RESEARCH PAPER

A Study to Assess the Level of Stress among Dialysis Patients in Selected Hospital, Puducherry

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ABSTRACT

Background: Chronic kidney disease is a major health problem worldwide and many patients require hemodialysis as a life – sustaining treatment. Hemodialysis is a long-term and demanding procedure that affects the physical, psychological, and social well-being of patients. patients undergoing regular dialysis often experience stress due to repeated hospital visits, financial burden, Dietary restrictions, and fear of complications . increased stress may reduce quality of life and treatment adherence, so assessment of stress level is important for providing proper nursing care.

Methods: A quantative research approach with descriptive design was used for the study. The study was conducted in selected hospital, Puducherry. 60 dialysis patients were selected by convenient sampling technique. data were collected using demographic variables and hemodialysis stressor scale (HSS).data were analysed using descriptive and inferential statistics.

Results: the study findings revealed that majority of dialysis patients had moderate level of stress ,few had severe level of stress and some had mild stress . There was a significant association between level of stress and selected demographic variables .

Conclusion: the study concluded that dialysis patients experience considerable level of stress due to long- term treatment and lifestyle changes , early identification of stress and proper psychological support can improve the quality of life of patients undergoing hemodialysis .

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INTRODUCTION

According to the World Health Organization (WHO), the annual mortality rate for patients on hemodialysis is about 15-20% per year in many countries. Stress is a psychological and physiological response that occurs when individuals are unable to cope with challenging situations. In patients undergoing hemodialysis, stress may lead to poor treatment adherence, decreased quality of life, and increased risk of anxiety and depression. Coping strategies play an important role in helping patients adjust to long - term support; counselling and positive thinking can reduce the level of stress among dialysis patients. Assessing the level of stress and coping strategies among patients undergoing hemodialysis is essential for planning appropriate nursing interventions and providing holistic care. The world's population is 7.49 billion in 2017, among which 1.34 billion live in India. It comprises 27.7% childhood, 17.99% adolescence, 40.9% early childhood, 7.3% late adulthood, and 6.09% of old age (WHO, 2017). In Tamil Nadu, 67.86 million people live, with a total of 69.6 crore males and 65.2 females, and in Chennai, 4.9 million people lives. Adults are among the important groups in the population. Chronic kidney disease (CKD) is a major public health problem worldwide, and its prevalence is increasing due to the rise in diabetes, hypertension, and aging population. Hemodialysis is one of the most common treatment modalities for patients with end-stage of renal disease, which helps to remove waste products and maintain fluid and electrolyte balance. However, hemodialysis is a lifelong and demanding procedure that affects the physical, psychological, and social well-being of the patient. Patients undergoing regular dialysis often experience stress due to

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repeated hospital visits, financial burden, dietary restrictions, dependency on treatment, and fear of complications. CKD is a global threat to health in general and in developing countries in particular because therapy is expensive and lifelong. In India, 90% of patients cannot afford the cost. Hemodialysis is a lifelong treatment that significantly and sometimes adversely affects patients' physical, mental, and social well-being. Chronic kidney disease is one of the major health problems affecting people worldwide, and patients with end-stage renal disease require lifelong treatment, such as hemodialysis, to survive. Hemodialysis is an effective treatment, but it causes many physical, psychological, and financial difficulties for the patients. Frequent visits, strict dietary and fluid restrictions, dependency on dialysis machines, and uncertainty about the future often create future stress among patients undergoing dialysis. Stress can negatively affect the patient's quality of life, treatment adherence, and overall health status. If stress is not identified early, it may lead to poor coping ability and emotional imbalance. Therefore, assessing the level of stress among patients undergoing hemodialysis is very important for providing holistic Nursing care. nurses have a key role in identifying stress and helping patients to adapt to their condition through proper guidance and counseling to improve their physical and psychological well-being.

CHRONIC KIDNEY DISEASE

Assess:
It refers to systematically collecting , analyzing, and interpreting data related to stress levels using a standardized hemodialysis stressors scale.

Stress:
It refers to the psychological and emotional strain experienced by patients undergoing hemodialysis as measured by the hemodialysis stressors scale (HSS).

Dialysis patients
It refers to individuals aged 18 years and above undergoing maintenance of hemodialysis for chronic kidney disease in the selected hospital during the study period.

Assumption
The dialysis patients may experience more stress.

OBJECTIVES OF THE STUDY

1. To assess the level of stress among dialysis patients
2. To associate the level of stress among the dialysis patients with their selected demographic variables.

MATERIALS AND METHODS

The quantitative research approach with a descriptive research design was used for the study. The study was conducted in a selected hospital; Puducherry .60 dialysis patients were selected by convenient sampling techniques. data were collected using demographic variables and hemodialysis stressor scale (HSS). Data was analyzed using descriptive and inferential statistics.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

Graphic and clinical characteristics of dialysis patients such as age, gender, educational status , occupation, marital status.

The tool will consist of two sections:

Section A- Demographic variables
This section includes items related to the socio demos, monthly income duration of illness, duration of dialysis treatment, number of dialysis sessions, per week and source of support.

Section B-hemodialysis stressors scale
The hemodialysis stressor scale (HSS) is a standardized instrument developed by Baldree et al (1982) To assess the various stressors experienced by patients undergoing hemodialysis. The tool is designed to identify the intensity of stress related to physical, psychological and social aspects of hemodialysis treatment. The scale consists of 29 items, which are grouped into three domains.

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of the data collected from 60 dialysis patients. The data was organized, tabulated and analyzed, according to the objectives. The findings are presented under the following sections.

ORGANIZATION OF THE DATA

SECTION A: Description of the demographic variables of dialysis patients.

SECTION B: Assessment of level of stress among dialysis patients.

SECTION C: Association of level of stress among dialysis patients with their selected demographic variables.

SECTION A: DESCRIPTION OF THE DEMOGRAPHIC VARIABLES OF THE DIALYSIS PATIENTS.

Table 1: Frequency and percentage distribution of demographic variables of dialysis patients

Demographic Variables	Frequency	Percentage
Age (years)		
18 – 31	**4**	**6.7**
31 – 40	**6**	**10.0**
41 – 50	**16**	**26.6**
51 – 60	**34**	**56.7**
Gender		
Male	**48**	**80.0**

Demographic Variables	Frequency	Percentage
Female	**12**	**20.0**
Religion		
Hindu	**47**	**78.3**
Christian	**5**	**8.4**
0Muslim	**8**	**13.3**
Others	**-**	**-**
Educational status		
Professional labor	**3**	**5.0**
PG and UG	**3**	**5.0**
Diploma	**4**	**6.7**
Higher secondary school	**10**	**16.7**
Middle school	**14**	**23.3**
Primary school	**14**	**23.3**
Illiterate	**12**	**20.0**
Marital status		
Married	**56**	**93.3**
Unmarried	**4**	**6.7**
Separated / Divorced	**-**	**-**
Widow / Widower	**-**	**-**
Occupation		
Profession	**4**	**6.7**
Semi – profession	**5**	**8.3**
Skilled worker	**13**	**21.7**
Semi-skilled worker	**10**	**16.7**
Unskilled worker	**4**	**6.7**
Unemployed	**24**	**40.0**
Income (Monthly)		
<5000	**18**	**30.0**
5000 – 10000	**29**	**48.3**
>10000	**13**	**21.7**
Duration of illness		
1 – 2 years	**18**	**30.0**
2 – 3 years	**29**	**48.3**
3 – 4 years	**5**	**8.4**
>4 years	**8**	**13.3**
Frequency of dialysis		
2 times per week	**55**	**91.7**
3 times per week	**5**	**8.3**
Distance from home to hospital		
Nearby house (5 km)	**14**	**23.3**
Long distance (about 5 km)	**46**	**76.7**

The table 1 shows that most of the dialysis patients,34(56.7%) were aged between 51-60 years , 48(80%) were male , 47(78.3%)were Hindus , 14(23.3%had middle and primary school education,56(93.3%) Were married , 24(40%) were unemployed, 29(48.3%) had income of between 5000-10000,29(48.3%) had the illness for 2-3 years , 55(91.7%) were undergoing dialysis for 2 times per week and 46(76.7%) stayed at home at a long distance(about 5km from hospital).

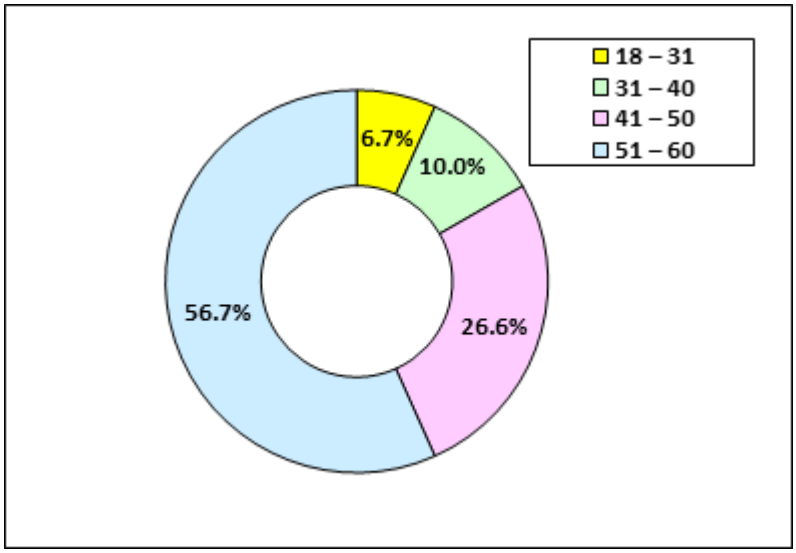


Fig:4.1 Percentage distribution of age of dialysis patients.

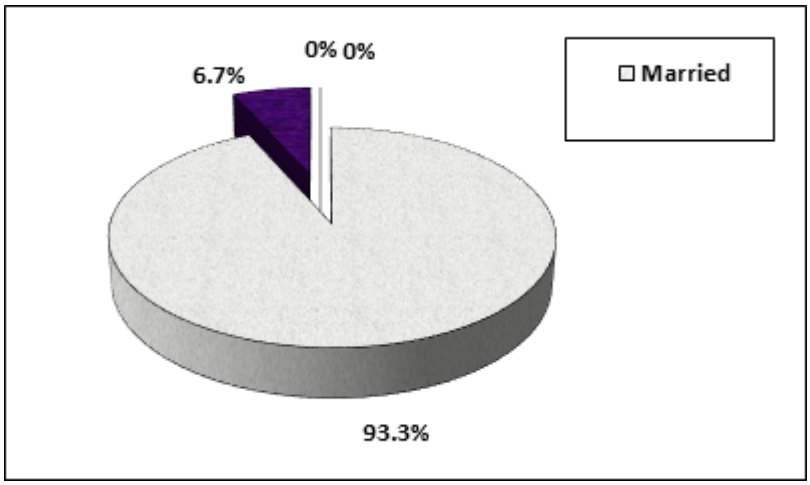


Fig : 4.2 Percentage distribution of marital status of the dialysis patients.

SECTION B: ASSESSMENT OF LEVEL OF STRESS AMONG THE DIALYSIS PATIENTS.

Table 2: Frequency and percentage distribution of level of stress among dialysis patients N =60

Level of Stress	Frequency	Percentage
Low (28 – 65)	1	1.7
Moderate stress (66 – 102)	56	93.3
High (103 – 145)	3	5.0

The above table 2 depicts that among the dialysis patients,56(93.3%) experienced moderate stress, 3(5%) had high stress and 1(1.7%) had low level of stress.

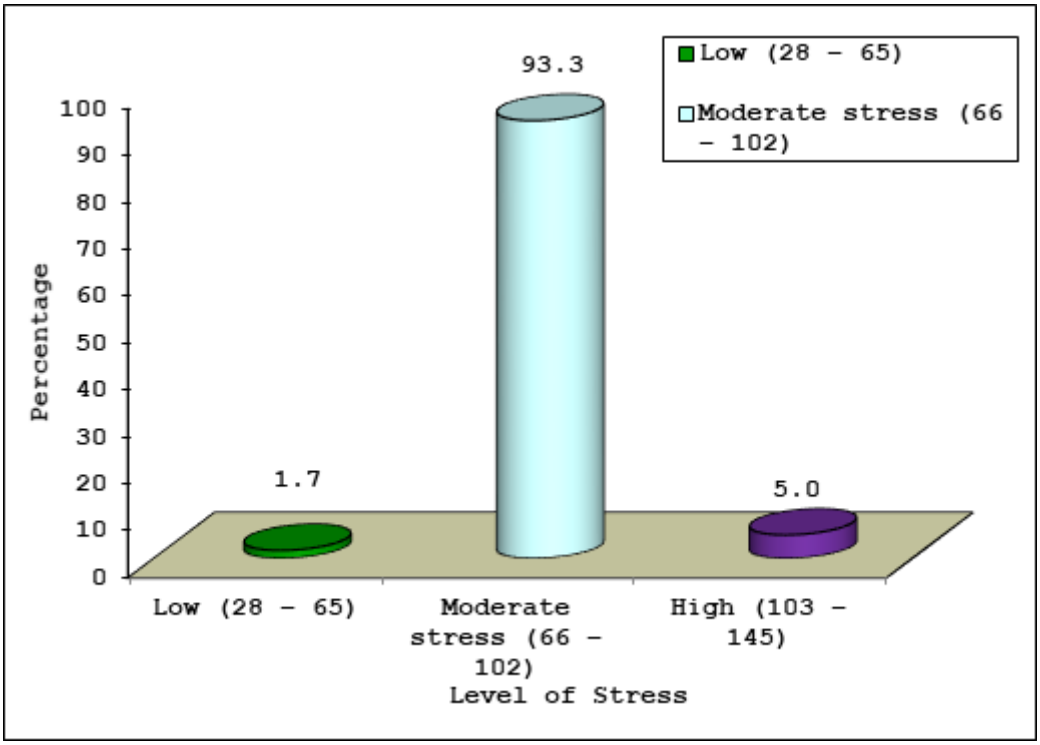


Fig:4.3 Percentage distribution of level of stress among the dialysis patients.

Table 3 : Assessment of mean and standard deviation of stress scores among the dialysis patients. N=60

Stress	Score
Median	93.50
Mean	91.57
SD	9.49

Table 3 shows that among the dialysis patients the mean score of stress was 91.57 ±9.49 with median score of 93.50.

SECTION C: ASSOCIATION OF LEVEL OF STRESS AMONG THE DIALYSIS PATIENTS WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.

Table: 4 Association of level of stress among the dialysis patients with their selected demographic variables.

Demographic Variables	Low		Moderate		High		Chi-Square & p-value
	F	%	F	%	F	%	
Age (years)							χ^2=14.985 d.f=6 p=0.020 S*
18 – 31	1	1.7	3	5.0	0	0	
31 – 40	0	0	6	10.0	0	0	
41 – 50	0	0	16	26.7	0	0	
51 – 60	0	0	33	55.0	1	1.7	
Gender							χ^2=0.517 d.f=2 p=0.772 N.S
Male	1	1.7	46	76.7	1	1.7	
Female	0	0	12	20.0	0	0	
Religion							χ^2=6.859 d.f=4 p=0.144 N.S
Hindu	1	1.7	46	76.7	0	0	
Christian	0	0	5	8.3	0	0	
Muslim	0	0	7	11.7	1	1.7	
Others	-	-	-	-	-	-	
Educational status							χ^2=9.121 d.f=12 p=0.693 N.S
Professional labour	0	0	3	5.0	0	0	
PG and UG	0	0	3	5.0	0	0	
Diploma	0	0	4	6.7	0	0	

Demographic Variables	Low		Moderate		High		Chi-Square & p-value
	F	%	F	%	F	%	
Higher secondary school	1	1.7	9	15.0	0	0	
Middle school	0	0	14	23.3	0	0	
Primary school	0	0	14	23.3	0	0	
Illiterate	0	0	11	18.3	1	1.7	
Marital status							χ^2=14.280 d.f=2 p=0.001 S*
Married	0	0	55	91.7	1	1.7	
Unmarried	1	1.7	3	5.0	0	0	
Separated / Divorced	-	-	-	-	-	-	
Widow / Widower	-	-	-	-	-	-	
Occupation							χ^2=15.733 d.f=10 p=0.108 N.S
Profession	0	0	4	6.7	0	0	
Semi – profession	0	0	5	8.3	0	0	
Skilled worker	0	0	13	21.7	0	0	
Semi-skilled worker	0	0	10	16.7	0	0	
Unskilled worker	1	1.7	3	5.0	0	0	
Unemployed	0	0	23	38.3	1	1.7	
Income (Monthly)							χ^2=3.426 d.f=4 p=0.489 N.S
<5000	1	1.7	17	28.3	0	0	
5000 – 10000	0	0	28	46.7	1	1.7	
>10000	0	0	13	21.7	0	0	
Duration of illness							χ^2=3.425 d.f=6 p=0.754 N.S
1 – 2 years	1	1.7	17	28.3	0	0	
2 – 3 years	0	0	28	46.7	1	1.7	
3 – 4 years	0	0	5	8.3	0	0	
>4 years	0	0	8	13.3	0	0	
Frequency of dialysis							χ^2=0.188 d.f=2 p=0.910 N.S
2 times per week	1	1.7	53	88.3	1	1.7	
3 times per week	0	0	5	8.3	0	0	
Distance from home to hospital							χ^2=0.630 d.f=2 p=0.730 N.S
Nearby house (5 km)	0	0	14	23.3	0	0	
Long distance (about 5 km)	1	1.7	44	73.3	1	1.7	

*p<0.05, S – Significant, N.S – Not Significant

The table 4 shows that the demographic variables age (x^2 =14,985, p=0.020) and marital status (x^2 = 14,280, p=0.001) had shown statistically significant association with level of stress among the dialysis patients at p<0.05 level and the other demographic variables had not shown statistically significant association with level of stress among the dialysis patients at p<0.05 level.

CONCLUSION

The present study concluded that dialysis patients are experiencing moderate to high level of stress due to long term treatment, dietary restriction, financial burden, physical weakness and fear complications. Proper psychological support, counselling and nursing care are necessary to reduce stress among dialysis patients. early identification of stress can help to improve quality of life of patients undergoing hemodialysis.

REFRENCES

1. World Health Organization. preventing chronic kidney disease stress and health A vital investment. Geneva: world health organization; 2019
2. Perumal A. A descriptive study to assess the stressors, level of stress and coping strategies of patients undergoing hemodialysis. Int J nurse med invests. 2022;(3): 25-31.
3. Manoj Dhungana, et al, (2023). Moderate stress level among patients undergoing hemodialysis in a tertiary care center. J Nepal Med Assoc; 61 (264) : 651 -3.
4. Joseph N, Thomas A, Philip A S. et al. A study to assess the level of stress regarding hemodialysis among chronic renal failure patients in a selected hospital Ernakulam, Kerala, India. International journal of research and review. 2017; 4 (11) :23-26.
5. Priyadharshini M, Varghese LS, HemaVH . Depression, anxiety, stress and coping strategies among patients undergoing hemodialysis.

International journal of advance research in nursing.2023;6(1):07.

6. Archana V, Dr. Rajalakshmi, (2025). A Study to assess the level of stress, anxiety and depression among patients with chronic kidney disease in selected hospitals, Hosur. journal of neonatal surgery, 14(21s), 1091- 1096.
7. Sharmila. S, Hannah Ashwini D. S, M jeyagowri(2022). A study to assess the level of perceived stress and coping strategies among patients receiving hemodialysis for end stage oof renal disease in east coast hospitals, Puducherry. IJNRD, Volume 7, issue 8.
8. Micheal D, john M, Samuel u, Lakshmi G. Assessment of hemodialysis stressors among patients undergoing maintenance hemodialysis. MGM J Med sci 2024; 11:678- 83
9. Shinde, M., & Mane, S. P. (2014). Stressors and the coping strategies among patients undergoing hemodialysis. International Journal of Science and Research (IJSR), 3(2), 266–276.
10. Ahamed. M., & Al Nazley, E.k (2015). Hemodialysis: stressors and coping strategies. psychology, health and medicine ,20(4), 477- 487.
11. Alshammari, O.A., et al. (2024). prevalence of anxiety and depression among end - stage of kidney disease patients on dialysis in Saudi Arabia. journal of family medicine and primary care, 13(10).