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Original Research Article

A Study to Assess the Level of Stress Regarding Haemodialysis among Chronic Renal Failure Patients in a Selected Hospital at Ernakulam, Kerala, India

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ABSTRACT

Background: Stress is a part of normal fabric of human existence. Haemodialysis can cause various types of stress such as physical, emotional, physiological and economic stress.
Objective: To assess the level of stress regarding haemodialysis in Chronic Renal Failure patients.
Materials and Methods: Quantitative approach with descriptive design was adopted for the the study. Sample consists of 100 Chronic Renal Failure patients on haemodialysis were selected through convenient sampling technique. Four point rating scale with 40 statements was prepared for assessing the level of stress among CRF patients on haemodialysis.
Results: The study finding revealed that out of 100 samples 56% of patients have severe stress, 27% have extreme, 14% have moderate and 3% have mild level of stress.
Conclusion: The study emphasized the importance of assessing the level of stress regarding haemodialysis among Chronic Renal Failure patients. The researchers suggest to conduct similar study on larger population by including more hospitals. An experimental study can be done about the effect of deviation methods in the stress management.

Key words: Haemodialysis, stress, Chronic Renal Failure patients

INTRODUCTION

Chronic Renal Failure (CRF) is a progressive and irreversible deterioration of renal function in which the body is unable to maintain metabolic and fluid and electrolyte balance resulting in uremia. [1] Chronic Renal Failure is a devastating medical, social and economic problem for patients and their families. [2]

The prevalence of Chronic Renal Failure in the adult population is 7852/million. The incidence of Chronic Renal Failure in adults in India will be 0.25%. [3] According to Indian Renal Foundation, in Indian Journal of Nephrology, there are 40,000 people with chronic renal failure on haemodialysis in Mumbai city, India. [2]

Stress is an internal state which can be caused by physical demands on the body or by environmental and social situation which are evaluated as potentially harmful uncontrollable or exceeding our source of coping. Patients subjected to haemodialysis experience stress of different nature and their coping ability varies. [4]

According to National Kidney Foundation data, clients undergoing haemodialysis reported significantly more stressors such as bodily pain, lower vitality,

poor general health, greater physical, social, mental dysfunction and greater limitation in their ability to work and participate in activities due to their poor health status. [2]

In Lisie hospital and average of 45 patients had undergone haemodialysis regimen, the clients had to make changes in their life style. Even the most employed found difficult to meet their financial needs. According to National Kidney Foundation, dialysis patients reported significantly more stresses in their life. [5]

MATERIALS AND METHODS

A quantitative approach with descriptive design was used to assess the level of stress regarding haemodialysis among CRF patients. Study population included 100 Chronic Renal Failure patients on haemodialysis in dialysis unit of Lisie hospital, Ernakulam, Kerala, India. Convenient sampling technique was used to select the sample. CRF patient who are on haemodialysis at least twice in a week and willing to participate in study were selected. CRF patients, who are, critically ill, mentally ill, illiterate and under the age of 10 years were excluded from the study.

The tool for data collection comprised of 2 sections. Section A comprised of demographic data. Section B, which was the stress rating scale consist of 40 questions which were arranged in physiological, social, emotional and economical domains to assess the level of stress. The reliability and validity of tool was established before data collection. Data collected from the samples were analyzed by descriptive and inferential statistics.

Statistical Methods

The tool was given to 7 experts for the content validity. The reliability of the tool was established using Cronbach alpha method. Correlation method was used to compute the reliability. The correlation value was found to be 0.89, which was reliable and thus the tool was adopted for the data collection. The pilot study was conducted among 10 CRF patients admitted in Nephro ICU and Nephro rooms in Lisie hospital, Ernakulam, Kerala, India. The results showed that 80% of samples had severe and 20% had moderate level of stress. The demographic data collected from the samples were analyzed and categorized in to groups according to the frequency and percentage. Chi-squre test was established at 0.05 level of significance, to find out association between socio-demographic variables of CRF patients and level of stress.

RESULTS

The data was collected from September 03 to September 09 (2012). Study samples consist of 100 CRF patients on haemodialysis.

Demographic data

Table 1: Frequency and percentage distribution of CRF patients according to their demographic variables.

Sl no:	Sample characteristics	Frquency	Percentage
1	**Age (in years)**	3	3
	10-20	6	6
	21-30	9	9
	31-40	29	29
	41-50	53	53
	>50		
2	**Sex**		
	Male	67	67
	Female	33	33
3	**Religion**		
	Hindu	45	45
	Christian	41	41
	Muslim	14	14
	Others	0	0
4	**Educational Qualification**		
	Lower primary	16	16
	Upper primary	13	13
	High school	34	34
	Pre-degree	28	28
	Graduate	7	7
	Post graduate	2	2
5	**Employment Status**		
	Employed		
	Private	21	21
	Government	8	8
	Agriculture	10	10
	Unemployed	61	61
6	**Monthly Income**		
	<3000	17	17
	3001-6000	22	22
	6001-9000	33	33
	>9001	28	28
7	**Marital Status**		
	Married	79	79
	Unmarried	13	13
	Divorced	0	0
	Widowed	8	8
8	**Duration Of Dialysis**		
	<1 year	30	30
	1-3 years	52	52
	3-5 years	12	12
	>5 years	6	6

The data regarding socio-demographic variables of CRF patients were collected, analyzed and categorized in groups according to frequency and percentage. The data is presented in table 1.

Level of stress

The study findings revealed that out of 100 samples 56% of patients have severe stress, 27% have extreme, 14% have moderate and 3% have mild level of stress. The data presented in Figure 1.

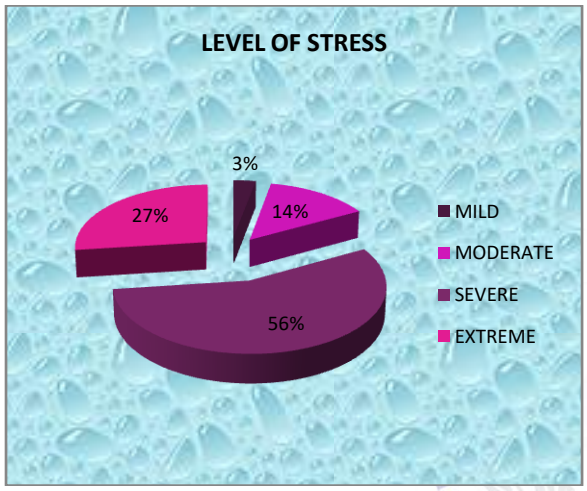

Figure 1: Pie chart showing the level of stress among CRF patients.

Association with demographic variables

Chi-squre test established at 0.05 level of significance denotes association between the level of stress and selected demographic variables. There was an association between level of stress and demographic variables such as sex, education, monthly income and duration of haemodialysis. There is no significant association found between level of stress and demographic variables such as age, employment, religion and marital status.

DISCUSSION

The study was conducted on 100 samples from dialysis unit to assess the level of stress regarding haemodialysis in CRF patients. The study revealed that, among the total samples 63% were above 51 years, 67% were male, 45% belongs to Hindu religion, 79% were married, 34% had educational qualification of High School and 61% were unemployed. Only 33% had the monthly income of 6001-9000 and 52% were undergoing haemodialysis from 1-3 years. The findings of the study revealed that the level of stress as extreme, severe, moderate and mild were 27%, 56%, 14% and 3% respectively. Significant association found between level of stress and demographic variables such as sex, duration of haemodialysis, education and monthly income.

The present study is supported by another descriptive study done by Kavitha .M, and Jayasri . N, in Chennai, TN, India. The objective of the study was to assess the stress and coping among chronic renal failure patients in selected hospitals, Chennai. A quantitative approach was used. The study was conducted with a sample size of 30 CRF patients. The samples were collected through non-probability convenient sampling technique. The investigators used the variable Performa, perceived the stress scale and coping strategies inventory scale. The data was collected using an interview method. The demographic characteristics revealed that with regard to age, the chronic renal patients were in 41-50 years (26.6 %), 56.6 % were males, 33.3 % of them completed their higher education, 63.3 % unemployed and duration of kidney disease was 1- 3 years among 46.6 %. The overall mean score of the stress among renal failure patients was 25.63 with standard deviation of 3.24. Out of the total patients 93.9 % of CRF patients had moderate stress and 6.60% of them had severe stress. The correlation between stress and coping level was significant at P <0.0438. There was significant association found between level of stress and income of CRF patients. [6]

Another supporting study was conducted by Julian Maria J and Arjunan Porkodi in Chennai, TN, India, to assess stress and coping among Indian patients subjected to haemodialysis at dialysis unit. A cross-sectional research design was adopted. Sixty patients were selected using

convenient sampling method. Study participants were completed the questionnaire on stress and coping. Among total samples 30% were in 41-50 age group, 73% of them were male, 52% completed their higher secondary education, 35% were not working due to present health status, 57% have monthly income between Rs. 10,000 – 20,000/- and duration of disease was between 1-3 years for 42% of the study population. Among patients subjected for dialysis, 39(65%) were having mild stress and 12(20%) were having moderate stress. The study also revealed that 38(63.3%) of the participant were never had coping where as 22(36.7%) had sometimes coping. [7]

CONCLUSION

The present study was an attempt to identify the level of stress regarding haemodialysis among CRF patients in Lisie hospital, Ernakulam, Kerala, India. The investigators found that most of the subjects are experiencing severe level of stress. The study findings throw light on the need for developing interventions, to reduce stress among CRF patients on haemodialysis.

The study emphasizes the importance of assessing the level of stress regarding haemodialysis among CRF patients. The investigators suggest that same study can be done in a vast population and a new study can be done regarding the coping and deviation methods for stress regarding haemodialysis.

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