



Effect of Acupressure on Level of stress among Clients with End Stage Renal Disease

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ABSTRACT

The main aim of the present study was to evaluate the effectiveness of Acupressure in reducing the level of stress among clients with End stage renal disease. To assess the pre and post test level of stress among clients with End stage renal disease in experimental and control group and to evaluate the effectiveness of Acupressure on level of stress among clients with End stage renal disease

METHODS: The research design adopted was a pre experimental design. Non-probability purposive sampling technique was adopted to select 30 clients with ESRD. of Acupressure was given for 20 to 30 minutes twice a day for 3 consecutive days. Standardized Holmes and Raage perceived stress scale was used to assess the level of stress. The data collection tool was validated by 5 experts and was found to be valid. **RESULTS:** Analysis using paired 't' test 31.11* was significant at $p < 0.05$ levels, showed a significant difference between the pre and post test. The findings of the study revealed that Acupressure was effective in reducing stress among Clients with End stage renal disease.

Keywords: Effectiveness, Acupressure, stress, end stage renal disease.

The modern world, which is said to be a world of achievements, is also a world of stress. One finds stress everywhere, whether it be within the family, business, organizational enterprise or any other social or economic activity, right from the time of birth till the last breath drawn, an individual is invariably exposed to various stressful situations.

The term stress means many things to different people. A layperson may define stress in terms of pressure, tension, unpleasant external forces or an emotional response. Psychologists have defined stress in a variety of different ways. An estimated 25% of all cardiac problems in India are stress related; so are about 30% of impotence problems being reported in Indian cities.

There are several methods to overcome stress like pharmacokinetics and some alternative therapies such as guided imagery, acupressure, meditation, yoga, aroma therapy, aversion therapy, behavioral therapy and relaxation technique among them acupressure is prominently effective in reducing stress.

All India Institute of Medical Science (2015) reported that among India's 1 billion populations there are 7.85 million patients were diagnosed as chronic renal failure. A study conducted in United States (May2015) estimated that annual growth of the ESRD populations is approximately 4.1% newly diagnosed, 6.4% were long-term ESRD patients, 7.1% were dialysis patients, 6.1% were patients with functioning transplants, and 8.2% were on wait lists for transplants.

Statement of Problem

A Study to Evaluate The Effectiveness Of Acupressure On Level Of Stress Among Clients With End Stage Renal Disease At Selected Hospital In UttarPradesh.

Objectives

- To assess the level of stress among clients with End Stage Renal Disease.
- To evaluate the effectiveness of Acupressure on level of stress among clients with End Stage Renal Disease.
- To determine the association between level of stress among clients with End Stage Renal Disease with their selected demographic variables.

Hypotheses

H₁: There is a significant difference between the pre test and post test level of stress among clients with End Stage Renal Disease.

H₂: There is a significant association between the level of stress among clients with End Stage Renal Disease and their selected demographic variables.

Operational Definitions

Effectiveness

It refers to the outcome of Acupressure in terms of reducing stress among clients with End Stage Renal Disease.

Acupressure

Physical Pressure is applied by hand over ashi trigger points, by elbow, for 8-10 seconds for each muscle group with the aim of clearing blockages in these meridians. The intervention was given for 20 - 30 minutes twice a day for 3 consecutive days.

Stress

Stress describes a person's physical or emotional response to the demands or pressures of daily life. In this study it is measured by using Holmes and Raage Perceived Stress Scale.

End Stage Renal Disease

It is a progressive loss in renal function ($GFR < 15 \text{ ml/min/1.73 m}^2$) over a period of month or years which needs dialysis.

Assumptions

- Acupressure may have an influence on stress.
- Acupressure may enhance a sense of well being thus reducing stress.
- Acupressure may have no adverse effect among clients with End Stage Renal Disease experiencing stress.

REVIEW OF LITERATURE

For the study, the literature reviews are divided into following:

- Studies related to prevalence of stress among clients with End Stage Renal Disease.

- Studies related to stress.
- Studies related to Acupressure.
- Studies related to Acupressure on stress among End Stage Renal Disease.

Conceptual Framework: The present study was based on Sister Callista Roy's adaptation model (1984). The goal of the model for nursing is the promotion of adaptation in physiological, self concept, role function and interdependence modes, there by contributing to the person's health, quality of life and dying with dignity.

METHODOLOGY

Research Approach

A quantitative, evaluative approach was used in this study

Research design

A pre experimental one group pre test and post test design was chosen for this study.

Setting of the Study

This study was conducted in S.P. Surgicals, Bicchia Kala Chandauli. It is a multi speciality hospital with Nephrology, Cardiology, General Medicine, and Gynecology. The total number of beds in the hospital is 110 beds. There were minimum of 10 subjects per week who got admitted. Approximately there were around 100 patients visiting outpatient department daily.

Population

The target population was clients with End Stage Renal Disease with stress. The accessible population for this study included clients with End Stage Renal Disease with mild to moderate level of stress admitted at selected hospital.

Sample and Sampling Technique

The sample for this study included clients with End Stage Renal Disease with mild to moderate level of stress and those who fulfilled the inclusion criteria. The sample was selected by purposive sampling technique. The sample size for the study was 30.

Inclusion Criteria

1. Clients with mild and moderate level of stress.
2. Irrespective of gender.
3. Clients who were mentally stable

Exclusion Criteria

1. Clients who were critically ill.
2. Clients who use anxiolytic and antidepressants.
3. Clients with sensory deficit, Clients with respiratory problems, Cerebrovascular accident and other neurological problems.

Description of tool

Part A

It consisted of the socio demographic variables of clients with End Stage Renal Disease

Part B

It consisted of Standardized Holmes & Raage perceived Stress Scale. It is a standardized scale to assess the stress level of the clients, which had 22 items and is rated on a five point scale as **Never, Almost Never, Sometimes, Fairly often, and Very often**, the rating was done by the patient. Reliability was checked by Cronbach's alpha 0.82.

Scoring Procedure

Each item was scored on a scale are as follows: 0, 1, 2, 3 and 4.. The minimum score was 22 and the maximum score was 88.

1-22	:	Normal/ No Stress
23-44	:	Mild level of stress
45-66	:	Moderate level of stress
67-88	:	Severe level of stress

Intervention

The investigator developed the intervention on Acupressure by reviewing literature & obtaining expert opinion. **Acupressure** is an alternative therapy which is based on the concept of life energy which flows through "meridians" in the body. Physical pressure is applied to acupressure points or ashi trigger points with the aim of clearing blockages in these meridians. Pressure is applied by hand, by elbow, or with various devices for 8-10 seconds for each muscle group. The intervention was given for 20 - 30 minutes twice a day for 3 consecutive days.

Validity

Five experts in nursing and two experts in medicine evaluated the content of the instrument and intervention. Nursing experts were Medical Surgical Nursing and Medical experts were from Nephrology and Psychiatric department.

Reliability

Reliability was checked by Cronbach's alpha 0.82. Hence the tool was found to be reliable and used in this study.

Pilot Study

The Investigator conducted a pilot study among ten clients with End Stage Renal Disease at Maxwell Hospital, Daffi, The tool applicability and feasibility was found to be satisfactory.

Data Collection Procedure

The data collection procedure was done for a period of 6 weeks in Nephrology wards of S.P. Surgicals, Bichia kala. Permission to conduct the study was obtained from the Director. The researcher informed the participants about the nature and purpose of the study. Informed written consent was obtained from all the study subjects. On Day 1. Self administered standardized Holmes and Raage perceived Stress Scale was administered to assess pre test stress scores. Acupressure was demonstrated first time about 30 minutes followed by pre test and the sample were asked to repeat the demonstration on day 2, 3 and 4, twice a day (morning and evening) and it was supervised daily by the investigator. Post test was done on day 5 by using the same questionnaire.

Plan for Data Analysis

The demographic variables were analyzed by using descriptive statistics (frequency & percentage). The level of stress was analyzed by using descriptive statistics (mean, standard deviation). The effectiveness of Acupressure was paired 't' test. Association between the levels of stress among clients with End Stage Renal Disease and their selected demographic variables were analyzed by using chi square analysis.

Protection of Human Rights

The study was conducted after the approval of research committee of the college. Informed written consent was obtained from all study participants. Anonymity and confidentiality was maintained throughout the study.

Level of Stress among Clients with End Stage Renal Disease

Table: 1

S.No	Variables	Pre-experimental Group			
		Pre-test		Post-test	
		n	%	n	%
1.	Normal	0	0	7	23
2.	Mild	7	23	23	77
3.	Moderate	23	77	0	0

The above table shows the level of stress among the experimental group with End Stage Renal Disease. Out of 30 samples, 7 (23%) had a mild level of stress, 23 (77%) had a moderate level of stress during pre test. During post test 7 (23%) of them had a normal level of stress, 23 (77%) had a mild level of stress and none of them had moderate level of stress.

Table : 2

Effectiveness of Acupressure in terms of Stress among Clients with End Stage Renal Disease.

S.No.	Variables	Mean	SD	MD	't' Value
1.	Pre-test	61.04	6.21	14.2	31.11*
2.	Post-test	30.98	9.58		

*- Significant at $p < 0.05$ levels

Table 2 revealed that the mean pre test score was 61.04 with standard deviation 6.21 and the mean post test score was 30.98 with the standard deviation 9.58.

The mean difference was 14.2. The obtained 't' value, 31.11 was significant at $p < 0.05$ level. It was inferred that Acupressure was effective in reducing the level of stress among clients with End Stage Renal Disease.

Hence, the stated hypothesis, $H_1 =$ There will be a significant difference between the pre test and post test stress scores among clients with End Stage Renal Disease was accepted.

Table : 3

Association between Level of Stress among Clients with End Stage Renal Disease with their selected Demographic Variables.

n=30

S. No.	Demographic Variables	Level of Stress				χ^2 Value
		Mild		Moderate		
		f	%	f	%	
1	Age (in years)					
	a) 21-40	0	0	6	20	4.36
	b) 41-60	5	17	7	23	df=2
	c) >60	2	7	10	33	
2	Gender					
	a) Male	2	7	15	50	2.76
	b) Female	5	17	8	26	df=1
3	Educational qualification					
	a) Primary	1	3	3	10	1.1
	b) High school	1	3	7	24	df=3
	c) Higher secondary	4	13	8	27	
	d) Degree / Equivalent	1	3	5	17	
4	Occupation					
	a) Government Employee	2	7	3	10	3.88
	b) Private Employee	0	0	7	24	df=4
	c) Self Employed	1	3	4	13	
	d) Unemployed	3	10	5	17	
	e) Retired	1	3	4	13	

S. No.	Demographic Variables	Level of Stress				χ^2 Value
		Mild		Moderate		
		f	%	f	%	
5	Marital Status					
	a) Married	4	13	8	27	2.1
	b) Unmarried	0	0	5	17	df=4
	c) Widow / Widower	3	10	10	33	
	d) Divorced	0	0	0	0	
	e) Separated	0	0	0	0	
6	Monthly Income					
	a) Below Rs. 5000	0	0	4	13	3.98
	b) Rs. 5000 – Rs. 10000	2	7	12	40	df=2
	c) Above Rs. 10000	5	17	7	23	
7	Religion					
	a) Hindu	3	10	12	40	0.72
	b) Christian	3	10	6	20	df=3
	c) Muslim	1	3	5	17	
	d) Others	0	0	0	0	
8	Type of family					
	a) Nuclear	5	17	13	43	0.28
	b) Joint	2	7	10	33	df=1
9	Duration of illness					
	a) Below 3 years	2	7	11	36	2.15
	b) 3-5 years	2	7	8	27	df=2
	c) Above 5 years	3	10	4	13	

S. No.	Demographic Variables	Level of Stress				χ^2
		Mild		Moderate		
		f	%	f	%	
10	Duration of hospitalization					
	a) 0-3 days	3	10	12	40	0.16
	b) 4-7 days	3	10	9	30	df=2
	c) > 7 days	1	3	2	7	
11	Are you undergoing hemodialysis?					
	a) Yes					0.7
	b) No	6	20	22	74	df=1
	Plan for transplantation	1	3	1	3	
12	a) Yes					
	b) No	0	0	0	0	0
	Family history of	7	23	23	77	df=1
13	a) Yes					
	b) No	5	17	13	43	0.49
	Family support	2	7	10	33	df=1
14	a) Father / Mother					
	b) Son / Daughter	0	0	4	13	2.74
	c) Relatives	1	3	7	23	df=3
	d) Husband / Wife	3	10	5	17	
	Financial Support	3	10	7	24	
15	a) Property					
	b) Insurance	7	23	23	77	0
	c) Loan	0	0	0	0	df=2
		0	0	0	0	

Table 3: revealed that there was no significant association between the level of stress among clients with End Stage Renal Disease and their socio demographic variables. Hence **Hypotheses H2: “There will be significant association between the level of stress among clients with End Stage Renal Disease and their selected demographic variables”** was rejected.

Major Study Findings

- With regard to the socio demographic variables, majority of the clients with End Stage Renal Disease 12 (40%) belonged to age group of 41-60 years and above 60 years, 18 (60%) of them were males,

12(40%) of them had studied up to secondary level, 8 (26%) were self employees. Meanwhile among marital status majority 13(43%) of them were widow/widower, 14 (47%) had earned income of Rs 5000-Rs 10000, 15(50%) were Hindus, 18 (60%) were from nuclear family. With regard to duration of illness majority of them 13 (43%) suffering from End Stage Renal Disease less than 3 years, duration of hospitalization 15(50%) were hospitalized for 0-3 days, 28(93%) clients were undergoing hemodialysis in that 14 (47%) were undergoing hemodialysis twice in a week. Regarding the plan for transplantation 30(100%) had no plan for transplantation. Majority of the clients 18(60%) having previous family history of renal disease, 10 (33%) were supported by husband/wife and all of them 30(100%) financially supported by family property.

- With regard to effectiveness of Acupressure in reducing the level of stress among clients with End Stage Renal Disease, the mean post test score of level of stress was less than the mean pretest score of level of stress. The obtained 't' value 31.11 was significant at $p < 0.05$ level.
- With regard to association between the level of stress with their selected demographic variables, the study findings had revealed that there was no significant association between level of stress among clients with End Stage Renal Disease and their demographic variables.

IMPLICATIONS OF THE STUDY

Nursing Practice

- ✓ The nurses can encourage the use of Acupressure as a form of relaxation, among clients in the Nephrology ward. As it is cost effective and has no adverse effects, which is a current trend in relaxation.
- ✓ The nurses can understand the importance of Acupressure, and teach the benefits of Acupressure in reducing stress among clients with End Stage Renal Disease.

Nursing Education

- ✓ Nursing colleges can educate the students to learn assessment of stress and the effectiveness of Acupressure in the reduction of stress as an independent nursing intervention.
- ✓ Nursing colleges can make their own stress assessment scales with the help of available literature and check with various complementary therapies.

Nursing Research

- ✓ The study findings encourage, further research studies on the effectiveness of Acupressure in reducing stress among clients with End Stage Renal Disease.
- ✓ The study findings can be disseminated through conferences, seminars publication in professional, national and international journals and worldwide web.

Nursing Administration

- ✓ Nurse Administrators can collaborate in formulating policies to employ qualified nurses in Nephrology units and periodically supervise the application of Acupressure.
- ✓ Nurse administrators can plan and conduct in-service education programme on Acupressure to reduce symptoms like headache, hypertension and insomnia.
- ✓ Educational pamphlets containing information on relaxation techniques be given to the nursing staff and in turn taught to the patients. It helps to broaden the understanding and motivate them to develop healthy practices.

Recommendations

- ✓ A similar kind of study can be conducted with a larger sample size.
- ✓ A comparative study to assess the effectiveness of Acupressure on individuals and in combination with other complementary therapies.
- ✓ A longitudinal study can be undertaken to see the long term effect of Acupressure, in reducing stress at various time intervals such as at 6 months, 1 year and 2 years.

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