International Journal of Multiphysics
Volume 18, No. 3, 2024
ISSN: 1750-9548

Assessment of Psychological wellbeing and Activities of Daily Life Among Elderly Patients with Chronic Renal Failure

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Abstract

Background & Aim: Chronic kidney disease is a major health concern in Egypt, often requiring lifelong hemodialysis (HD) especially among elderly. Patients on long term HD has a great impact on their health-related quality of life, as it affects physical, social, psychological and spiritual well-being of patients. The current study aimed to assess psychological wellbeing and activities of daily life among elderly patients with chronic renal failure.

Methods & Materials: Descriptive design was used via a purposive sample of 100 elderly with chronic renal failure. Three tools were used; structured interview questionnaire (sociodemographic data & medical history), DASS (21) depression, anxiety and stress scale and Katz scale for activities of daily living.

Results: The study findings reported that the elderly mean age was 66.04±4.59 years, 54% were males, 70% belonged to rural areas, 48% were married, 54% were illiterate, 40% were housewives before retirement, almost all studied patients attended three hemodialysis sessions per week, hypertension and diabetes were the leading causes of renal failure among elderly, only 18% of the elderly patients were independent in activities of daily life, 30% suffered from extremely severe depression, 64% suffered from extremely sever anxiety and 16% suffered from extremely sever stress.

Conclusion: Chronic renal failure had negative effect on psychological wellbeing and activities of daily life among elderly patients.

Recommendations: Replicate the study on larger sample size for longer period to further assess psychological wellbeing and activities of daily life among elderly patients with chronic renal failure. Encourage the development of supportive groups for elderly dialysis patients to enhance psychological wellbeing, and provide occupational therapy interventions to improve functional independence.

Keywords: Activities of Daily Life, Chronic Renal Failure, Elderly Patients, Psychological wellbeing

Introduction

The process of aging population will inevitably increase age-related comorbidities including chronic kidney disease (CKD). In light of this demographic transition, the lack of an age-adjusted CKD classification may enormously increase the number of new diagnoses of CKD in old subjects with an indolent decline in kidney

function. Overdiagnosis of CKD will inevitably lead to important clinical consequences and pronounced negative effects on the health-related quality of life of these patients **(Alfano et al. 2022).**

Aging is a gradual and irreversible pathophysiological process. It presents with declines in tissue and cell functions and significant increases in the risks of various aging-related diseases, including neurodegenerative diseases, cardiovascular diseases, metabolic diseases, musculoskeletal diseases and immune system diseases. Although the development of modern medicine has promoted human health and greatly extended life expectancy, with the aging of society, a variety of chronic diseases have gradually become the most important causes of disability and death in elderly individuals (**Guo et al., 2022)**.

Aging is a process associated with a range of damage both on a molecular and cellular level. The first age-related body changes appear after the age of 30. The kidneys are one of the organs most prone to aging, which manifested by decrease in the number of nephrons with age and glomerular filtration **(Dybiec et al., 2022).** Kidney aging is associated with molecular and physiological changes that cause a loss of renal function and of regenerative potential. As the aging population grows, it is crucial to understand the mechanisms underlying these changes, as they increase the susceptibility to developing acute kidney injury (AKI) and chronic kidney disease **(Rex et al., 2023).**

Patients with chronic kidney disease undergoing renal replacement therapy by hemodialysis (HD) presents series of complications due to the development of the disease also to the therapeutic method **(Timofte et al., 2021).** Unfortunately, patients with HD exhibit a variety of complications, including fatigue, weakness that are common physical problem after dialysis, nausea, anorexia, vomiting, muscle cramps, headaches, and dizziness, and interruption of everyday life. In addition, HD creates problems such as limitations of consuming liquids and foods. Various physical, psychological, and social pressures, feelings of loneliness and isolation, lack of supportive resources, and dependence on dialysis may lead to uncontrolled and aggressive behaviors. On the other hand, these inappropriate behaviors negatively affect the patient-family relationship and the family caregiver and increase the burden of care **(Hejazi et al., 2021).**

World Health Organization (WHO) defines psychological wellbeing as a state of mind in which an individual is able to develop their potential, work productively, and creatively, and is able to cope with the normal stresses of life **(WHO, 2021).** Psychological well-being is considered crucial for comprehensive health and happiness and has been linked to improved mental health, better physical health, and longer life expectancy (**Dhanabhakyam &Sarath, 2023).**

Depression, anxiety and stress can arise as a consequence of several factors as a result of being sick, hospitalization, procedures and dangerous environment **(Al- Shammari et al., 2021).** Depression and anxiety are frequent comorbid disorders among CKD patients, with estimated prevalence of approximately 25% in this population, and are associated with worse outcomes, such as progression to ESRD and mortality. The transition from pre-dialysis management to renal replacement therapy is a stressful event in the course of CKD, leading to challenges and decisions that might increase their susceptibility to anxiety, mood disorders or even exacerbate psychological issues that already exist **(Nagar et al., 2021).** Stress occurs when the individual considers their relationship with the environment to be threatening or overwhelming in a way, which can affect well-being. The HD patient experiences periods of great psychological stress over the course of the disease, with adaptation becoming necessary. This adaptation process usually takes place over around 66 days. After six months of HD and with new consolidated care habits, the patient should be able to face the illness with low levels of stress, as the perception of stress is dependent on life events and the development of coping strategies that form part of the concept of resilience **(García-Martínez, et al., 2021).**

The activities of daily living (ADL) is a term used to collectively describe fundamental skills required to independently care for oneself, such as eating, bathing, and mobility. ADL is use as an indicator of a person's functional status. The inability to perform ADL results in the dependence of other individuals and/or mechanical devices. Measurement of an individual's ADL is important as these are predictors of admission to nursing homes, need for alternative living arrangements, hospitalization, and use of paid home care (Edemekong et al ., 2024) .Consequently, physical inactivity is a significant factor to the worsening of physical status with adverse clinical

outcomes that partially alleviated by engagement in regular exercises, which is associated with a decreased mortality risk, enhanced quality of life, and reduced depressive symptoms and fatigue **(Parker et al., 2021).**

Hemodialysis can be an emotionally difficult experience for patients. Nurses provide emotional support and work to meet the psychosocial needs of their patients, helping them manage the stress associated with chronic disease and its treatment (**Güvener & Gümüş, 2024)**.

Significance of the study:

Chronic kidney disease is a progressive condition that affects >10% of the general population worldwide, amounting to >800 million individuals. Chronic kidney disease is more prevalent in older individuals (**Kovesdy, 2022).** In this context, chronic kidney disease is one of the most important health challenges in Egypt **(Yamany et al., 2017).** Chronic kidney disease is one of the major health challenges in Egypt; it affects 13% of the adult population, resulting in a diminished quality of life and significant morbidity, mortality, and healthcare costs. It remained the 16th leading cause of premature death **(Nagib et al., 2023).**

Aim of the study:

The aim of the current study is to assess psychological wellbeing and activities of daily life among elderly patients with chronic renal failure.

Method

Study Design and Setting

A descriptive study design was utilized to conduct the current study in hemodialysis unit at Zagazig university hospital and in hemodialysis unit El-Ahrar Teaching Hospital in Zagazig City.

Sample

The sample of this study included 100 elderly patients from the aforementioned setting who met the following criteria; 60 years, older both sexes (male & female), receiving regular hemodialysis for not less than 12 hemodialysis sessions and agree to participate in the study and able to communicate.

Sample size

The sample size was computed using Ebi-info package at level of confidence 95 %, a margin error 50 % and power of test was 80 % assuming psychological wellbeing among elderly was 50 %, was 100 patients.

Tool of data collection

To gather the required data, three tools were used. **Tool I:** a structured interview questionnaire that was developed by the researchers based on the literature review. It composed of two parts: demographic characteristics; age, sex, residence, marital status, educational level, previous occupation, current occupation, living condition, sufficiency of monthly income. Health profile of the studied elderly; duration of disease, comorbidity with renal failure, causes of renal failure, duration of hemodialysis numbers of sessions per week, duration of hemodialysis session.

Tool II: Katz scale: This scale used to assess the activities of daily living (ADL), it was designed by *Katz and Akpom (1983).* It contains six closed-ended questions about bathing, dressing, going to toilet, mobility, continence, and feeding.

Scoring system: The total score ranges from 6 to 18. Each of these six functions is measured and scored according to the elderly actual performance, and categorized into one of three levels of dependence. These were “Totally dependent” scored 3, “Need assistance” scored 2, and “Totally independent” scored 1, so that a higher score indicates more dependence. The scores of the six domains were summed-up, and the total score ranged from 6 to 18. According to Katz and Akpom, the total score is classified into three categories; Totally dependent: 13-18; Need assistant: 7-12; and totally independent: 6.

Tool III: DASS (21) Depression, Anxiety and Stress Scale (Souse et al., 2017): Depression, anxiety and stress scale included 21 Items. (DASS-21) is a set of three self-report scales designed to measure the psychological states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items, divided into 3 subscales with similar content.

- **The depression subscale:** It contains seven closed-ended questions (Questions 3,5,10,13,16,17&21) about dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia.
- **The anxiety subscale:** It contains seven closed-ended questions (Questions 2, 4, 7, 9, 15, 19&20) about autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect.
- **The stress subscale**: It contains seven closed-ended questions (Questions 1, 6, 8, 11, 12, 14&18). It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient.

Scoring system: The degree to which respondents endorsed the symptoms over the last week is rated on a scale that ranges from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). Higher scores reflect higher levels of symptom endorsement calculated by summing the scores for the relevant items. Scores on the DASS-21 will need to be multiplied by 2 to calculate the final score. The total score classified into five categories

	Depression	**Anxiety**	**Stress**
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Validity:

The validity was done by group of panels who were three Experts from nursing and medical staff who reviewed the tools and ascertained clarity, relevance, comprehensiveness, and understandability.

Tool reliability:

Reliability of tools were assessed through estimating test-retest reliability and measuring its internal consistency. Internal consistency of the tools was assessed by calculating Cronbach alpha coefficients. The reliability proved to be high as shown by the values of Cronbach alpha coefficient in the following table:

Scales	**No of items**	**Cronbach's alpha**
Activities of Daily Living	6	0.862
Anxiety subscale	7	0.952
Depression subscale	7	0.935
Stress subscale	7	0.923

Pilot study:

A pilot study was carried out on 10 elderly patients representing 10% of the total studied sample, to test its feasibility, clarity, comprehensiveness and applicability of the study tools. Also, to estimate the necessary time for completion of the data collection tools sheet. All participants received a clear clarification about the study purpose. The elderly enrolled in the pilot, were included in the main study sample as there were no modifications done.

Fieldwork

After obtaining an official permission from the General Director of internal medicine hospital in Zagazig University Hospitals and the General Director of Al Ahrar Hospital, to conduct the study and get access to patients attending the setting**,** the researcher started the actual fieldwork by meeting the elderly patients attending the hemodialysis unit to be familiar with them. Next, the researcher explained to them the aim and process of the study, and invited them to participate. Those who agreed and fulfilled the eligibility criteria were included in the sample. They were individually interviewed by the researcher using the data collection form.

Administrative design:

An official letter indicating the aim of the study and its procedures was issued from the postgraduate department of the Faculty of Nursing to the General Director of Internal Hospital at Zagazig University hospitals and the General Director at Al Ahrar Hospital, asking for permission and cooperation.

Statistical design:

The collected data were organized, tabulated, and statistically analyzed using the Statistical Package for Social Sciences (SPSS) version 27. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means, standard deviations for quantitative variables. Cronbach alpha coefficient was calculated to assess the reliability of the study tools through their internal consistency**.**

Results

Elderly patient's demographic characteristics (n = 100)

Table 1 displays that, the mean age was 66.04±4.59 years, 54% of them were males, 70% of them belonged to rural areas, 48% of them were married, 54% of them were illiterate, 40% of them were housewives before retirement, while 50% of them work without effort now and 48% of them were living with their husband /wife, 52% of them had sufficient income.

Elderly patient's medical history (n = 100)

Table 2 reveals that, 42% of the studied patients had hypertension, hypertension and diabetes were the leading causes of renal failure among elderly patients, 48% of the studied patients received hemodialysis treatment for five years. Almost all studied patients attended three hemodialysis sessions a week for four hours.

Elderly patient's activities of daily life (n=100)

Figure 1 depicts that, two-fifths of elderly patients were totally dependent in activities of daily life, while 44% were partially dependent, and only 16% were independent in activities of daily life.

Elderly patient's depression level (n=100)

Figure 2 reveled that, 24 % and 30 % of the elderly hemodialysis patients suffered from severe and extremely severe levels of depression respectively, while 36% didn't have depression.

Elderly patient's anxiety level (n=100)

Figure 3 portrays that, 64% of elderly patients suffered from extremely severe anxiety, while only 16% were classified as normal with no significant anxiety symptoms.

Elderly patient's stress level (n=100)

Figure 4 clarifies that, 62 % of elderly hemodialysis patients suffered from varied degrees of stress ranged from mild stress to extremely sever stress, while 38% of the elderly patients free from stress.

Elderly patient's total depression, anxiety and stress level (n=100)

Table 3 reveals that, the highest level of psychological wellbeing was anxiety (mean = 11.88, SD = 6.34) followed by stress (mean = 10.52, SD = 5.37), and finally depression (mean = 9.62, SD = 7.21).

Relation between characteristics of the studied elderly patients and their total level of activities of daily life

Table 4 displays highly statistically significant relations between studied elderly patient's total level of activities of daily life and their age, sex, and occupation before retirement ($p<0.01$). In addition, there were a statistically significant relations with place of residence, level of education, current occupation and sufficiency of monthly income ($p<0.05$).

Relation between characteristics of the studied elderly patients and their total level of depression

Table 5 shows highly statistically significant relations between studied elderly patient's total level of depression and their age, sex, level of education, occupation before retirement and sufficiency of monthly income ($p<0.01$). In addition, there was a statistically significant relation with current occupation ($p<0.05$).

Relation between characteristics of the studied elderly patients and their total level of anxiety

Table 6 declares highly statistically significant relations between studied elderly patient's total level of anxiety and their place of residence, marital status and occupation before retirement ($p<0.01$). In addition, there were a statistically significant relations with age, sex, level of education and sufficiency of monthly income ($p<0.05$).

Relation between characteristics of the studied elderly patients and their total level of stress

Table 7 represents highly statistically significant relation between studied elderly patient's total level of stress and their sex ($p<0.01$). In addition, there were a statistically significant relations with Age (years), level of education, occupation before retirement, and sufficiency of monthly income ($p<0.05$).

Discussion

Concerning age, the present study results revealed that the mean age of studied patients was 66.04±4.59 years. The increasing mean age of the elderly with end stage renal failure may reflect the improvements in health care system and safety standers performed in Egypt and so increase life expectancy. This result is matched with a study conducted by **Hewidef et al. (2024)** in Zagazig, Egypt, who illustrated that the mean age of patients on dialysis was 66.50 ± 4.24 years. In addition to that, a study done in Suez Canal, Egypt by **Mohamed et al. (2021)** reported that the mean age of dialysis patients was 67.19 years.

Pertaining to sex, the current study results displayed that more than half of studied patients in were men. This may be due to differences in lifestyle between both sexes, where males may have unhealthier lifestyle as smoking, which may lead to a higher risk factor for hypertension and diabetes which are the most common causes of ESRD. Also, male residents in rural areas are prone to vigorous work especially farming, which may lead to heavy swearing and more concentration of sodium which later may contribute to kidney stones and renal failure. This result is in the same line with a study conducted in Sohag, Egypt by **Albadry et al. (2020).** And study in Iraq by **Al-Khazaali et al., (2021)** who showed that the highest percentage of the studied patients were males. In contrast with these findings, a study conducted in Zagazig, Egypt by **Abdrabouh et al. (2022)** revealed that more than half of the studied elderly were women.

Pertaining to place of residence, the result of the existing study revealed that, more than two third of studied patients belonged to rural areas. This finding may be attributed to the setting of data collection in Zagazig University and Al Ahrar Hospital at El-Sharkia governorate, which characterized by its agricultural nature and so most attendee belong to rural areas, this result is in agreement with a study done by **Elzeiny and El-Emary (2023)** in Dyarb Negm**,** Egypt, reported that the majority of their studied patients belonged to rural areas. In addition, **Elshafie et al. (2023)** confirmed that the majority of their patients lived in rural areas.

As regards marital status, the current study results displayed that around half of studied patients were married. This result might be attributed to increased life expectancy of both sex in Egypt. This result is in parallel to study conducted in Menoufia Governorate, Egypt, by **Elsedawy et al. (2023)** which reported that more than three quarters of participants were married.

As to educational level, the present study results showed that slightly more than half of studied patients and more than two fifth were illiterate. These findings may be due to that the majority of studied sample were from rural areas, where illiteracy is common among older generation. This result is in agreement with a study done in Morocco by **Boukhira et al. (2022)**, who reported that less than two-thirds of the patients were illiterate.

Regarding occupation before retirement, the present study results clarified that less than two thirds of studied patients were unemployed. This result might be attributed to being illiterate, which limit the chance of being employed and instead may accept any other job. These findings are in congruent with **Panma et al. (2019)** who stated that nearly three quarters of the patients with CRF were unemployed. In addition, **Alosaimi et al., (2020)** stated that half of the patients were unemployed.

Regarding current occupation, the present study results clarified that less than half of studied patients have no current work and about half of them have work without effort. Possible explanation is that most of patients were not capable of tolerating workload beside their illness and because they are aged. Besides, impaired physical status, the nature of the disease, strict hemodialysis schedule and the need to attend hemodialysis sessions three times a week make it difficult for the elderly patients to keep job. This result meets the finding of a study conducted in hemodialysis unit at Kafr Elsheikh governorate General Hospital in Egypt, which revealed that the majority of the study subjects didn't have current work **Mohamed et al. (2020).**

Regarding monthly income, the present study results clarified that slightly more than half of studied patients had sufficient monthly income. This result might be attributed to receiving financial support from sons or government as Takaful we Karameh (Solidarity and Dignity). Similarly, in Beni-Suef, Egypt **Abdalla et al., (2022)** found that more than half of the studied elderly had sufficient monthly income. Also, a study by **Abdallah et al. (2021),** in Sharkia Governorate, Egypt revealed that more than half of the studied elderly had sufficient income.

Medical history

Concerning causes of renal failure, the results of the current study revealed that, the main cause of renal failure among elderly patients in the study sample were hypertension and diabetes. In the same vein, a study conducted in USA by **Burrows et al. (2022)** reported that hypertension and diabetes as the leading causes of renal failure among elderly individual. Also, a study by **Ali et al. (2023)** in Pakistan concluded that hypertension and diabetes mellitus are the main cause of chronic kidney disease.

As regards to Duration of hemodialysis treatment, the present study revealed that nearly half of the patients receiving hemodialysis treatment for five years. It may be due to that maintenance hemodialysis undergo for multiple years, with survival rates improving due to advances in dialysis technology, better infection control, and comprehensive management of comorbidities such as hypertension and diabetes. In the same line, study conducted in Egypt by **Elsayed et al. (2019)** clarified that more than two-fifths of patients were on HD treatment for five years. In addition, **El-Saidy (2025**) reported that more than half of the elderly patients underwent HD treatment for four years. Also, **Xu et al. (2023)** showed that nearly two-thirds the patients had been receiving hemodialysis for more than five years in China.

Pertaining to the number and duration of hemodialysis sessions, the present study results clarified that all studied patients attended three hemodialysis sessions per week for four hours. This finding is supported by study done in Mansoura, Egypt by **Mohamed et al. (2020)** mentioned that all patients received hemodialysis three times per week that prolonged four hours for each session. Moreover, a study done in Menoufia, Egypt by **Zahran et al. (2020)** showed that the majority of patients received hemodialysis three times per week that prolonged four hours for each session.

Relation between characteristics of the studied older patients and their total level of activities of daily life

The current study results reveal significant associations between the total level of activities of daily living (ADLs) among the elderly hemodialysis patients and several sociodemographic factors. Highly significant relationships were observed with age, and statistically significant relations with place of residence and sufficiency of monthly income.

The finding that elderly patients aged 60-65 years had higher ADL scores is supported by **Junqué et al. (2021)** in Spain, who found that lower physical activity levels in hemodialysis (HD) patients were linked to older age. Similarly, **Santos et al. (2022)** in Brazil reported that age was significantly associated with functional and activity limitations in HD patients, identifying age as a predictor of poorer physical functioning. This is likely due to the natural aging process, which increases vulnerability to health issues, slows recovery, and reduces physical resilience. In HD patients, these effects are intensified by the physical demands of dialysis and the burden of chronic illness, making it more difficult for older individuals to maintain strength, mobility, and independence.

Besides, **Furtado et al. (2022)** in Portugal reported that elderly individuals living in rural areas demonstrated higher levels of activities of daily life independence compared to their counterparts in urban settings. It may be older adults in rural areas being active through manual tasks such as farming, gardening, and household chores, which help maintain their strength and mobility. Plus, **Abdel Kareem et al. (2024)** in Minia University, Egypt illustrated that there were significant associations in work character in elderly hemodialysis patients, indicating that individuals engaged in vigorous work demonstrated less disability compared to those with office work or not working.

In the same vein**, Ngamaba et al. (2017)** in UK noted highly statistically significant positive correlations between economic status with activities of daily life because individuals with higher economic resources often have better access to healthcare, nutritious food, and supportive services. These advantages enable them to maintain better physical health and independence, which translates into improved ability to perform daily tasks. Conversely, lower economic status may limit access to such resources, leading to greater challenges in managing daily activities**.**

Relation between characteristics of the studied older patients and their total level of depression

The current study results illustrated significant relations between studied elderly patient's total level of depression and their age ($p<0.01$).

In the same line **Abdelmobdy et al. (2022),** in a study conducted in Cairo, Egypt, reported a statistically significant relationship between depression severity and age, with increasing age being associated with higher levels of depression.

Also, **Zahran et al. (2024),** in a study conducted in Menoufia, Egypt to detect depression among patients undergoing regular hemodialysis, found that depression was significantly associated with older age.

Relation between characteristics of the studied older patients and their total level of anxiety

The current study results highlighted significant associations between anxiety levels among the studied elderly patients and several sociodemographic variables. There were highly statistically significant relations with place of residence and there were statistically significant associations with age, and sufficiency of monthly income.

This result is supported by **Ravindran et al. (2021)** in India, who reported that age and was significant negative predictors of the psychological domain, including anxiety, among patients with end-stage renal disease (ESRD). As patients grow older, they often face an increased burden of comorbidities, physical frailty, and functional decline, all of which heighten psychological stress and reduce resilience. Older ESRD patients are particularly vulnerable to existential anxiety, social isolation, and fears related to dependency, disability, and mortality.

This result is supported by **Cukor et al. (2007)** in USA, whose results highlighted that psychosocial factors such as perceived social support and coping resources significantly influence anxiety levels in dialysis patients. Given that urban patients generally have better access to these resources, they tend to experience lower anxiety.

In contrast, rural elderly patients often face greater social isolation and limited access to mental health services, which can intensify anxiety symptoms.

Moreover, **Thapa et al. (2020)** in Australia reveled that, financial security, indicated by sufficient or saving monthly income, reduces stressors that commonly exacerbate anxiety among the elderly. Financial hardship may compel patients to deplete their savings, liquidate their assets, or incur debt to pay for daily necessities and healthcare services. Lower socioeconomic status, higher rates of poverty, and fewer educational opportunities commonly may also contribute to chronic stress and uncertainty, which can intensify anxiety.

Relation between characteristics of the studied older patients and their total level of stress

The present study results revealed statistically significant associations between total stress levels and sociodemographic factors including age, educational level and sufficiency of monthly income.

These findings align well with study conducted by **Naganandini (2024)** in India illustrated that, age was significantly related to stress indicating that older adults tend to experience higher stress levels. The educational level also exhibited a significant correlation with stress. In addition, financial status also had a positive coefficient indicating that financial resources relate to varying levels of stress, financial strain can significantly influence stress in diverse ways. Also, another study in USA by **Marshall et al. (2021)** revealed that, financial sufficiency emerged as a key factor, with patients reporting adequate or saving monthly income experiencing lower stress.

Ultimately, this result is consistent with a study conducted in India by **Mahdavi (2016)**, which reported significant associations between anxiety, stress, and depression and various demographic factors, including age, marital status, economic status, and education level.

Conclusion

From the current study results it can be concluded that, hypertension and diabetes were the leading causes of renal failure among elderly, only 18% of the elderly patients were full functioning in activities of daily life, 30% of the elderly patients suffered from extremely severe depression, 64% of the elderly patients suffered from extremely sever anxiety and 16% of the elderly patients suffered from extremely sever stress.

Recommendations

Replicate the study on larger sample size for longer period to further assess psychological wellbeing and activities of daily life among elderly patients with chronic renal failure. Encourage the development of support groups for elderly dialysis patients to enhance psychological wellbeing, and provide occupational therapy interventions to improve functional independence.

Acknowledgments

The present research article was derived from Doctorated dissertation, Gerontological Nursing Department, Faculty of Nursing, Zagazig University. The elderly patients who actively participated in the study are acknowledged by the authors as well as the medical team at hemodialysis unit in Zagazig university hospital and El-Ahrar Teaching Hospital at Zagazig City for facilitating the data collection process.

Declaration of Conflicting Interests

The Author(s) declare(s) that there is no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Table 1: Elderly patient's demographic characteristics (n = 100)

Items	**No**	**%**
Age (years)		
60 - <65	38	38.0
65 and more	62	62.0
Mean (SD)	66.04±4.59	
Sex		
Male	54	54.0
Female	46	46.0
Place of residence		
Rural	70	70.0
Urban	30	30.0
Marital status		
Single	4	4.0
Married	48	48.0
Widow	40	40.0
Divorced	8	8.0
Level of education		
Illiterate	45	54.0
Reads and writes	14	14.0
Primary and preparatory school	6	6.0
Middle school (Secondary)	12	12.0
University	14	14.0
Occupation before retirement		
Employee	26	26.0
Farmer	32	32.0
Craft	2	2.0
Housewife	40	40.0
Current occupation		
No work	40	40.0
Work with effort	10	10.0
Work without effort	50	50.0
Living arrangements		
Alone	8	8.0

With husband /wife	48	48.0
With one of sons	40	40.0
With another relative	4	4.0
Sufficiency of monthly income		
Sufficient and saving	14	14.0
Sufficient	52	52.0
Not sufficient	34	34.0

*Significant p ‹0.05. **Highly significant p ‹0.01. Not significant p>0.05

Table 2: Elderly patient's medical history (n = 100)

Items	**No**	**%**
***Health problems with renal failure**		
Hypertension	46	46.0
Diabetes	40	40.0
Cardiovascular disease	10	10.0
GIT	10	10.0
Respiratory	6	6.0
Non	8	8.0
Causes of renal failure		
Diabetes	36	36.0
Hypertension	42	42.0
Congenital anomaly	4	4.0
Medication such as analgesic	10	10.0
Idiopathic (un known cause)	8	8.0
Duration of hemodialysis treatment		
>3 months - < 1 year	8	8.0
1< 5 years	44	44.0
>5 years	48	48.0
Numbers of hemodialysis sessions per week		
Two	4	4.0
Three	96	96.0
Duration of hemodialysis session		
Three hours	0	0.0
Four hours	100	100

*Significant p ‹0.05. **Highly significant p ‹0.01. Not significant p>0.05 *More than one answer

Figure 1: Elderly patient's activities of daily life (n=100)

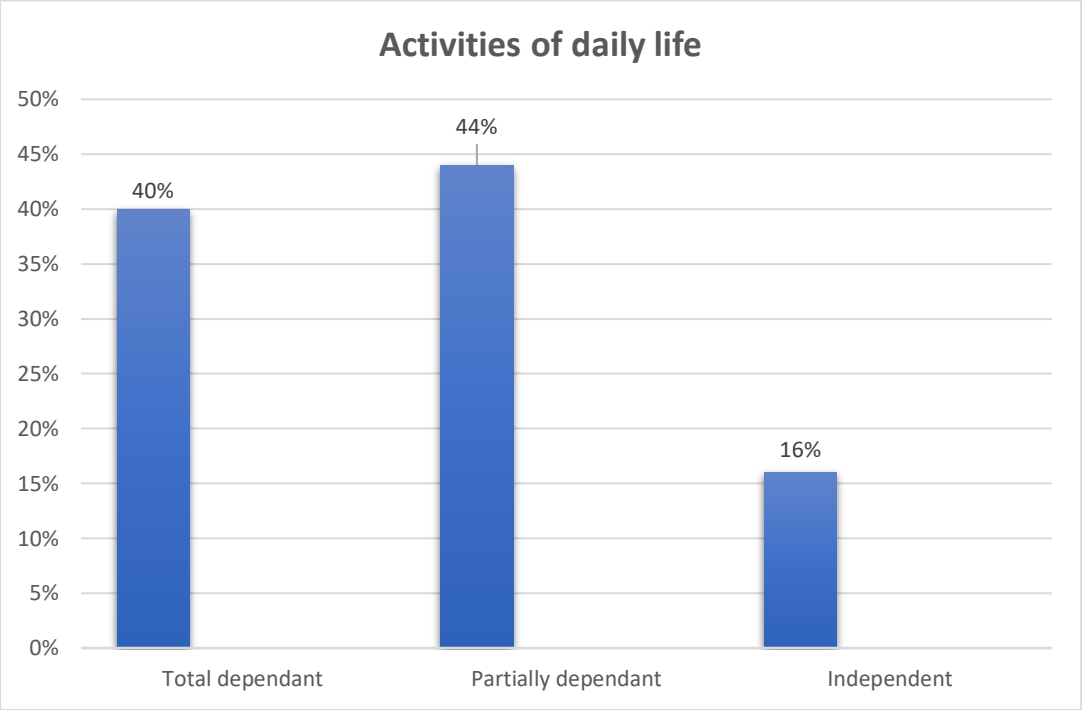

Figure 2: Elderly patient's depression level (n=100)

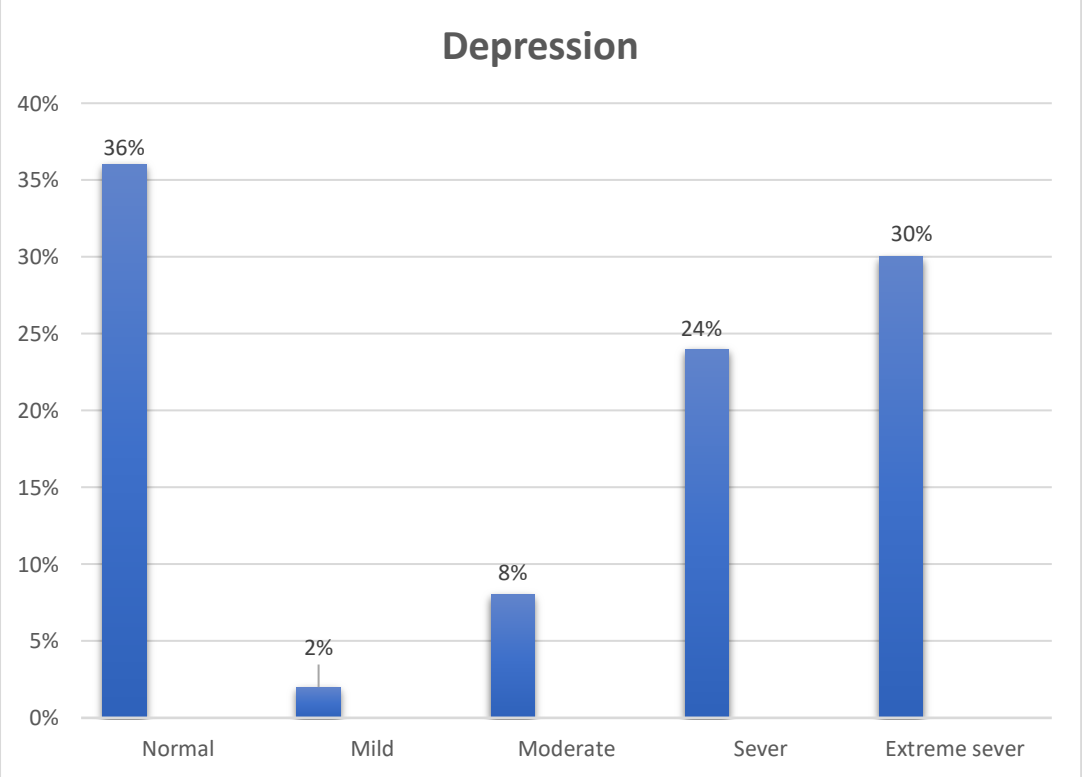

Figure 3: Elderly patient's anxiety level (n=100)

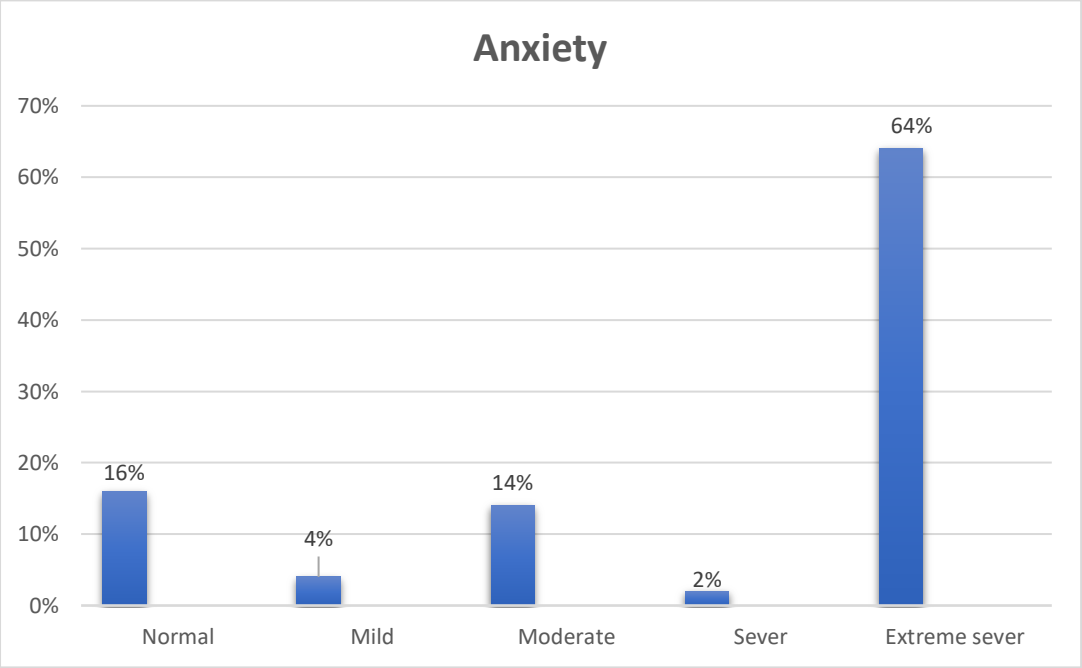

Figure 4: Elderly patient's stress level (n=100)

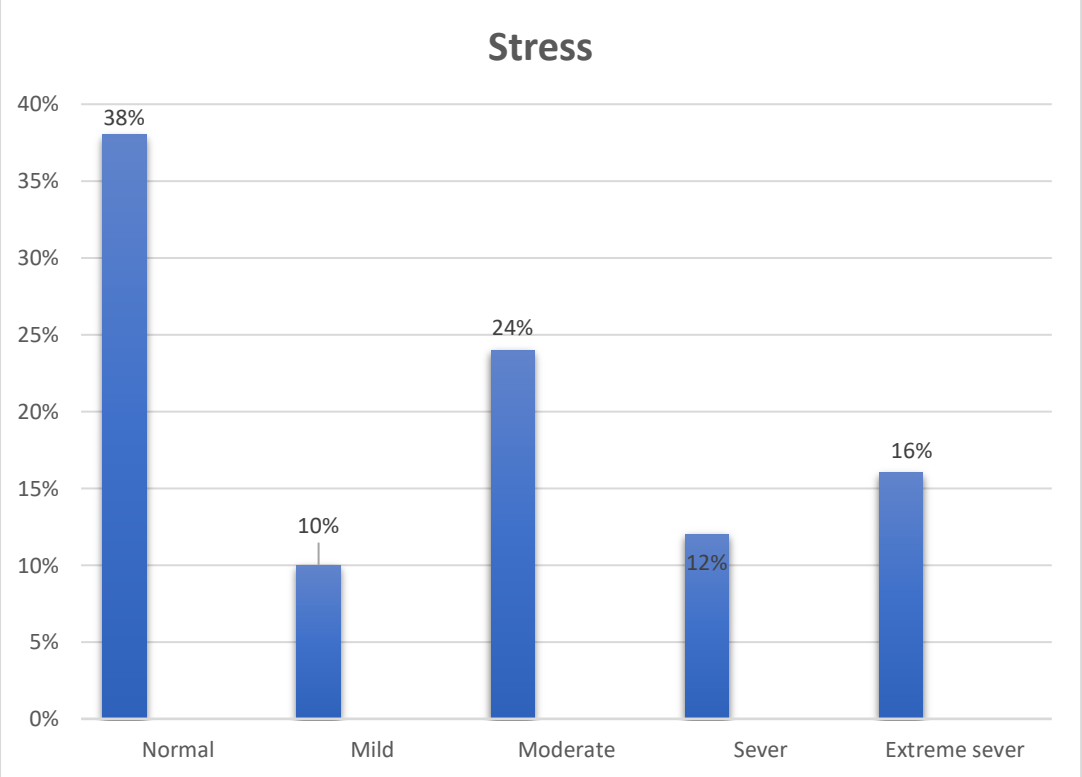

Table 3: Elderly patient's total depression, anxiety and stress level (n=100)

Item	Mean ±SD
Total depression	9.62±7.21
Total anxiety	11.88±6.34
Total stress	10.52±5.37

^ Independent t-test. *Significant at p ‹0.05. **Highly significant at p ‹0.01

Table 4: Relation between characteristics of the studied elderly patients and their total level of activities of daily life

Demographic characteristics	Mean ±SD
Age (years)	
60 - <65	3.72±1.65
65 and more	3.56±1.85
Sex	
Male	4.26±1.58
Female	2.91±1.65
Place of residence	
Rural	3.89±1.68
Urban	3.07±1.79
Marital status	
Single	3.50±3.54
Married	3.75±1.59
Widow	3.50±1.85
Divorced	3.75±1.89
Level of education	
Illiterate	3.70±1.46
Reads and writes	5.14±1.46
Primary and preparatory school	1.33±0.58
Middle school (Secondary)	3.50±1.76
University	3.00±2.16
Occupation before retirement	
Employee	3.46±1.81
Farmer	4.75±1.00

Craft	3.64±1.73
Housewife	3.00±1.75
Current occupation	
No work	3.90±1.83
Work with effort	3.80±1.48
Work without effort	3.29±1.68
Living arrangements	
Alone	1.25±0.50
With husband /wife	3.75±1.59
With one of sons	3.85±1.78
With another relative	3.64±1.73
Sufficiency of monthly income	
Sufficient and saving	3.57±1.81
Sufficient	3.12±1.63
Not sufficient	4.47±1.62

*Significant p ‹0.05. **Highly significant p ‹0.01. Not significant p>0.05

Table 5: Relation between characteristics of the studied elderly patients and their total level of depression

Demographic characteristics	Mean ±SD
Age (years)	
60 - <65	7.76±6.63
65 and more	11.48±7.42
Sex	
Male	6.22±6.51
Female	13.61±5.92
Place of residence	
Rural	9.71±7.63
Urban	9.40±6.37
Marital status	
Single	7.00±8.48
Married	11.88±7.69
Widow	7.80±6.37
Divorced	6.50±5.92
Level of education	

Illiterate	10.93±7.47
Reads and writes	3.57±4.83
Primary and preparatory school	8.67±6.66
Middle school (Secondary)	14.00±4.29
University	7.29±7.31
Occupation before retirement	
Employee	7.92±6.66
Farmer	6.38±7.32
Craft	12.00±7.21
Housewife	13.20±6.26
Current occupation	
No work	5.40±6.26
Work with effort	15.60±6.19
Work without effort	11.71±6.57
Living arrangements	
Alone	11.75±0.96
With husband /wife	11.88±7.69
With one of sons	7.35±6.47
With another relative	9.62±7.21
Sufficiency of monthly income	
Sufficient and saving	6.57±7.81
Sufficient	13.35±5.48
Not sufficient	5.18±6.48

*Significant p ‹0.05. **Highly significant p ‹0.01. Not significant p>0.05

Table 6: Relation between characteristics of the studied elderly patients and their total level of anxiety

Demographic characteristics	Mean ±SD
Age (years)	
60 - <65	12.92±6.58
65 and more	10.84±6.07
Sex	
Male	11.56±6.56
Female	12.26±6.21
Place of residence	

Rural	12.54±6.72
Urban	10.33±5.26
Marital status	
Single	14.50±3.54
Married	11.79±7.05
Widow	11.70±5.71
Divorced	12.00±7.87
Level of education	
Illiterate	12.93±5.80
Reads and writes	16.68±3.27
Primary and preparatory school	6.67±6.51
Middle school (Secondary)	8.90±2.18
University	10.87±4.50
Occupation before retirement	
Employee	11.92±4.11
Farmer	12.00±8.04
Craft	13.00±6.35
Housewife	11.70±6.49
Current occupation	
No work	9.25±5.95
Work with effort	16.80±3.35
Work without effort	12.83±6.42
Living arrangements	
Alone	12.50±0.58
With husband /wife	11.79±7.05
With one of sons	11.30±6.32
With another relative	17.50±0.71
Sufficiency of monthly income	
Sufficient and saving	13.86±4.74
Sufficient	10.69±6.55
Not sufficient	12.88±6.54

*Significant p ‹0.05. **Highly significant p ‹0.01. Not significant p>0.05

Table 7: Relation between characteristics of the studied elderly patients and their total level of stress

Demographic characteristics	**Mean ±SD**
Age (years)	
60 - <65	11.52±5.67
65 and more	9.54±4.95
Sex	
Male	12.15±5.54
Female	8.61±4.56
Place of residence	
Rural	10.29±5.35
Urban	11.07±5.56
Marital status	
Single	6.00±1.41
Married	11.13±4.27
Widow	10.50±6.61
Divorced	9.25±5.90
Level of education	
Illiterate	9.44±5.48
Reads and writes	15.00±6.19
Primary and preparatory school	10.67±6.35
Middle school (Secondary)	7.83±3.25
University	12.43±2.15
Occupation before retirement	
Employee	9.77±3.94
Farmer	13.75±5.82
Craft	18.00±5.37
Housewife	8.05±4.38
Current occupation	
No work	9.85±5.05
Work with effort	10.60±3.78
Work without effort	10.79±5.96
Living arrangements	
Alone	8.25±7.09
With husband /wife	11.13±4.27

With one of sons	9.40±5.82
With another relative	10.52±5.36
Sufficiency of monthly income	
Sufficient and saving	13.43±4.43
Sufficient	9.27±4.81
Not sufficient	11.24±6.16

*Significant p ‹0.05. **Highly significant p ‹0.01. Not significant p>0.05

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