Primary Hypothesis: - Hypothesis will be tested at 0.05 level of significant.

H₀: There will be no significant difference between mean post - intervention stress score of Experimental groups (GI) and control group (WGI) among chronic renal failure patients undergoing haemodialysis.

Table 2 : Distribution of chronic renal failure patients undergoing haemodialysis according to the level of stress score in both groups.
n=25+25

Stress Score	Experimental group		Control group	
	Pretest		Pretest	
	Frequency	%	Frequency	%
Mild (Score 24-48)	0	0.0%	0	0.0%
Moderate (Score 49-72)	23	92.0%	24	96.0%
Severe (Score >72)	2	8.0%	1	4.0%

Above table shows that, In experimental group, 92% of the chronic renal failure patient undergoing haemodialysis had moderate stress (Score 49-72) and 8% of them had severe stress (Score >72). In control group, 96% of the chronic renal failure patient undergoing hemodialysis had moderate stress (Score 49-72) and 4% of them had severe stress (Score >72).

Table 3 : Difference of mean stress scores and SD among haemodialysis patients with and without guided imagery.
n=25+25

Post Test	Mean	±SD	Mean difference	±SD difference
Experimental	19.5	5.7	15.2	2.5
Control	-4.3	3.2		

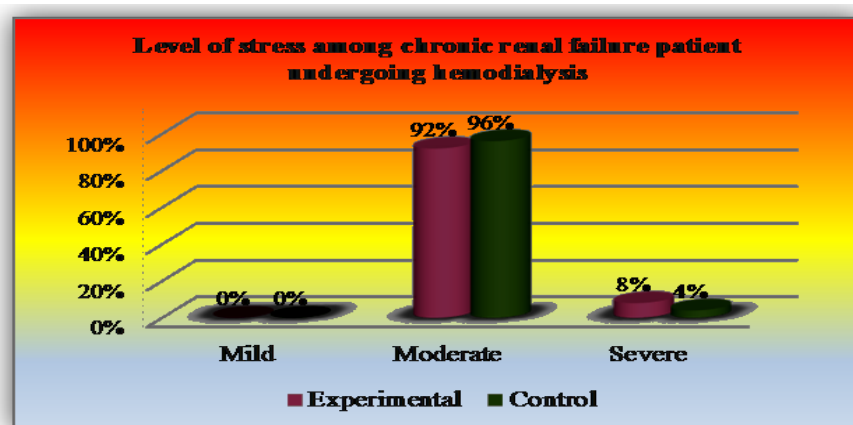


Fig 1 : Bar diagram of distribution of levels of stress scores among CRF patients before intervention in both the groups

Above table-3 showed that mean stress score difference of experimental and control group was 15.2 and SD difference was 2.5 which increased in the experimental group so null hypothesis is rejected

Table 1 & Fig 1 Showed the levels of stress pre-interventions in both groups respectively in moderate level 47 patients (92,96 %) and severe 3 (8,4 %) patients.

Table 4: Comparison of pretest and post-test stress levels among haemodialysis patients with and without guided imagery
N=25+ 25

Stress	Experimental group				Control group			
	Pretest		Posttest		Pretest		Posttest	
	Freq	%	Freq	%	Freq	%	Freq	%
Mild (Score 24-48)	0	0.0%	24	96.0%	0	0.0%	0	0.0%
Moderate (Score 49-72)	23	92.0%	1	4.0%	24	96.0%	22	88.0%
Severe (Score >72)	2	8.0%	0	0.0%	1	4.0%	3	12.0%

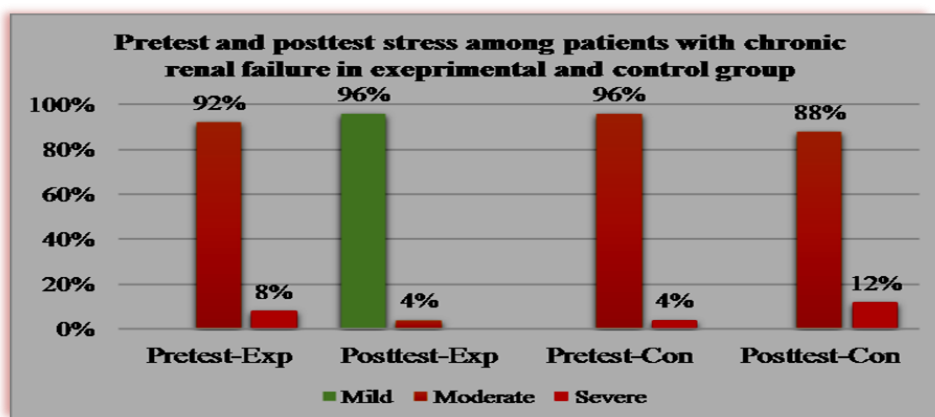


Fig 2: Comparison of stress level of experimental and control group with and without guided imagery.

Above result shows that, in experimental group, in pre intervention, 92% of the chronic renal failure patient undergoing hemodialysis had moderate stress (Score 49-72) and 8% of them had severe stress (Score >72). In post - intervention, 96% of them had mild stress (Score 24-48) and 4% of them had moderate stress (Score 49-72) and in control group, 96% of the chronic renal failure patient undergoing hemodialysis had moderate stress (Score 49-72) and 4% of them had severe stress (Score >72). 96% of the chronic renal failure patient undergoing hemodialysis had moderate stress (Score 49-72) and 4% of them had severe stress (Score >72) without intervention. This is evident that the stress among haemodialysis patients improved remarkably after guided imagery. H_0 : There will be no significant difference between mean post - intervention stress score of Experimental groups (GI) and control group (WGI) among chronic renal failure patients undergoing haemodialysis.

Table 5: Paired t-test for comparison of pre-test and post-test stress levels among haemodialysis patients with guided imagery.
n=25+ 25

	Mean	SD	t	Df	p-value
Pre-intervention	64.2	5.0	17.3	24	0.000*
Post intervention	44.7	2.1			

t24 value= 2.0629 df₂₄ * Significant

The guided imagery was significantly effective in improving the stress among the haemodialysis patients.

Table No :-6 Comparison of change in stress scores among haemodialysis patients with and without guided imagery
N=25+ 25

	Mean	SD	t	df	p-value
Experimental	19.5	5.7	18.2	48	0.000
Control	-4.3	3.2			

t48= 2.0596

Researcher applied two sample t-test for the comparison of change in stress scores among haemodialysis patients with guided imagery. Average change in stress score in experimental group was 19.5 which was -4.3 in control group. T-value for this test was 18.2 with 48 degrees of

freedom. Corresponding p-value was 0.000, which is small (less than 0.05), the null hypothesis is rejected. The guided imagery was significantly effective in improving the stress among the haemodialysis patients

Since all the p-values are large (greater than 0.05), none of the demographic variables was found to have significant association with the stress level.

DUSCUSSION

Result showed that Maximum male (48%) in experimental group and maximum female (52%All) in experimental group similar study conducted on 2008, by Abolfazil R et all result shows that, sample consisted of 47.2% men, 52.8% women.

Total sample age mean is 43.44, majority of patient belonged to the category of 46-55 in both (56%,44%) the groups. Similar study conducted on 2008, by Abolfazil R et al. result shows that, 41.7% percent in the age range of 40 to 59, 19.4% in the range of 20-39, and 33.3% in range of 60

In both groups Hindus were more. In control group maximum (56%) participants were secondary and in experimental group (56%) majority were higher secondary as educational status. Majority of participants had 5,000 INR as family income in both groups (52%,48%). Maximum patients were employed part-time (96%,68%). Most of the patient (96%) felt that they had moderate (96%, 88%) family responsibilities in both groups only 4% in experimental group responded to complete responsibility.

Maximum patients were not undergoing any supportive therapy other than medicine. All patients in the control group undergoing dialysis twice in a week only 4% in the experimental group undergoing once in a week. In both groups' creatinine level above 6 mg/dl (96%), only 4% had below in both groups. Maximum finance providers were Mahatma Jyoti Rao Phule Jeevandai yojana (92,96%). In both group majority were suffering in Kidney

diseases (84%) in compare to (12%) diabetes and hypertension (4%) respectively. Majority of people in both groups Suffering 12-24 months (76,64%). Majority of patient travelled above 20 kms to reach the unit in both groups (100,76%) only 6 (24%) patients travelled 11-12 kms in control group.

In experimental group, 92% of the chronic renal failure patient undergoing hemodialysis had moderate stress (Score 49-72) and 8% of them had severe stress (Score >72). In control group, 96% of the chronic renal failure patient undergoing hemodialysis had moderate stress (Score 49-72) and 4% of them had severe stress (Score >72).

Result showed that in experimental group, in pre intervention, 92% of the chronic renal failure patient undergoing hemodialysis had moderate stress (Score 49-72) and 8% of them had severe stress (Score >72). In post -intervention, 96% of them had mild stress (Score 24-48) and 4% of them had moderate stress (Score 49-72) and in control group, 96% of the chronic renal failure patient undergoing haemodialysis had moderate stress (Score 49-72) and 4% of them had severe stress (Score >72). 96% of the chronic renal failure patient undergoing hemodialysis had moderate stress (Score 49-72) and 4% of them had severe stress (Score >72) without intervention. This is evident that the stress among haemodialysis patients improved remarkably after guided imagery.

Result showed that paired t-test for the comparison of pretest and post-test stress levels among haemodialysis patients with guided imagery. Average stress score in pretest was 64.2 which reduced to 44.7 n post-test. t-value for this test was 17.3 with 24 degrees of freedom. Corresponding p-value was 0.000, which is small (less than 0.05), the null hypothesis is rejected. The guided imagery was significantly effective in improving the stress among the haemodialysis patients. Similar study conducted on 2014 by Jallo N et al, Results suggest that GI

intervention may be effective in reducing perceived stress, anxiety, and fatigue measures among pregnant African American women

Fisher's exact test used for the association result shows that, all the p-values are large (greater than 0.05), none of the demographic variables was found to have significant association with the stress level

CONCLUSION

The guided imagery was significantly effective in improving the stress among the haemodialysis patients.

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