

Assessment the Levels of Depression among Patients with Hemodialysis at the Dialysis Centers in Mosul City

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ABSTRACT:

Aim: Depression is the most common psychiatric illness in patients with end-stage renal disease .

Objectives: a descriptive study design, aiming to assess the levels of depression among patients with hemodialysis at two dialysis centers in Mosul City for the period 1st January to 15th Jun 2023.

Material and Methods: The study used a non-probability accidental sampling method, 84 patients with Chronic Kidney Disease who were subjected to hemodialysis was enrolled in two dialysis centers at Mosul City. The study was conducted using the diagnostic poll method and standardized research tools: Part 1 collected socio-demographic characteristics of the patients. Part 2 [the Center for Epidemiologic Studies Depression Scale (CESD-R-20)], a 20-item self-report questionnaire to measure depressive symptoms. The scale had a 4-level Likert scale, and a total score was calculated by summing the 20 items. Scores equal to or above 16 indicated a person at risk for clinical depression. Data were collected through self-report questionnaires.

Conclusion: The findings indicated varying levels of depression among the patients, with some experiencing high levels of depression symptoms.

Recommendation: The study provides valuable insights about the need for coordination between mental health professionals and dialysis patients in dialysis centers.

Keywords: Hemodialysis, depression, patient.

INTRODUCTION

Depression is the most common disorder of psychiatric illness experienced by haemodialysis patients. It is an established mental health issue in end-stage renal disease (ESRD) patients leading to more disease states and death. Various factors are involved in triggering depression in hemodialysis patients. These include their comorbidities, chronic pain, and disturbances in sleep⁽¹⁾. Chronic kidney disease is a public health problem worldwide. Depression, as the 4th leading cause of disability in the world, is one of the most common psychiatric disorders in haemodialysis patients⁽²⁾. There are two ways to get dialysis: Hemodialysis and Peritoneal dialysis. With hemodialysis, a machine removes blood from the body, filters it through a dialyzer (artificial kidney) and returns the cleaned blood to your body. This 3- to 5-hour process may take place in a hospital or a dialysis center three times a week⁽³⁻⁸⁾. Depression in these patients is associated with the potential to increase mortality, hospitalization, fatigue, changes in appetite and weight, gastrointestinal disturbances, sexual dysfunction, general pain, backaches and headaches, and reduced quality and commitment to social activities. Furthermore, a large percentage of patients show subclinical depression symptoms, leading to decrease in patient's quality of life⁽⁹⁾. The aim of this study was to assess the level of stress and prevalence of depression among haemodialyzed patients with regard to sociometric and medical data. The study goals was to determine if gender, age, educational attainment, professional status, place of residence, financial situation, self-sufficiency in performing daily activities and disease knowledge level are associated with an increase in stress and depression among haemodialyzed patients⁽¹⁰⁾. We assumed that respondents' gender has a significant influence on the prevalence of depression.

MATERIAL AND METHODS

Setting of the Study: The study is conducted following the standard arrangement obtained from Nineveh health Director, in two hemodialysis centers at two different governorate hospitals at the left side of the Mosul city/ Iraq (Ibn-sina dialysis center, and AL- Salam center) for period from the 1st January to 1st February 2023. These are the biggest hospital in the Mosul city, so a total population of this study around (950) patients whom enrolled in schedules visit to these centers to obtain the health care and perform the dialysis at hospital. (550) patients at Ibn-Sina dialysis center which contain (100) hemodialysis machines, another with

(225) at Al-Salam dialysis center (25) machines only, as well as there are another numbers of patient the visit these centers as emergency cases and may receive peritoneal dialysis

Sample of the Study: A non-probability based accidental sample of (84) patients under hemodialysis was chosen from Ibn-sina, and Al-Salam hospitals in order to achieve the study objectives.

Study Instrument: After an extensive review of related research the researcher adopt and develop special instrument to collect the necessary information to achieve the goals of the study. Which consist of two parts: Part 1: socio-demographics characteristic about patient consist of 10 items (age, gender, resident, marital status, education level, occupation, any other chronic disease, monthly family income, family history of dialysis, and the time from the first dialysis). Part 2: Center for Epidemiologic Studies Depression Scale (CESD-R-20) consist of 20-item of self-report to measure the depressive symptoms, with 4 level of Likert scale. The scale has been found reliable (Alpha>.85) in previous research (Radloff, 1977). The total score is calculated by finding the sum of 20 items. Scores range from 0-60. A score equal to or above 16 indicates a person at risk for clinical depression.

Data Collection Methods: Before collecting data, each participant was explained about the research objectives and asked to sign the consent form only if they were willing to participate in this study. Data were collected by self-report questionnaire, for those patients whom can read and write, another that's illiterate the researcher complete to explain and fill the questionnaire instead of them. Then, each participant was requested to response particular questions of the questionnaire. The Confidentiality and anonymity were strictly maintained.

Data Analysis: Data is analyzed by using the Statistical Package for social Science (SPSS) for windows version 24, to analyze the results by using a descriptive data analysis such frequency (f) and percentage (%).

RESULTS

This table show the most age group recorded by the patient who have hemodialysis are between (31-40) years, which represent (26.22 %) of the total age groups, the gender of them are male slightly more than female it was (53.6 %). Regarding the educational levels a non-read, non-write are slightly the higher ratio of educational levels by institute and above, primary school are most of them (32.1%) (21.4 %) respectively. Above half of the sample are married they represent (57.1 %). Regarding the

occupation it was nearly equal between the group which are unemployed, free business, employ 26.2 %, 26.2 %, 28.6 % ; respectively. about half of the patient didn't suffer from any another disease rather than chronic renal disease, but (27.4 %) diabetes

are the most relative diseases which record. Most of them are poor economic status it was (57.1 %). About one four(26.2%) of the patient had positive family history of chronic renal failure.

Table 1: Demographical data of haemodialysis patients

No.	Variable		f	%
1	Age (year)	1-10 years	3	3.57 %
		11-20 years	9	10.71 %
		21-30 year	13	15.47 %
		31-40 years	22	26.22 %
		41- 50 years	14	16.66 %
		51- 60 years	9	10.71 %
		61 years or more	14	16.66 %
		Total		100 %
2	Gender	male	45	53.6 %
		female	39	46.4 %
		Total	84	100 %
3	Education	none read none write	22	26.2 %
		primary	18	21.4 %
		secondary	17	20.2 %
		institute or college	22	26.2 %
		Higher degree	5	6 %
		Total	84	100 %
4	Marital status	single	17	20.2 %
		married	48	57.1 %
		widowed	2	2.4 %
		separated	17	20.2 %
		Total	84	100 %
5	Occupation	child	3	3.6 %
		student	10	11.9 %
		unemployed	22	26.2 %
		free business	22	26.2 %
		employee	24	28.6 %
		retired	3	3.6 %
		Total	84	100 %
6	Do you suffer from other chronic disease rather then renal failure	Not suffer from other disease	44	52.4 %
		hypertension	6	7.1 %
		Diabetes	23	27.4 %
		Cardiovascular diseases	4	4.8 %
		others	7	8.3 %
Total	84	100 %		
7	Monthly income	weak	48	57.1 %
		middle	29	34.5 %
		good	7	8.3 %
		Total	84	100 %
8	Family history of dialysis	yes	22	26.2 %
		no	62	73.8 %
		Total	84	100 %

F.: frequency, %: percentage No. number of variables

Table 2: Items that measured the levels of depression among hemodialysis patients

No.	Items (Total n = 84)	Rarely 0		Little of the Time 1		Moderately or Much of the time 2		Mostly or Almost all the Time 3	
		f	%	f	%	f	%	f	%
1	I was bothered by things that didn't normally bother me	41	48.81	20	23.81	11	13.10	12	14.29
2	My appetite was poor	30	35.71	33	39.29	12	14.29	9	10.71
3	I felt that I couldn't get rid of the worry even with someone's help	27	32.14	32	38.10	13	15.48	12	14.29
4	I felt that I was just as good as other people	20	23.81	30	35.71	24	28.57	10	11.90
5	I had trouble keeping my mind on what I was doing.	21	25.00	40	47.62	14	16.67	9	10.71
6	I felt depressed.	19	22.62	41	48.81	14	16.67	10	11.90
7	I felt that everything I did was an effort.	24	28.57	37	44.05	12	14.29	11	13.10
8	I felt hopeful about the future.	20	23.81	29	34.52	29	34.52	13	15.48
9	I thought my life had been a failure.	29	34.52	32	38.10	14	16.67	9	10.71
10	I felt fearful.	26	30.95	27	32.14	17	20.24	14	16.67
11	My sleep was restless	26	30.95	21	25.00	23	27.38	14	16.67
12	I was happy	24	28.57	15	17.86	23	27.38	22	26.19
13	I talked less than usual	24	28.57	22	26.19	24	28.57	14	16.67
14	I felt lonely	32	38.10	16	19.05	22	26.19	14	16.67
15	People were unfriendly.	33	39.29	22	26.19	15	17.86	14	16.67
16	I enjoyed life	25	29.76	25	29.76	21	25.00	13	15.48
17	I had crying spells.	24	28.57	22	26.19	20	23.81	18	21.43
18	I felt sad.	19	22.62	33	39.29	15	17.86	19	22.62
19	I felt that people disliked me	41	48.81	20	23.81	11	13.10	12	14.29
20	I could not get "going".	30	35.71	33	39.29	12	14.29	9	10.71
	Total mean of score		30.8		32.7		20.6		15.36

F.: frequency, %: percentage No. number of variables

This table show that the mean score of the total sample was record 30.87 % have no signs of depression, with 32.7 % have mild, 20.6 % was moderate and 15.36 % have severe symptoms of major depression.

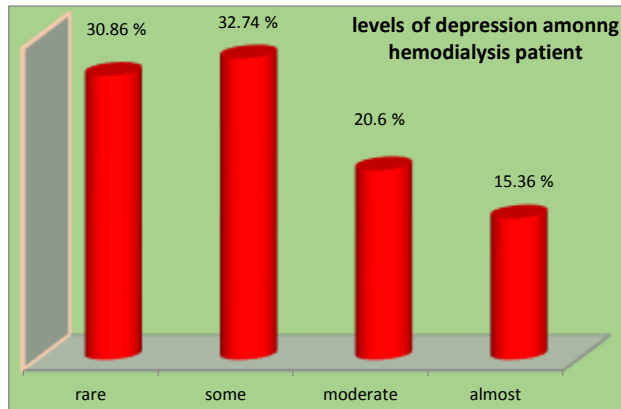


Figure 1: overall levels of depression among hemodialysis patients

DISCUSSION

The researchers present several key findings, summarized as follows: Age: The majority of the participants fell into the age range of 31-40 years (26.22%), followed by 21-30 years (15.47%). Gender: The majority of the participants were male (53.6%), while the remaining participants were female (46.4%). Regarding to educational levels the highest proportion of participants had an institute or college education (26.2%), followed by illiterate (26.2%). Marital Status: The largest proportion of participants were married (57.1%), followed by single (20.2%), separated (20.2%), and widowed (2.4%). Occupation: The largest group consisted of employees (28.6%), followed by free business (26.2%), unemployed (26.2%), students (11.9%), child labor (3.6%), and retired (3.6%). Monthly Income: The majority had a weak income (57.1%). Family History of Dialysis: A considerable proportion of participants (26.2%) reported a positive family history of dialysis^(11,13). Table (2) revealed that the study included a total of 84 participants. Each participant rated the frequency of experiencing different symptoms of major depression using a Likert scale ranging from "Rarely or None of the Time" to "Most or Almost All the Time." The table presents the frequencies and percentages for each response category for each item⁽¹⁴⁻¹⁶⁾. The results indicate that several symptoms of major depression, the most commonly reported symptoms were feeling upset by things that didn't normally upset them, poor appetite, and feeling that they couldn't get rid of worry even with someone's help. These symptoms were reported "Moderately or Much of the Time" or "Most or Almost All the Time" by a significant proportion of participants. The mean scores were 30.87 for "Rarely or None of the Time," 32.7 for "Some or Little of the Time," 20.6 for "Moderately or Much of the Time," and 15.36 for "Most or Almost All the Time." These scores indicate the overall level of depressive symptoms experienced by the participants⁽¹⁷⁾. In summary, the results suggest that patients undergoing hemodialysis experience varying levels of major depression symptoms. Some symptoms, such as feeling sadness, having a poor appetite, and experiencing persistent worry, were more prevalent, while other symptoms, such as feeling good about oneself and feeling hopeful about the future, were less common. These findings highlight the importance of addressing and managing depression among patients undergoing hemodialysis to improve their overall well-being and quality of life.

Limitations of the Study: The other limitation notes regarding patients these who cannot read, so the information and the questionnaire was require more time to completes than other patients.

CONCLUSIONS

Patients undergoing hemodialysis in the dialysis centers in Mosul City exhibit significant levels of major depression symptoms. Comorbidities, such as diabetes and hypertension, may contribute to higher levels of depression among patients undergoing hemodialysis.

Recommendations: Implement routine mental health assessments for patients undergoing hemodialysis, using validated screening tools, to identify those at risk of depression.

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This article may be cited as: Suleiman QAA., Abed MS., Ahmed MS.: Assessment the Levels of Depression among Patients with Hemodialysis at the Dialysis Centers in Mosul City. *Pak J Med Health Sci*, 2023; 17(8): 67-69.