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Nursing

A Study to Assess the Association of Stress and Anxiety with Self Care in Hemodialisis Patient Admitted at Selected Hospital Bagalkot

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Abstract	**Original Research Article**

Background: Stress and anxiety have intertwined behavioral and neural underpinnings. Grasping the mechanisms underlying this bidirectional relationship will have major clinical implications for managing a wide range of psychopathologies. Chronic and progressed renal failure remarkably affects the physical and mental health of an individual chronic kidney disease (CKD) is a serious disease with considerable health consequences. ***Methodology:*** The research design selected for this study was descriptive research design. The sample size comprises of 60 patients with hemodialysis admitted at selected Hospital Bagalkot. The sampling technique adopted for this study will be simple random technique. In the present study the data will be collected by standard tool stress, anxiety and self care for, the data was analyzed by using descriptive and inferential statistics in terms of mean percentage by distribution, and Chi square test for association. ***Result:*** the association between stress and self-care ($\chi^2=6.08$) and p value is 0.013 had shown significant association with hemodialysis patient and association between anxiety with self care ($\chi^2=0.19$) the p value is 0.64. There is the chai square value of stress is more then table value so their is significant association between stress and self-care. ***Conclusion:*** The descriptive study shows that mean ± SD score of perceived stress among hemodialysis patient was 23.4 ± 3.44, median was 41.4 and range was about 15, anxiety among hemodialysis patient was 12.58 ± 3.81, median was 13 and range was about 16, self-care among hemodialysis patient was 68.08 ± 7.82, median was 69 and range about 29 and. There is the chai square value of stress is more then table value so their is significant association between stress and self care
Keywords: Assess, association, hemodialysis, stress, anxiety, self-care.

INTRODUCTION

The kidneys perform several important functions including excretion of waste products such as ammonia and urea, electrolyte regulation, and acid-base balance. They play a vital role in the control of blood pressure and the maintenance of intravascular volume via the renin-angiotensin-aldosterone system [1]. The underlying mechanism is associated with renal medullary hypoxia, direct toxicity of contrast agents, oxidative stress, apoptosis, immune/inflammation and epigenetic regulation in contrast-induced nephropathy [2]. chronic kidney disease is highly prevalent (10-13% of the population), irreversible, progressive, and associated with higher cardiovascular risk. Patients with this pathology remain asymptomatic most of the time, presenting the complications typical of renal dysfunction only in more advanced stages [3]. chronic kidney disease is a worldwide public health problem with an increasing incidence and prevalence, poor outcomes, and high cost. Outcomes of chronic kidney disease include not only kidney failure but also complications of decreased kidney function and cardiovascular disease [4]. In persons with pre-existing kidney disease, secondary prevention, including blood pressure optimization and glycemic control, should be the main goal of education and clinical interventions [5]. Stress and anxiety have intertwined behavioral and neural underpinnings. Grasping the mechanisms underlying this bidirectional relationship will have major clinical implications for managing a wide range of psychopathologies. defining individual trait anxiety in rodents, and participating in the link between stress and anxiety [6].

MATERIALS AND METHODS

Research approach quantitative research approach. the present study is non experimental

descriptive design. a purposive sampling technique where used to select of 60 hemodialysis patient from B.V.V.S HSK Hospital and research center Bagalkot. written consent was taken from participant for the study. self-structured questionaries for socio demographic variables, standardized perceived stress scale (pss 10), standardized anxiety scale and standaredized selfcare scale. where used as tool for data collection. the data was analyzed by using descriptive and inferential statistical.

Study Design: The study design adopted for this study was non experimental descriptive design.

Setting of the Study: The present study was conducted at B.V.V.S. HSK Hospital and research center Bagalkot

PARTICIPANT:
In the present study participant were the hemodialysis patient who are admitted in B.V.V.S. HSK Hospital and research center Bagalkot. who met the inclusive criteria were selected as sample for the study.

INSTRUMENT:
The study was conducted using a structured questionaries for socio demographic variables, standardized perceived stress scale (pss 10), standardized anxiety scale and standaredized selfcare scale.

DESCRIPTION OF THE DATA COLLECTION INSTRUMENT
PART I: Questionaries to assess the socio demographic data of hemodialysis patient
PART II: perceived stress scale (pss 10) will be used to assess the level of perceived stress
PART III: Anxiety scale will be used to assess the anxiety level
PART IV: Self care scale will be used to assess the level of self care

DATA COLLECTION PROCEDURE:
The data collection was carried out from 04-10-2025 among hemodialysis patients who are undergoing treatment the BVVS HSK Hospital and Research Centre, Bagalkot. Permission was obtained from the medical superintendent of BVVS HSK Hospital before data collection. Written consent was obtained from 60 subjects. Superficial patients were selected on the basis of Probability simple random sampling technique.

VARIABLE UNDER THE STUDY:
Study variables for the present study were the perceived stress, anxiety and self-care among hemodialysis patient.

SOCIO DEMOGRAPHICVARIABLE:
Age, gender, marital status, occupational status, educational status, residancial status, family income frequency of hemodialysis per week and co morbidities

STATISTICAL ANALYSIS
The obtained data were statistically examined in terms of the objectives of the study using descriptive and inferential statistics. A master sheet was prepared with responses given by the study participant. Frequencies and percentage was used for the analysis of demographic data, and karl-pearsons co relational co efficient was used to determine significance of co relation between perceived stress, anxiety and self-care The chi square test to find out the association between socio demographic variables and perceived stress, anxiety and self-care.

Ethical Clearance
A certificate of ethical permission was obtained from ethical committee of the institution and written consent was taken from each participant.

RESULT
PART I: Description of socio demographic variables
In this study their age group shows 36.6% of hemodialysis patient age group of 41 -50 years, followed by 26.7% of hemodialysis patient age group of 31 – 40 years, 25% of hemodialysis patient where in 51 – 60 years, and 11.7% of hemodialysis patient age group above 60 years. according to their gender describe that majority 66.7% of hemodialysis patient in males, followed by 33.3% of hemodialysis patient in females. according to their marital status described that majority 96.6% of hemodialysis patient are married, followed by 3.4% are widows. according to their occupation status majority 41.7% of hemodialysis patients are labor, followed by 21.7% government worker, followed by 20% of non-government workers, followed by 16.6% of hemodialysis patients are business. according to their educational status indicates that majority 33.3% of patients had completed primary education, followed by 26.7% of hemodialysis patient completed degree and above followed by 13.4% patient completed PUC, followed by 13.3% patient competed secondary education followed by 13.3% patient no formal education. according to their residence status shows that majority 65% of hemodialysis patient living in rural area, followed by 35% hemodialysis patient were living in a urban area. according to their family income shows that majority 30% of hemodialysis patient family income of 10000-20000 and 21000-30000, followed by 20% hemodialysis patient family income of Less than 10000 and 31000-Above. according to their frequency of hemodialysis per week show that majority 68.3% pat6ient having 3 times per week, followed by 23.3% patients 2 times per week, followed by 6.7% of patient 1 time per week, followed by 1.7% of patient 4 times per week. according to their co-morbidities. morbidity all patient had co-morbidity yes (100%) and No is (0).

PART II: Assessment of perceived stress among hemodialysis patient.

Table 1: Frequency and percentage distribution of hemodialysis according to their stress
N = 60

Description	Score	Frequency	Percentage %
Low	0 - 13	0	0%
Moderate	14 – 26	50	83.3%
Severe	27 – 40	10	16.7%

Table 1. Shows that percentage wise distribution of hemodialysis patient according to their stress level shows that majority 83.3% hemodialysis patient, followed by 16.7 % followed by 0%.

Table 2: Mean, Median, Range, SD, of hemodialysis patient according to their level of perceived stress PSS-10 N = 60

Demographic	Mean	Median	range	SD
Perceived stress scale (pss-10)	23.4	41.4	15	3.44

Table 2 study result shows that mean ± SD score of perceived stress among hemodialysis patient was 23.4 ± 3.44, median was 41.4 and range was about 15.

PART III: Assessment of anxiety among hemodialysis patient

Table 3: Frequency and percentage distribution of hemodialysis according to their anxiety
N = 60

Description	Score	frequency	Percentage
Minimal	0-4	1	1.6%
mild	05—09	15	25%
Moderate	10—14	23	38.4%
Severe	15 or above	21	35%

Table 3 Shows that percentage wise distribution of hemodialysis patient according to their anxiety level shows that majority 38.4% hemodialysis patient, followed by 35 % severe followed by 25% mild followed by 1.6% minimal.

Table 4: Mean, Median, Range, SD of hemodialysis patient according to their level of anxiety
N = 60

Demographic	Mean	Median	Range	SD
Anxiety scale	12.58	13	16	3.81

Table 4 study result shows that mean ± SD score of anxiety among hemodialysis patient was 12.58 ± 3.81, median was 13 and range was about 16.

Table 5: Frequency and percentage wise distribution among hemodialysis patient with self-care

Description	Score	Frequency	Percentage
low	0-29	0	0%
moderate	30-58	11	18.3%
High	59-88	49	81.7%

PART IV: Assessment of self-care among hemodialysis patient N=60

Table 5 Shows that percentage wise distribution of hemodialysis patient according to their self care level shows that high 81.7% hemodialysis patient, followed by 18.3 % moderate followed by low 0%.

Table 6: Mean, Median, Range, SD of hemodialysis patient according to their self care level
N = 100

Demographic	Mean	Median	range	SD
Self care	68.08	69	29	7.82

In this study result shows that mean ± SD score of self-care among hemodialysis patient was68.08 ± 7.82, median was 69 and range about 29.

PART 5: Find out association between Stress, Anxiety, with self-care among hemodialysis

Table 7: Association between perceived stress (PSS -10) and selected socio demographic variables among hemodialysis patient. N = 100

SI	Demographic	Df	chi Square	Table value	p value	Association
1	Stress	1	6.08	3.84	0.013	Association
2	Anxiety	1	0.19	3.84	0.65	not association

P=<0.05

Table 7: shows that association between perceived stress and anxiety with self-care among hemodialysis admitted in HSK Hospital Bagalkot. The table shows that the association between stress and self-care (χ^2=**6.08**) and p value is 0.013 had shown significant association with hemodialysis patient and association between anxiety with self care (χ^2=**0.19**) the p value is 0.64. There is the chai square value of stress is more then table value so their is significant association between stress and self-care

PART VI: Association between perceived stress (PSS 10) anxiety and self-care among hemodialysis patient with their selected socio demographic variables

Table 8: association between perceived stress (PSS 10) selected socio demographic variables among hemodialysis patient

SI	SOCIO DEMOGRAPHIC	Df	chi square	table value	p value	Association
1	Age	1	0.87	3.84	0.34	Not Association
2	Gender	1	7.5	3.84	0.006	Association
3	Marital Status	1	0.5	3.84	0.47	Not Association
4	Occupational Status	1	6.85	3.84	0.008	Association
5	Educational Status	1	4.83	3.84	0.02	Not Association
6	Residence Status	1	0.01	3.84	0.89	Not Association
7	Family Income	1	3.75	3.84	0.05	Not Association
8	Frequency Of Hemodialysis	1	9.6	3.84	0.001	Not Association
9	Co Morbidities	1	0	3.84	1	Not Association

P=<0.05

Table 8: shows that association between stress on gender(χ^2=7.5) had shown significant association with hemodialysis patient and occupational status (χ^2=6.85) shows that significant association with hemodialysis and other socio demographic variables are age, (χ^2=0.87)marital status, (χ^2=0.5)educational status(χ^2=4.83),residence status, (χ^2=0.01) family income , (χ^2=3.75)frequency of hemodialysis, (χ^2=9.6) and co morbidities, (χ^2=0) are not associated.

TABLE 9: Find out association between anxiety with their socio demographic variable among hemodialysis

Si	Sociodemographic Variables	Df	Chi Sqare	Table Value	P Value	Association
1	Age	1	8.67	3.84	0.003	Association
2	Gender	1	1.16	3.84	0.28	Not Association
3	Marital Status	1	1.91	3.84	0.166	Not Association
4	Occupation Status	1	4.83	3.84	0.02	Not Association
5	Education Status	1	0.07	3.84	0.78	Not Association
6	Residence Status	1	1.51	3.84	0.21	Not Association
7	Family Income	1	8.56	3.84	0.003	Association
8	Frequency Of Hemodialysis	1	0.001	3.84	0.96	Not Association
9	Co Morbidities	1	1.911	3.84	0.16	Not Association

P=<0.05

Table 9: in the current study the socio demographic variable association between anxiety on age(χ^2=8.67) had shown significant association with hemodialysis patient and family income (χ^2=8.56) shows that significant association with hemodialysis and other socio demographic variables are gender, (χ^2=1.16) marital status, (χ^2=1.91) occupational status, (χ^2=4.83) residence status, (χ^2=1.51) frequency of hemodialysis, (χ^2=0.001) co morbidities, (χ^2=1.911) are not association.

TABLE 10: find out association between self care with their socio demographic variable among hemodialysis

SI NO	socio demographic variable	DF	chi square	table value	p value	Association
1	Age	1	0.511	3.84	0.4744	Not Association
2	Gender	1	5.56	3.84	0.01	Not Association
3	Marital Status	1	1.71	3.84	0.19	Not Association
4	Occupational Status	1	2.67	3.84	0.1	Not Association
5	Educational Status	1	2.75	3.84	0.09	Not Association
6	Residence Status	1	4.85	3.84	0.02	Not Association
7	Family Income	1	4.85	3.84	0.02	Not Association
8	Frequency Of Hemodialysis	1	11.42	3.84	7.26	Association
9	Co - Morbidities	1	0.03	3.84	0.85	Not Association

$P=<0.05$

TABLE 10: shows that association between self-care on frequency of hemodialysis ($\chi^2=11.42$) had shown significant association with hemodialysis patient and other socio demographic variables are age, ($\chi^2=0.511$) gender, ($\chi^2=5.56$) marital status, ($\chi^2=1.71$) occupational status, ($\chi^2=2.61$) educational status, ($\chi^2=2.75$) residence status, ($\chi^2=4.85$) family income, ($\chi^2=4.85$) co morbidities, ($\chi^2=0.03$) are not associated.

DISCUSSION

of the study shown related to perceived stress shown that majority 83(83%) of hemodialysis stress, mean patient were having moderate level of perceived stress among hemodialysis patient was 23.4±3.44, median was 41.4 and range was perceived ± SD score about 15.

In this study result shows that mean ± SD score of anxiety among hemodialysis patient was 12.58 ± 3.81, median was 13 and range was about 16. In this study result shows that mean ± SD score of self-care among hemodialysis patient was68.08 ± 7.82, median was 69 and range about 29.

The association of stress with self-care the stress($\chi^2=6.08$) had shown significant. stress shown that majority 83(83%) of hemodialysis stress, mean patient were having moderate level of perceived stress among hemodialysis patient was 23.4±3.44, median was 41.4 and range was perceived ± SD score about 15. of the study shown that the association between perceived stress with socio demographic variables was like gender ($\chi^2= 7.5$) and occupational status ($\chi^2= 6.85$) had shown significant association with perceived stress (PSS-10) among hemodialysis patient anxiety with sociodemographic variables was like age ($\chi^2= 8.67$) and family income ($\chi^2=8.56$).

Self-care with socio demographic variables was like frequency oh hemodialysis ($\chi^2=11.42$).

LIMITATION
The study limited to the sample of 60 hemodialysis patient admitted at B.V.V.S. HSK Hospital and research center Bagalkot

CONCLUSION
The study concluded that majority of hemodialysis patient who are admitted the association between stress and self-care ($\chi^2=6.08$) and p value is 0.013 had shown significant association with hemodialysis patient and association between anxiety with self-care ($\chi^2=0.19$) the p value is 0.64. There is the chai square value of stress is more than table value so their is significant association between stress and self care.

DECLARATION BY AUTHORS
Ethical approval: Institutional ethical clearance approved.

Conflict of Interest: The authors declare no conflict of interest.

REFERANCES

1. Soriano RM, Penfold D, Leslie SW. Anatomy, Abdomen and Pelvis: Kidneys. [Updated 2023 Jul 24]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK482385/ [1]
2. nephropathy. *Life Sci*. 2020; 259:118379. doi: 10.1016/j.lfs.2020.118379 Zhang F, Lu Z, Wang F. Advances in the pathogenesis and prevention of contrast-induced.[2]
3. Ammirati AL. Chronic Kidney Disease. *Rev Assoc Med Bras (1992)*. 2020;66Suppl 1(Suppl 1):s03-s09. Published 2020 Jan 13. doi:10.1590/1806-9282.66. S1.3.[3]
4. Levey AS, Coresh J, Balk E, et al. National Kidney Foundation practice guidelines for chronic kidney disease: evaluation, classification, and stratification [published correction appears in Ann Intern Med. 2003 Oct 7;139(7):605]. *Ann Intern Med*.

2003;139(2):137-147. doi:10.7326/0003-4819-139-2-200307150-00013[4]

5. PK, Garcia-Garcia G, Lui SF, et al. Kidney health for everyone everywhere: from prevention to detection and equitable access to care [published correction appears in J Nephrol. 2020 Aug;33(4):867. doi: 10.1007/s40620-020-00792-3.]. Li *J Nephrol*. 2020;33(2):201-210. doi:10.1007/s40620-020-00728SSSSSs.[5]

6. Daviu N, Bruchas MR, Moghaddam B, Sandi C, Beyeler A. Neurobiological links between stress and anxiety. Neurobiol Stress. 2019; 11:100191. Published 2019 Aug 13. doi: 10.1016/j.ynstr.2019.100191.[6]