

ST. PAUL'S HOSPITAL MILLENNIUM MEDICAL COLLEGE

PREVALENCE OF DEPRESSION AND ASSOCIATED FACTORS
AMONG PATIENTS UNDERGOING HEMODILYSIS FOR
CHRONIC KIDNEY DISEASE AT ST. PAUL'S HOSPITAL
MILLENNIUM MEDICAL COLLEGE: A DESCRIPTIVE CROSS
SECTIONAL STUDY



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ADDIS ABABA, ETHIOPIA

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Abstract

Background: *Chronic kidney disease (CKD) is a global problem with millions of people on treatment with hemodialysis (HD) for it worldwide. Depression is among the common comorbidities in such patients with important adverse implications. Despite this little is known about the prevalence and associated factors in our patients and remains underdiagnosed and undertreated because of it.*

Methods: *A hospital based descriptive cross-sectional study was done from July to August 2019 by using a standardized questionnaire (PHQ-9) to assess the prevalence and associated factors of depression among the 59 patients undergoing HD for CKD at Saint Paul's Hospital Millennium Medical College (SPHMMC).*

Results: *Participants had a mean age of 43.13 years with the majority being male (67.3 %) and belonging to the age group of 25 to 49 years of age (61 %). The most common cause of CKD was hypertension followed by diabetes. The prevalence of depression was 30.5% (18 patients) with most having mild depression. Among the studied associated factors female gender (P value 0.019), longer time on dialysis (P value 0.00) and having dialysis 2 times a week (P value 0.024) were all strongly associated with a higher prevalence.*

Conclusions: *Prevalence of depression in CKD patients undergoing hemodialysis is high and female gender, longer duration on HD and having dialysis two times a per week were associated with a higher prevalence. Routine screening of patients is recommended with appropriate management and possible referral of depressed patients.*

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List of acronyms and Abbreviations

BDI – Becker Depression Inventory

CKD – Chronic Kidney Disease

CVD – Cardiovascular disease

HD – Hemodialysis

PD – Peritoneal Dialysis

PHQ- 9 – Patient Health Questionnaire - 9

ESRD – End Stage Renal Disease

SCID – Structured Clinical Interview for DSM-IV

QoL – Quality of life

1.Introduction

1.1Background

Chronic kidney disease (CKD) is a complex clinical syndrome with variable causes, manifestations and complications and is currently a Public Health problem. It affects millions of people all over the world, with increasing incidence and prevalence [1]. CKD and its treatment modalities including hemodialysis (HD) are causes of major physical, economical and psychological stress for affected people and require a huge social adaption. Prevalence of depression in patients undergoing HD is higher as compared to the general population and predicts a higher mortality risk [2-7]. And it is related to increased diagnostic difficulties, worse prognosis, decreased quality of life and higher treatment costs [3].

Some patient and treatment related factors were found to be associated with depression in this patients such as older age, female sex, being unmarried or unemployed, low socioeconomic status, living alone, lack of formal education, long time on dialysis, and presence of comorbidities [3-9]. Despite this, research regarding prevalence of depression and associated factors in this patient group is limited in Ethiopia and has not been done in our hospital as HD was introduced as one of the treatment modalities for CKD only recently

1.2 Statement of the problem

CKD is a common and is becoming an emerging problem in developing countries like ours. Depression occurs at a higher prevalence in these patients as compared to healthy individuals especially in those who are on HD.

Because it was introduced as a treatment modality only recently in our country, data pertaining to its prevalence in these group of patients is lacking and tackling this gap in information is paramount in increasing awareness among health care providers and may be important in improving mortality, morbidity, quality of life and adherence to overall management plan.

2. Literature review

It is known that Chronic Kidney Disease (CKD) affects millions of people worldwide with rising prevalence and incidence [1]. Available researches show that Psychiatric disorders (depression, anxiety, sleep disorders) are prevalent in patients undergoing chronic hemodialysis (HD) for Chronic Kidney Disease as compared with healthy individuals [2] and is associated with high morbidity and mortality and a lower quality of life but despite these most patients remain undiagnosed and untreated [3].

One of the landmark studies in hemodialysis patients: the DOPPS II (Dialysis Outcomes and Practice Patterns Study) which included 9382 hemodialysis patients randomly selected from dialysis centers of 12 countries, assessed the prevalence of depressive symptoms and physician-diagnosed depression and associations with treatment by antidepressants among hemodialysis patients. It also assessed whether depressive symptoms were independently associated with mortality, hospitalization, and dialysis withdrawal. The study reported a 43 % prevalence of depressive symptoms of whom 17.3 % were on antidepressants and 13.9% prevalence of physician-diagnosed depression of whom 34.9 % were on treatment. Depressive symptoms were associated with a significantly higher relative risk of death, hospitalization and dialysis withdrawal. The data suggested that depression is underdiagnosed and undertreated among hemodialysis patients and interventions should target these patients with the aim of decreasing mortality and hospitalizations [3].

In a study that assessed the Prevalence of depressive and anxiety disorders in dialysis patients with CKD at the Department of Nephrology at Bielański Hospital in Warsaw, which included 107 patients which used the Mini-International Neuropsychiatric Interview (M.I.N.I.), for diagnosis, Depressive disorders were diagnosed in 84 (78.5%) patients, including: a major depressive episode in 31 (29%), dysthymia in 30 (28%), and an episode of depression with melancholic features in 23 (21.5%), 12 patients (11.2%) had comorbid depressive disorders and anxiety disorders, Six (5.6%) patients had obsessive compulsive disorder, 4 (3.7%) had generalized anxiety disorder and 2 (1.9%) had panic disorders. Only 23 (21.5%) patients met no criteria for a mental disorder. It concluded that that depressive disorders may be particularly prevalent in dialysis patients with CKD. Their intensity is moderately related to a low level of illness acceptance and recommended routine screening for depression in dialysis patients [4].

In a study that assessed psychiatric complications of ESRD and examine the prevalence of a broad range of psychopathology in an urban hemodialysis center in U.S.A. and their impact on quality of life by using clinician-administered semi structured interview for DSM – 4 in a randomly selected sample of 70 predominately black patients, >70% were found to have a psychiatric diagnosis : Twenty-nine percent had a current depressive disorder, 20% had major depression, and 9% had a diagnosis of dysthymia or depression not otherwise specified, 27% had a current major anxiety disorder, 19% current substance abuse and 10% had a psychotic disorder. Only 13% reported being in current treatment by a mental health provider, and only 5%

reported being prescribed psychiatric medication by their physician and concluded that prevalence of psychopathology in patients with End Stage Renal Disease (ESRD) might be higher than previously expected and that the disorders may need to be treated independently and that cognitive behavioral therapeutic techniques may be especially advantageous in this population of patients who are treated with many medications [5].

A cross sectional study done in Sri Ramachandra Medical Centre in India during the period January-June 2010 which evaluated psychiatric morbidity in patients with CKD undergoing hemodialysis by using M.I.N.I. included 130 patients. Forty percent of patients (n=52) were diagnosed with psychiatric illness, 27.69% male patients (n=36): major depressive episode 17 (13.1%) followed by mild depressive episode 10 (7.7%), 7 patients had neuropsychiatric problems such as dementia 3 (2.3%), delirium (2.3%), Most of the patients (n=25, 19.23%) diagnosed to have a psychiatric illness belonged to the age group of 40-60 years. In conclusion it suggested the high importance of the provision of psychological support toward the patients undergoing hemodialysis, which can be achieved with customized and continuous assessment and evaluation of each patient's needs and that Psychosocial interventions would be better to begin at diagnosis and should focus on physical, psychological and social functioning of people [6].

In a Saudi Arabian cross sectional study aimed at identifying the Prevalence of Depressive Symptoms among HD and Peritoneal Dialysis (PD) Patients for CKD which included 133 PD patients and 133 HD patients by using the Zung self- rating depression scale, depression was seen in 98.5% of PD patients and in with 83.5% HD patients, 65.4% of participant patients had low monthly income, 61.3% of them had low education and 48.9% of them were not working and revealed that there is a high prevalence of depressive symptoms among PD and HD patients and recommended adding a system for screening, diagnosis and treatment of depression for all dialysis patients to improve their life [7].

In a cross-sectional observational study conducted at HD unit of an urban tertiary care hospital aiming to assess sociodemographic profile and to estimate the prevalence and type of psychiatric morbidity, quality of life in patients undergoing HD, fifty consecutive patients undergoing hemodialysis were included. Psychiatric morbidity was assessed using Diagnostic and Statistical Manual IV Text Revised Criteria and World Health Organization QOL Scale-BREF scale was used to measure patient's quality of life. Majority of patients was males, in middle-age group, secondary educated, unemployed and married. Psychiatric diagnosis was observed in 64% of the patients (major depressive disorder, adjustment disorder with depressed mood). Overall quality of life score in patients was significantly low in those with psychiatric morbidity and revealed the high prevalence of Psychiatric morbidity in hemodialysis patients and that it impairs their quality of life [8].

A 2016 Japanese study comparing the prevalence of major depressive disorder among hemodialysis patients and healthy people by using the Structured Clinical Interview for DSM-IV. A total of 99 patients undergoing HD were recruited and 404 age- and sex-matched healthy controls who Project were also included in this study. Results revealed that there was a significant difference between HD patients and controls in the prevalence of depression (12 (12.1% and 4 (2%) respectively) and concluded that more HD patients as compared to controls had Depression and the SCID may be clinically useful in the survey of depression in HD patients [9].

In a trial done in Northern China to determine the Prevalence and related factors of Depressive symptoms in patients undergoing HD for CKD by using a cross sectional study design included 227 patients, the prevalence of depressive symptoms among HD patients was 29.1%. Patients with a lower mood have worse quality of life and activities of daily living, less social support (both family and outside family) than patients with better mood and concluded that the prevalence of depressive symptoms is high in CKD patients on HD in northern China. activities of daily living, family support, “acceptance-resignation” coping style and ego resiliency were independently associated with depressive symptoms [10].

In a 2014 study assessing Depression among 217 hemodialysis patients with CKD by a cross-sectional design in southeast of Iran by using M.I.N.I. structured questionnaire and BDI, revealed that 29%, 30% and 27.4% were reported as suffering from mild, moderate and severe level of depression respectively and also showed that diabetic patients and patients with hypertension were significantly at a higher risk of depression. It concluded that, it is important to frequently screen all patients on maintenance hemodialysis for signs and symptoms of psychiatric disorders such as depression given its high prevalence [11]

A 2018 study from Ghana which was conducted in the two renal hemodialysis units in Accra examined the QOL and prevalence of depressive symptoms in 129 HD patients by using a cross sectional study design. Forty-five percent of patients tested positive for symptoms of depression by using PHQ-9, 19% obtained low scores on overall quality of life and significant negative correlations were found between: Depression and overall QoL, Depression and duration of dialysis treatment and Depression and income level. In conclusion, depressive symptoms were common amongst patients on long term HD and patients who obtained low scores on quality of life measures were more likely to screen positive for depressive symptoms [12].

A study done in 11 private and government hospitals providing HD services in Addis Ababa, Ethiopia assessed the prevalence and associated factors of depression by using PHQ-9 and included 426 patients. Identified that the overall prevalence of depression was 60.3% (PHQ-9 score >10) and factors associated with depression were being female, having a comorbid

medical illness, poor social support, and medium income. 75 % had comorbidities, commonly hypertension and diabetes. It concluded that depression is very common among HD patients in Ethiopia and should always be considered in their management [13].

2.1 Significance of this study

In addition to providing information and help in improving care given to patients as presented above, this study by being the first of its kind in addressing the problem in our hospital might also be useful as a stepping stone and source data for further studies who want to expand on the current knowledge by assessing the effect on outcome, prevalence other Psychiatric disorders and other issues surrounding our patients.

To this effect, the purpose of this study is to assess the prevalence of depression in CKD patients undergoing chronic HD and try to identify the common factors associated with it in our patients and by doing so help in creating awareness among physicians treating these patients about the magnitude of the problem and by adopting a focused screening into the routine care of such patients, in turn might lead to the early diagnosis and appropriate treatment or referral to a Psychiatrist which may improve the quality of life, cost incurred, morbidity, outcome and adherence to overall treatment plan of a disease which has various manifestation and complications and as such requires an equally variable and complicated management regimen and due attention on the patients part.

3. Objective of the study

3.1 General objective

The general objective of this study is to assess the prevalence and associated factors of Depression in patients on chronic HD for CKD at St. Paul's Hospital Millennium Medical College dialysis unit.

3.2 Specific objective

The specific objective of the study is to assess the prevalence of depression in CKD patients undergoing chronic HD at SPHMMC dialysis unit from June to July 2019 and to identify sociodemographic and disease related factors associated with depression in patients undergoing chronic HD for CKD from June to July 2019.

4. Study design and Methods

4.1 Study area

The study will be conducted in St Paul's hospital one of the largest public hospital in the country which was built by Emperor Haile Selassie II in 1961. It is a public hospital that primarily serves those unable to afford health care elsewhere, providing service free of charge to 75 % of the its patient. An estimated 1200 clinical and non-clinical staff provide care to approximately 200,000 people each year and a catchment population of more than 5 million The study will be conducted in the Dialysis unit which was established 6 years ago in collaboration with Egyptian government. Currently the unit provides HD service to 59 CKD patients with 4 patients receiving transplantation monthly and being replaced by new patients from the dialysis waiting list. It also provides acute hemodialysis service to approximately 15 to 20 patients per month.

4.2 Study period

From June to July 2019

4.3 Study design

Analytical and descriptive cross sectional study design will be used to assess the prevalence of depression and associated factors.

4.4 Population

4.4.1 Source population

All CKD patients undergoing chronic HD at St Paul's Hospital Millennium Medical College Dialysis unit from June to July 2019.

4.4.2 Study population

CKD patients undergoing chronic HD at SPHMMC unit from June to July 2019 who fulfill inclusion criteria for the study.

4.5 Inclusion and exclusion criteria

4.5.1 Inclusion criteria

- All patients above the age of 18 years with confirmed CKD who are undergoing HD at SPHMMC dialysis unit.

4.5.2 Exclusion criteria

- Those with severe cognitive deficit that cannot answer the questionnaire.
- Diagnosed or on management of depression prior to starting HD.

4.6 Sample size and sampling procedure

4.6.1 Sample size determination [9]

The sample size can be determined by

$$N = (z\alpha/2)^2 p (1-p)/d^2$$

Where N = sample size

$$z \alpha / 2 = 1.96$$

p = prevalence of Depression (20%)

d = marginalized error which is 0.05 (5%)

Confidence interval = 95%

$$= 245$$

Adding a 5% non-responder rate, the sample size is determined to be 257

4.6.2 Sampling technique

But because SPHMMC has only 60 CKD patients on HD all patients will be taken.

4.7 Measurement

4.7.1 Instrument

The PHQ -9 will be used for diagnosing and assessing the severity of depression. It is a standardized screening tool that has nine questions and grades the severity of each question according to the number of days in which it is present. Symptoms over the preceding two weeks are assessed to give a total score of 27.

Sociodemographic and treatment related data will be collected by a standardized questionnaire.

4.7.2 Study variables

4.6.2.1 Dependent variables – prevalence of Depression in CKD patients on HD

4.6.2.2 Independent variables – Age, sex, area of residence, duration on HD, comorbidities (DM, CVD, HTN), marital status, level of education, and family history of mental illness.

4.8 Plan of Data collection

Data will be collected manually by using standardized questionnaires by face - to- face interview. The data will be collected by the investigator.

4.9 Data Quality assurance

The collected data will be checked for completeness and accuracy by the investigator on a daily basis simultaneously with data collection and any errors will be corrected accordingly as patients are available for dialysis three times a week.

4.10 Data processing and analysis

The collected data will be cleared, categorized and analyzed by the investigator by using Statistical Package for Social Science (SPSS) version 25. The result will be summarized and described by using tables. Descriptive statistics will be used to put results of the study in the form of findings and percentages. Chi-square test will be utilized wherever appropriate and P-value < 0.05 will be considered as statistically significant.

4.11 Ethical considerations

Ethical clearance will be obtained from the Institutional Research Board (IRB) of St. Paul's Hospital Millennium Medical College. Verbal consent will be taken from study participants and the privacy of patients will be kept by writing patients identification card number only.

4.12 Operational Definition

Maintenance Hemodialysis: undergoing regular HD sessions for a diagnosed CKD regardless of the duration on HD prior to enrollment in the study.

PHQ – 9: is a standardized tool for assessing Depression having 9 questions in total, with questions answered none given 0, several days given 1, more than half days given 2 and almost every day given 3 points for each of the questions. Depression severity will be classified as follows according to the total score

- ✓ 0 to 4- no depression
- ✓ 5 to 9 – mild depression
- ✓ 10 to 14 – moderate depression
- ✓ 15 to 19 – moderately severe depression
- ✓ 20 to 27 – severe depression

4.13 Strengths and limitations

4.13.1 Strengths

- The issue has not been studied in patients at SPHMMC
- Serves as an initiative and source data for further studies

4.13.2 Limitations

- Sample size was not reached because of limited number of patients undergoing dialysis

4.14. Dissemination of result

Finally, the result of the study will be submitted to SPHMMC Department of Internal Medicine and documented in the library of SPHMMC. The finding will be presented to the staff and students of SPHMMC at the annual symposium to be held in the campus. Efforts will also be made to publish the results in a journal.

5. Results

5.1 Patient characteristics

Fifty-nine patients were interviewed having a mean age of 43.13 ± 14 years (range 19-80 years), the majority were male (67.3 %) and belonged to the age group of 25 to 49 years of age (61 %). Thirty-five (59 %) patients were married and only 3 (5%) patients had no formal education. Most of the patients followed orthodox Christianity religion (61%) and 40 (67.8 %) participants were unemployed.

Majority of participants, 35 patients (59.3%) are on dialysis for greater than 24 months and all received a dialysis dose of 4 hours per session. Nine patients (15.3 %) underwent dialysis 2 times per week and for most of these patients the reason specified was financial constraint. Three patients (5,1 %) had a family history of mental illness.

The commonest cause of CKD identified was hypertension (40.7%), followed by unknown causes (30.5%) and diabetes related kidney disease (16.9%), A total of 10 patients (16.9%) were found to have comorbidities, 9(15.3%) of which were involving the cardiovascular system. Table 1 and 2 below show these in detail.

Table 1. Sociodemographic variables of CKD patients on HD at SPHMMC from June to July 2019		Frequency	Percentage
Age	18-24 years	4	6.8
	25-49 years	36	61.0
	> 50 years	19	32.2
Gender	Male	37	62.7
	Female	22	37.3
Marital status	Single	17	28.8
	Married	35	59.3
	Divorced	1	1.7
	Widowed	6	10.2
Educational level	No formal education	3	5.1
	Primary school	9	15.3
	Secondary school	17	28.8
	College and above	30	50.8
Religion	Orthodox	36	61.0
	Muslim	14	23.7
	Protestant	8	13.6
	Catholic	1	1.7
Occupation	Unemployed	40	67.8
	Government	7	11.9
	Private	8	13.6
	Housewife	2	3.4
	Retired	2	3.4

Table 2. Patient related factors of CKD patients on HD at SPHMMC from June to July 2019

		Frequency	Percentage
Length of time on dialysis	1 to 6 months	2	3.4
	7 to 12 months	8	13.6
	13 to 24 months	14	23.7
	>24 months	35	59.3
Dialysis duration per session	4 hours	59	100.0
Frequency of dialysis per week	2 times	9	15.3
	3 times	50	84.7
Family history of mental illness	Yes	3	5.1
	No	56	94.9
Cause of CKD	Hypertension	24	40.7
	Diabetes related	10	16.9
	CGN	6	10.2
	PCKD	1	1.7
	Unknown	18	30.5
Comorbidities	Yes	10	16.9
	No	49	83.1
Comorbidities if yes	Cardiovascular	9	15.3
	Neurologic	1	1.7
	CVD and GI	1	1.7

5.2 Evaluation of prevalence of depression

The prevalence and severity of depression was assessed by using PHQ and adding the response to each of the nine questions graded from none to almost every day. The result was then grouped into one of the five severity grades. The prevalence of depression was found to be 30.5 % (18 patients) of which 28.8 % (17 patients) were mildly depressed and 1.7 % (1 patient) were moderately depressed. There were no patients with moderately severe or severe depression. See table 3 for details.

Table 3. Prevalence of depression		
	Frequency	Percentage
No depression	41	69.5
Mild depression	17	28.8
Moderate depression	1	1.7
Moderately severe depression	0	0
Severe depression	0	0

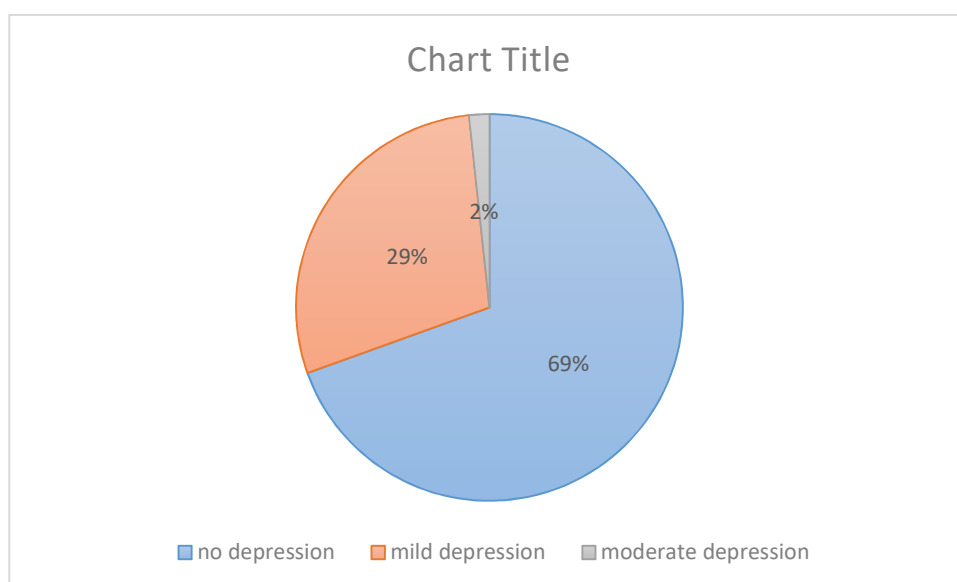


Figure 1. Prevalence of depression

Among patients with depression most were between the ages of 25 and 49 and the most common symptoms were feeling tired or having little energy, poor appetite or overeating and feeling bad about oneself or like a failure or have let oneself or family down.

5.3 Evaluation of associated factors

Chi-square test was used to determine associated factors with depression with a two sided P value <0.05 considered to be statistically significant. Of all the studied factors female gender (P value 0.019), longer time on dialysis (P value 0.00) and having dialysis 2 times per week (P value 0.024) were all associated with a higher prevalence of depression. No association was found between depression and other factors (age, occupation, comorbidities, educational level, cause of CKD, marital status)

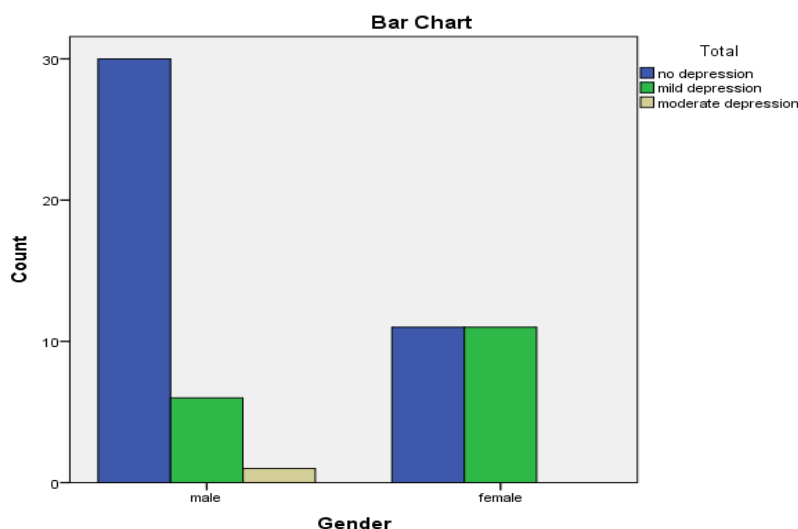


Figure 2. Gender versus Depression

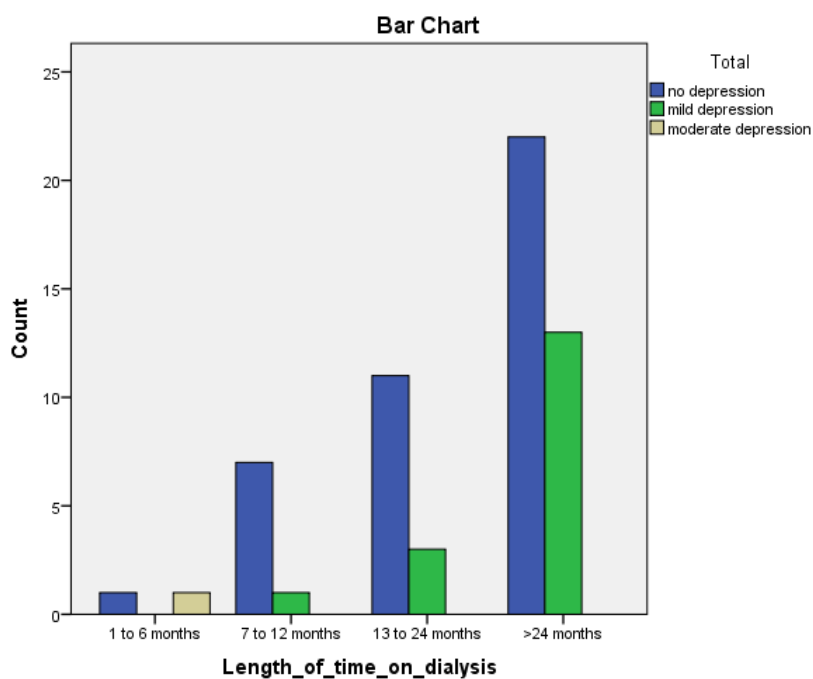


Figure 3. Length of time on dialysis versus Depression

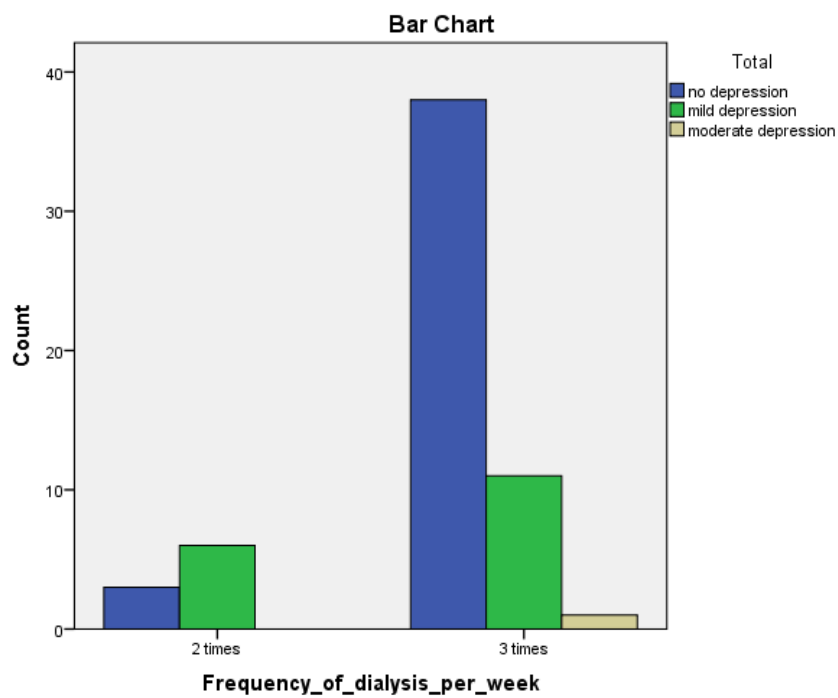


Figure 4. Frequency of dialysis per week versus Depression

	Strength of association	OR (95% CI)	P value
Female gender	Weak	4.286 (1.37-13.4)	0.019
Length of time on dialysis	Strong		0.00
Frequency of dialysis per week	weak	2.778 (1.41-5.4)	0.024

6. Discussion

The prevalence of depression in CKD patients undergoing hemodialysis has yielded variable results different studies and populations because of usage of different assessment tools [5,6,8,12,13]. The prevalence of 30.5 % found in this study is low as compared to a recent trial completed in governmental and private dialysis centers in Ethiopia [13] which reported a prevalence of 60.3 %. This can be explained by the fact that participants in the current study had a lower rate of comorbidities.

This study showed that female gender was associated with a higher prevalence of depression ($P= 0.019$) and this is similar to findings from several previous studies where prevalence of depression was higher in females [7,13].

According to the result of the current study longer time on hemodialysis treatment was strongly associated with depression ($P= 0.000$); this result is similar to a study done by Vincent J. et al. and another study done by Betelehem E. et al [12,13].

In addition, the finding of this study showed that receiving a HD dose of 2 times a week was strongly associated with depression ($P= 0.024$) which is similar to findings in the DOPPS study [1,13]

The finding of this study didn't show significant association between age, marital status, educational level, comorbidities, a family history of psychiatric illness and occupation with depression which were observed in several other studies [12,13]

7. Conclusions and recommendations

This study has found that there is a high prevalence of depression in CKD patients undergoing chronic hemodialysis for CKD and has identified that female gender, longer length of time since starting HD and frequency of dialysis 2 times per week were associated with a higher prevalence of depression in dialysis patients at SPHMMC.

Therefore, the current research recommends routine screening of patients for depression to identify and appropriately link identified patients to proper psychiatric care. It also recommends that measures to optimize dialysis frequency to three times a week (if possible) and to shorten duration of time on hemodialysis treatment should be undertaken to decrease the prevalence of depression.

Finally, further studies regarding health care worker's awareness about the problem, impact of depression on overall patient management and outcome and on quality of life and prevalence of other psychiatric diseases in these group of patients is recommended.

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Annex

Appendix 1 – general and sociodemographic data

Card number												
Age	1) 18-24 years			2) 25-49 years			3) >=50 years					
Gender	1) Male					2) Female						
Marital status	1. Single		2. Married		3. Widow			4.Divorced		5.Other		
Religion	1) Orthodox		2) Muslim		3) Protestant			4) Catholic		Other		
Educational level	1.No formal education		2. Primary school		3. Secondary school			4. College and above				
Occupation	1) Unemployed		2) Government		3) Private		4) Housewife		5) Student		6. Retired	
Length of time on dialysis	1) 1-6 months		2) 7-12 months		3) 13-24 months		4) >24 months					
Dialysis duration per session	1) < 4 hours		2) 4 hours									
Frequency of dialysis per week	1) < 2 times		2) 2 times					1. 3 times				
Family history of mental illness	1. Yes					2. No						
Cause of CKD	1.Hypertension		2.Diabetes		3.Chronic Glomerulonephritis			4. Polycystic Kidney Disease		5. Unknown		
Comorbidities	Yes	1. CVD		2.Pulmonary diseases		3. Gastrointestinal diseases		4.Neurologic diseases		5.Others		
	No											

Appendix 2 – PHQ-9

Over the past two weeks, how often have you been bothered by any of the following problems?				
	None (0)	Several days (1)	More than half the days (2)	Nearly every day (3)
1. Little interest or pleasure in doing things?				
2. Feeling down, depressed or hopeless?				
3. Trouble falling or staying asleep or sleeping too much?				
4. Feeling tired or having little energy?				
5. Poor appetite or overeating ?				
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down ?				
7. Trouble concentrating on things, such as reading the newspaper or watching television?				
8. Moving or speaking so slowly that other people could have noticed or the opposite – being so fidgety or restless that you have been moving around a lot more than usual?				
9. Thoughts that you would be better off dead or of hurting yourself in some way?				

