

# STRESS AMONG PATIENTS ON REGULAR HEMODIALYSIS AT ELJMEEH CENTER IN DONGOLA TOWN- SUDAN 2022

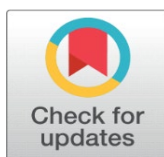
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Received 19 June 2023  
Accepted 20 July 2023  
Published 03 August 2023

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DOI  
[10.29121/granthaalayah.v11.i7.2023.5212](https://doi.org/10.29121/granthaalayah.v11.i7.2023.5212)

**Funding:** self-funded by the researchers, not any external funding sources.

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## ABSTRACT

**Background:** stress is commonly reported among dialysis patients, but their prevalence and correlates vary by sociocultural context.

**Objective:** The aim of this study is to determine the level of stress and associated factors among patients receiving hemodialysis at ELJMEEH CENTER in DONGOLA town.

**Method:** Descriptive cross-sectional design was used. 90 patients receiving hemodialysis were included. The patients were interviewed while undergoing their dialysis session using the perceived stress scale. verbal and written consent was taken. The data was analyzed by SPSS program and presented in tables and figures.

**Result:** there was no significant statistical relationship between demographic data of the study group and stress level, except with patient resident P value (0.022). More than half of the study group were male, living in villages, their level of education as for as primary or secondary.

**Conclusion:** There is no statistical relationship between stress and demographic data except in education and the total level of stress was moderate.

**Keywords:** Hemodialysis, Sudan, Dongola Town, Eljmeeh Center

## 1. INTRODUCTION

The first cross-sectional study was done in the United States. The results showed that most of the participants were men aged 60 years. 48% completed high school. Depression occurred in 40.8%. Depression scores were higher in illiterate patients than in highly educated patients [Nagar et al. \(2021\)](#). A second study from

Saudi Arabia, a cross-sectional study, found that the probability of depression according to HADS (23.3%) is showing. Before the onset of ESRD, only (11.3%) had been diagnosed with depression or anxiety. Age is an important factor for anxiety and depression. Anxiety and depression are common in ESRD patients in Mecca and anxiety can be predicted by the family. Early detection, management, and family support can improve treatment outcomes [Elkheir et al. \(2020\)](#). A third study, also conducted in Saudi Arabia, showed that 24.6% had depression and 19 had depression in a cross-sectional study of 122 CKD patients. 7% have symptoms of anxiety. Anxiety symptoms were more common in women than men ( $P = 0.04$ ). Advanced age was associated with depression ( $P = 0.003$ ). Patients' symptoms of depression and anxiety were not associated with their education, employment, duration of illness, and duration of hemodialysis [Alshelleh et al. \(2023\)](#). A fourth, national cross-sectional study in Egypt found that 45.3% of people with depressive symptoms agreed using the BDI. Despite the prevalence of depression, only 9.5% were diagnosed and received antidepressant treatment [Semaan et al. \(2018\)](#). Fifth, 68% of ESRD patients undergoing dialysis in Sudan. New patients on dialysis for less than 1 year had more depressive symptoms. 7% (21.6%) at 2-3 years of dialysis or 11.8% at 3 years. Chi-square tests revealed associations between depression and age, duration of dialysis, symptoms of weight gain without dieting, and symptoms related to anxiety or social or occupational dysfunction. Logistic regression testing showed that age and duration of dialysis were associated with depression (significant difference (0.724, 0.211) [Helali et al. \(2020\)](#)). A sixth study, also conducted in Sudan, included 120 patients with a 41% prevalence of depression. The prevalence of severe, moderate, and mild depression is 6.6%, 23.3% and 11.7% [Turkistani et al. \(2014\)](#), respectively.

## 2. METHODOLOGY

This was descriptive cross-sectional hospital-based study done during the period from November 2022 to January 2023. This study was conducted in Dongola is the capital of the state Northern Sudan, on the banks of the Nile. Abdullah AL-Jomiah Dialysis Center, the center started its work in 2008. It contains 24 machines and accommodates 150 patients. It works three shifts six-day week except Friday. The study includes patients on regular dialysis session in the center, both gender; Critical ill patient, unstable patient, and patient with mental disorder were excluded. (90) Patients were participated and available during time of study. Data was collected using Perceived stress scale (PSS) is classic stress assessment, the tool originated and developed in 1993 was used composed of five liker scale rates (0=never, 1= almost never, 2= sometimes, 3= fair often, 4= very often). Evaluation scale (E S): - Score range from 0-13 considered low stress, Score range from 14-26 considered moderate stress, Score range from 27-40 considered high stress. The Data was collected during four weeks, every patient was interviewed alone after session of dialysis, the objective of study was explained to them and they have the chance to refuse. The data coded then analyzed by SPSS programed several statistical measures was used (frequency, percentage, means, stander deviation), Chi-square test, and P value was concenter significant (0.05). The research proposal was approved from the faculty. Agreement was taken from the director of the hospital / dialysis center. Verbal consent was taken from the patient, and they have right to stop or continue any time.

### 3. RESULTS

**Table 1**

**Table 1 Cross Tabulation Between Stress Scale and Demographic Data of the Study Group**

Stress level	Demographic data
<i>P (0.815)</i>	Age
<i>P (0.681)</i>	Gender
<i>P (0.013)</i>	Education level
<i>P (0.022) **</i>	Resident
<i>P (0.728)</i>	Occupation
<i>P (0.180)</i>	Income
<i>P (0.428)</i>	Marital status
<i>P (0.231)</i>	Duration

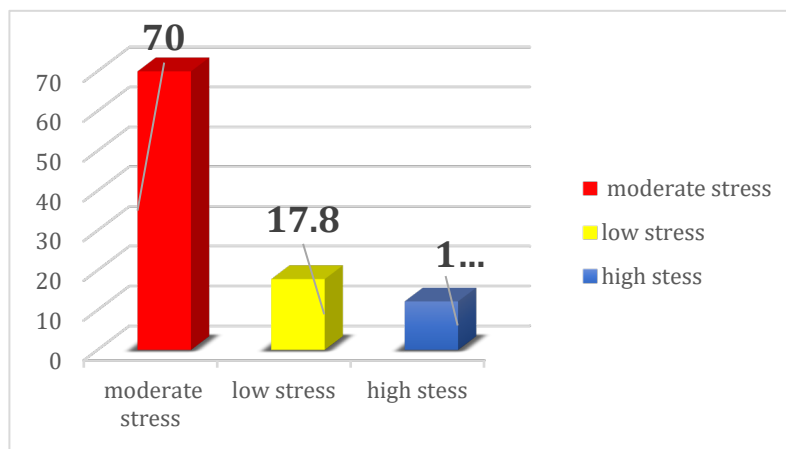
\*p value significant at (0.05) \* and highly significant < (0.05) \*\*

**Table 2**

**Table 2 Study Group Duration of Illness**

Duration	Frequency	percentage
< 1years	12	13.30%
1-3 years	22	24.40%
3-5 years	26	28.90%
>5 years	30	33.30%
Total	90	100

**Figure 1**



**Figure 1 Study Group Level of Stress**

### 4. DISCUSSION

The main aim on this study was to explain the coping styles in hemodialysis patient in relation to stress factors based on cross sectional model.

The present study reveals that more than half of study group (55.4) their age between (41-60) years, and gender of study group (55.6) male and half of them resident in village, less than one thirty of them they were education either primary

school or university. This study revealed, that patient who undergo dialysis for more than 5th years are more stress than those who undergoing dialysis for less than 5th years. There was similar study and in agreement with the study done in Khartoum showed that the percentage of stress or depression in patient who undergoing dialysis for less than one years had more stress symptoms than those who undergo dialysis for 2-3 years this is disagreement with our study.

Moreover, most patients undergoing dialysis were male have stress. In a similar study was done in Khartoum show that the most patient undergo dialysis were male and this agreement with this study. In addition to that, the study showed that most patients have stress was stay in home (house wife). These finding was in agreement with a similar study done in Khartoum also show that patient have stress stay in home. Furthermore, the study showed that most patients have stress their level of education is primary school. This result was in similar study done in Khartoum also show that patient have stress their level of education was primary school (10). Also, the study showed that most patient have stress was married .in similar study was done in Khartoum also show that patient have stress was married (10). Moreover, the study showed that the most patient who have stress were advanced age group between (41-60).in similar study was done in hospital of Nadiad city show that patient have stress was advanced age group between (40-50) this is agreement with our study (14).

The study shows that the most patient who have stress was low income .in similar study was done in hospital of Nadiad city show that patient have stress was low income this is agreement with our study (14). More than 70% of study group have moderate stress .no statistic relation between data and scale unless in education result for knowledge and duration of disease. While 12, 2% have high stress result for new case, low income, family factor and occupation. While 17, 8% have lower stress level result from coping with disease so there is no stress. Finally, the study reveals that, there was no significant statistical relationship between demographic data of the study group and stress level, except with patient resident P value (0.022).

## **5. CONCLUSION**

More than half of the study group were male, living in villages, there level of education as for as primary or secondary, there is no statistical relationship between stress and demographic data except in education and the total level of stress was moderate.

## **6. RECOMMENDATION**

The necessity of the presence of a psychological specialist for patient in dialysis unit. Peer group have to be established by the hospital manger including all medical staff specially nurses using all media and facilities. Training the nursing staff on how to deal with stressed patients to overcome their psychological problem. Activation of family role and support and should be influenced by the community doctors and community nurses.

## **AUTHOR DECLARATIONS**

We confirm all relevant ethical guidelines have been followed, and any necessary IRB and/or ethics committee approvals have been obtained.

## CONFLICT OF INTERESTS

None.

## ACKNOWLEDGMENTS

Our special thanks to all my teacher in faculty of nurse in Dongola University whom teach, guide and instruct me through my study. Our deepest gratitude goes to all conjunction of patients and outpatient clinic staff those who were encouraging and support us throughout this work in ELjmeeh Center for dialysis.

## REFERENCES

- Alshelleh, S., Alhawari, H., Alhourri, A., Abu-Hussein, B., & Oweis, A. (2023). Level of Depression and Anxiety on Quality of Life Among Patients Undergoing Hemodialysis. *Int J Gen Med*, 16, 1783-1795. <https://doi.org/10.2147/IJGM.S406535>.
- Elkheir, H.K., Wagaella, A.S., Badi, S., Khalil, A., Elzubair, T.H., Khalil, A., & Ahmed, M.H. (2020). Prevalence and Risk Factors of Depressive Symptoms Among Dialysis Patients with End-Stage Renal Disease (EsrD) in Khartoum, Sudan: A Cross-Sectional Study. *J Family Med Prim Care*. Jul 30, 9(7), 3639-3643. [https://doi.org/10.4103/jfmprc.jfmprc\\_1229\\_19](https://doi.org/10.4103/jfmprc.jfmprc_1229_19).
- Helali, M.A.H., Ibrahim, A. A., Eltayieb, M.A., Elmalik, A.B., & Alsayed, A.H.Y. (2020). Assessment of Depression among End Stage Renal Disease Hemodialysis Patients at the National Ribat University Hospital and Ibn Sena Specialized Hospital (July-2017). *Clin Res Nephrol Kidney Dis*, 1(1), 1002.
- Nagar, K., Vaidya, A., & Patel, K. (2021). Depression, Anxiety and Stress among the Patient of Chronic Kidney Disease at Nadiad City, A Cross Sectional Survey.
- Nagy, E., Tharwat, S., Elsayed, A. M., Shabaka, S. A. E., & Nassar, M. K. (2023). Anxiety and Depression in Maintenance Hemodialysis Patients : Prevalence and their Effects on Health-Related Quality of Life. *Int Urol Nephrol*. <https://doi.org/10.1007/s11255-023-03556-7>.
- Semaan, V., Noureddine, S., Farhood, L. (2018). Prevalence of Depression and Anxiety in End-Stage Renal Disease : A Survey of Patients Undergoing Hemodialysis. *Appl Nurs Res*, 43, 80-85. <https://doi.org/10.1016/j.apnr.2018.07.009>.
- Turkistani, I., Nuqali, A., Badawi, M., Taibah, O., Alserihy, O., Morad, M., Kalantan, E. (2014). The Prevalence of Anxiety and Depression Among End-Stage Renal Disease Patients on Hemodialysis in Saudi Arabia. *Ren Fail*, 36(10), 1510-5. <https://doi.org/10.3109/0886022X.2014.949761>.