

A Study to Assess the Effectiveness of Guided Imagery in Reduction of Stress among Patients with Chronic Renal Failure in a Selected Hospital, Moradabad

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Abstract: ***Background of the study:** Chronic diseases represent one of the major health problems in the industrialised world and chronic renal failure is one among them. Burden of long-term illness and images of forthcoming death cause a threatening feeling for these patients. These stresses have an important influence on physical and psychological wellbeing of the patients. Guided imagery is a powerful tool which can be used by nurses for their patients for the reduction of stress. The aim of the present study is to determine the effectiveness of guided imagery in reduction of stress. **Method:** Quasi-experimental research (pre-test post-test control group design) was used for the present study. The sample consisted of 40 chronic renal failure patients undergoing dialysis were randomly assigned to experimental group and control group (N=20+20=40). Tools used were baseline proforma and stress scale. Data was analysed using paired and unpaired 't' test, Friedman test, Fisher's exact test, Karl Pearson correlation co-efficiency, and Spearman's correlation co efficiency. **Result:** In Group I 20% of subjects had severe stress, 65% had moderate stress and 15% had mild stress. In Group II 15% of subjects had severe stress, 65% had moderate stress and 15% had mild stress. There was no significant difference in the pre-test stress score of renal failure patients in both groups, whereas a significant difference was found in the stress score of post-test among Group I and Group II ($t_{38}=2.311$, $P<0.05$). There was significant difference in the pre-test and post-test score of patients in the experimental group ($t_{19}=3.165$, $P<0.05$). There was significant difference among psychological, physiological, social and spiritual factors of stress (Friedman test $\chi^2_{(3)}=54.24$, $P<0.05$). There was significant reduction in stress in psychological, ($t_{19}=3.689$, $P<0.05$), physiological ($t_{19}=3.125$, $P<0.05$) and social ($t_{19}=3.699$, $P<0.05$) areas. There was no significant relationship between reduction in level of stress and demographic variables such as age (Fisher's $p = 0.34 > 0.05$), sex (Fisher's $p = 0.48 > 0.05$), marital status (Fisher's $p = 0.48 > 0.05$), income (Fisher's $p = 0.71 > 0.05$), and family responsibility (Fisher's $p = 0.86 > 0.05$). **Interpretation:** The results show that chronic renal failure patients had significant level of stress related to their illness and guided imagery is an effective intervention for reduction of stress. **Conclusion:** Guided imagery is a simple non-invasive, cost effective, method that can be used for reduction of stress without any adverse effects on the patients. Patients themselves can practice their own imagery without any assistance.*

Keywords: Guided imagery, chronic renal failure patients, Stress

1. Introduction

Guided imagery is a frequently used relaxation intervention based on imagination. It involves thinking in pictures to contact a person's inner reality. Thinking in pictures invokes all of the senses: hearing, seeing, tasting, smelling and touching as well as sensing the body's position and movement and even emotions. It uses a body mind connection which closely links to healing. Chronic diseases are assuming increasing importance among the adult population in developed and developing countries. Most common chronic diseases include cancer, chronic renal failure, coronary artery diseases, hypertension, diabetes, COPD etc. The prevalence of chronic disease is showing an upward trend in most countries. Psychosocial changes in the client are among the biggest and hardest problems the nurse must deal with. Coping is an attempt to master a new situation that is potentially threatening, challenging or gratifying. Sometimes people fail to overcome the stressful situation with the coping modes they have adopted. Guided imagery is a skill that can be taught by nurses and can be learned in both inpatient and outpatient settings. 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.

Objectives

- 1) To determine the level of stress among patients with chronic renal failure in Group I (Experimental group) and Group II (Control group) as measured by a stress scale.
- 2) To determine the level of stress among patients with chronic renal failure in Group I (Experimental group) after introduction of guided imagery.
- 3) To compare the pre-test and post-test stress level of Group I (Experimental group) and Group II (control group).

2. Methodology

Research Approach: In this study a quasi-experimental research approach (pre-test post-test control group design) was used.

Research design: quasi experimental two-group pre-test – post-test group design.

Sample: Chronic renal failure patients.

Sample size: The study sample consisted of 40 chronic renal failure patients undergoing dialysis in a selected hospital.

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Sampling Technique: In this study the researcher adopt the Convenience sampling technique.

Description of tool

The tool was prepared by the investigator to assess the effectiveness of guided imagery in reduction of stress which is as follows:

Tool 1: Demographic Performa

Tool 2: Stress Scale for Patients with Chronic Renal Failure

Data collection

Before conducting the study the researcher taking permission from dialysis unit of Vivekanand hospital, Moradabad, researcher give self- introduction and provide participant consent form for the signature of the participant & the adequate data information was collected. The data collection period was from 1st August 2005 to 31st August 2005. Their responses were assured confidentiality. Initially the tool comprising of baseline proforma and stress scale was given to patients of both Group I and Group II. After completing that, walkman with guided imagery cassette was given to patients in experimental group for hearing. Tape was of 12 minutes duration. Patients were advised to hear twice a day for 10 days and also whenever they were feeling stress. Investigator confirmed that they were hearing the audiotape by visiting them when they were coming for dialysis in between. Control group was not given guided imagery. After ten days, again data was collected from both the groups using stress scale. Patients were advised to create their own imagery whenever they are in stress. Patients were interested to participate in study.

Statistical Analysis

Both descriptive and inferential statistics was done for analysis of data, with the help of SPSS16version. Analysis is the systematic organisation and synthesis of research data and the testing of research hypothesis using those data: A master data sheet was prepared by the investigator to organise and computer the data. The data obtained was analysed using both descriptive and inferential statistics on the basis of objectives and hypotheses of the study. Frequency and percentage were used to analyse baseline proforma. Mean, standard deviation, range and percentage mean score of pre-test score of experiment and control group were found. Unpaired ‘t’ test was used to determine the difference between the scores of pre-test and post-test of Group I and Group II. The significant difference between the mean scores of Group I and Group II was determined by using paired ‘t’ test. The data are represented in the form of tables, bar diagrams, and graph.

Table 1: Comparison of mean stress score of pre-test of Group I and Group II

Group	Mean	S. D.	t	df	Significance
Group I	65.7	5.618	0.056	38	Not Significant
Group II	65.6	5.598			

$t_{38}=2.021, P < 0.05$

Data in Table 1 show that there is no significant difference in pre-test stress score of Group I and Group II ($t_{38} = 0.056, P > 0.05$). Hence the null hypothesis is accepted.

Table 2: Comparison of mean stress score of pre-test and post-test of Group I

	S. D.	t	df	Significance
Pre-test	7.558	3.165	19	0.01*
Post-test				

$t_{19} = 2.093, P < 0.05$

Significant Since the calculated value of ‘t’ ($t_{19} = 3.165, P < 0.05$) was greater than the table value of ‘t’ ($t_{19} = 2.093, P < 0.05$) we can conclude that there is a significant reduction in the stress level of Group I after using guided imagery. Hence the research hypothesis is accepted.

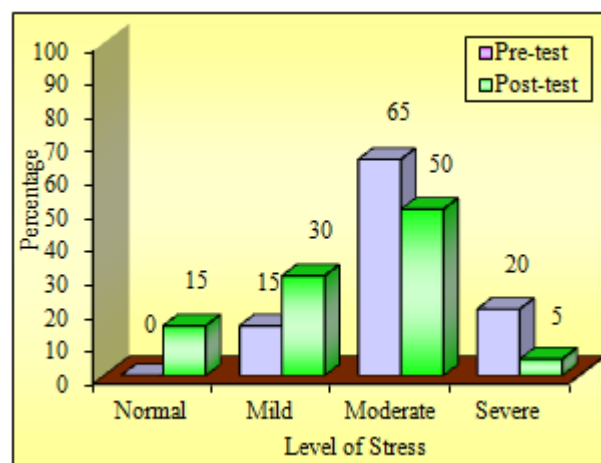


Figure 1: 3-D bar diagram showing grading of subjects according to the stress level score of pre-test and post-test among Group I

3. Results

In Group I 20% of subjects had severe stress, 65% had moderate stress and 15% had mild stress. In Group II 15% of subjects had severe stress, 65% had moderate stress and 15% had mild stress. There was no significant difference in the pre-test stress score of renal failure patients in both groups, whereas a significant difference was found in the stress score of post-test among Group I and Group II ($t_{38}=2.311, P<0.05$). There was significant difference in the pre-test and post-test score of patients in the experimental group ($t_{19}=3.165, P<0.05$). There was significant difference among psychological, physiological, social and spiritual factors of stress (Friedman test $\chi^2_{(3)}=54.24, P<0.05$). There was significant reduction in stress in psychological, ($t_{19}=3.689, P<0.05$), physiological ($t_{19}= 3.125, P<0.05$) and social ($t_{19}=3.699, P<0.05$) areas. There was no significant relationship between reduction in level of stress and demographic variables such as age (Fisher’s $p = 0.34 > 0.05$), sex (Fisher’s $p = 0.48 > 0.05$), marital status (Fisher’s $p = 0.48 > 0.05$), income (Fisher’s $p = 0.71 > 0.05$), and family responsibility (Fisher’s $p = 0.86 > 0.05$).

4. Interpretation

The results show that chronic renal failure patients had significant level of stress related to their illness and guided imagery is an effective intervention for reduction of stress.

5. Conclusion

Guided imagery is a simple non-invasive, cost effective, method that can be used for reduction of stress without any adverse effects on the patients. Patients themselves can practice their own imagery without any assistance. There was no association between absence of reduction in level of stress and selected demographic variables such as age, sex, marital status, income and family responsibility. All people may not be successful in using guided imagery as they may have various kinds of stresses which prevent them from concentrating. Under such circumstances repetitive use for a longer period is needed to have good result.

6. Declarations

Funding: No funding sources

Conflict of interest: None

7. Future Recommendations

- The same study can be conducted on a larger sample over a longer period of time which might yield more reliable results.
- A similar study can be conducted in patients with other chronic illness.
- A comparative study to determine effectiveness of guided imagery in patient with various chronic illnesses can be carried out.
- Effectiveness of other relaxation techniques in reduction of stress can be studied.
- A study can be carried out to find out the effectiveness of guided imagery on the occupational stress of employees of different fields.
- Effectiveness of guided imagery on clinical conditions like depression and phobia can be studied.

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