

## SOCIOPSYCHOLOGICAL IMPACTS AFFECTING PATIENTS WITH CHRONIC KIDNEY DISEASE

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### ABSTRACT

**Background:** Chronic kidney disease (CKD) is a progressive, life-threatening illness characterized by losing renal function over period of time (months, years), posing a fundamental existential problem on individuals and a burden on their families. Due to the life-long illness, majority of CKD patients may trigger physiologic, psychological, and social stressors at any point during the disease, thus, placing a barrier for them in maintaining the normal life-style and may also reduce their quality of life. **Objectives:** The present study has been designed to find out the prevalence of depression among CKD patients in central region of KSA and to evaluate their social life, personal relationships &

quality of life. **Material & Methods:** It was an observational cross-sectional Hospital based study. The data was collected from 33 CKD patients of either sex from Haemodialysis units at King Khalid Hospital, Almajmaah and Hurameula General Hospital, Hurameula, Kingdom of Saudi Arabia. A pre-defined self validated questionnaire (Beck Depression Inventory) was used to measure the severity of depression. To evaluate the Quality of Life of CKD, WHOQOL questionnaire was adapted and modified to the current situation. **Results:** The prevalence of depression among CKD patients was 44.0%. Majority of the patients had depression at the beginning of the condition 29 (90.6%), About 3/4 of the patients 24 (75.0%) were leading normal social life despite of being diseased. Significant association was

observed between depression scale and depression at the beginning of the condition ( $p=0.43$ ), showing that majority of the patients had borderline depression ( $n=8$ , 27.6%), ( $n=7$ , 24.1%) had moderate depression, whereas, ( $n=6$ , 20.7%) had severe depression. Significant association was observed between depression scale and the QoL scale ( $p<0.001$ ), showing that those with acceptable quality of life had borderline depression ( $n=9$ , 33.3%) and those with not acceptable quality of life, majority of them had severe depression ( $n=4$ , 80%).

**Conclusion:** A high proportion of CKD patients experienced depression eventually resulting in an impaired quality of life.

**KEYWORDS:** Chronic kidney disease self validated questionnaire quality of life.

## INTRODUCTION

Chronic kidney disease (CKD) is a progressive, life-threatening illness characterized by losing renal function over period of time (months, years) and posing a fundamental existential problem on individuals and a burden on their families. CKD causes changes within almost all organs of the body as well as the kidneys, with major effects including decreased nephron mass, GFR and overall excretory capacity and impaired metabolism.<sup>[1]</sup>

In Canada 1.9 to 2.3 million people have chronic kidney disease.<sup>[2]</sup> And in the US, the Centers for Disease Control and Prevention found that CKD affected an estimated 16.8% of adults aged 20 years and older, during 1999 to 2004.<sup>[3]</sup> And UK estimates suggest that 8.8% of the population of Great Britain and Northern Ireland have symptomatic CKD.<sup>[4]</sup> The overall prevalence of CKD in Kingdom of Saudi Arabia was 5.7% and 5.3%.<sup>[5]</sup>

And variety of biologic, physiologic, psychological and social stressors may trigger depression and other psychological problems at any point during this life-long illness (CKD), in which those psychological disorders will interfere with the processes of managing the CKD, maintaining of the normal life-style for the patient and will reduce the quality of life of the patients.<sup>[5]</sup>

Major depressive disorder (MDD) (also known as clinical depression or major depression) is a mental disorder characterized by episodes of all-encompassing low mood accompanied by low self-esteem and loss of interest or pleasure in normally enjoyable activities.<sup>[7]</sup> A depressed person may report multiple physical symptoms such as fatigue, headaches, or digestive problems; physical complaints are the most common presenting problem in

developing countries, according to the World Health Organization's criteria for depression.<sup>[8]</sup> Depression is a major cause of morbidity worldwide.<sup>[9]</sup> Lifetime prevalence varies widely, from 3% in Japan to 17% in the US. In most countries the number of people who would suffer from depression during their lives falls within an 8–12% range.<sup>[10] [11]</sup> In North America the probability of having a major depressive episode within a year-long period is 3–5% for males and 8–10% for females.<sup>[12]</sup>

Depression is prevalent in patients with chronic kidney disease (CKD) and has been associated with increased morbidity and mortality. Whereas the point prevalence of depression is 2% to 4% in the general community and 5% to 10% in the primary care setting,<sup>[11]</sup> 20% to 30% of patients with CKD have clinical depression.<sup>[13], [14], [15]</sup> Symptoms of clinical depression affect approximately 25% patients on hemodialysis and can be associated with low quality of life and increased mortality. The epidemiology of depressive disorders is less well studied in the renal transplant population. However, depression is a risk factor for poor outcomes, such as graft failure and death after renal transplantation.<sup>[16]</sup>

### **Purpose of the study**

#### **The study had been planned to**

- Find out the prevalence of depression among CKD patients in central region of KSA.
- To evaluate the social life and personal relationships of CKD patients.
- To evaluate quality of life of CKD patients.

### **Outcome of the Research**

To help CKD patients to overcome their psychological disturbance, social problems and biological complications, caused by their non-compliance to their special healthy diet.

- To inform the community about CKD patients situations, and difficulties they are facing.
- To ensure that CKD patients had a comprehensive idea about their medical condition and know how to deal with consequences of their disease.

### **MATERIAL AND METHODS**

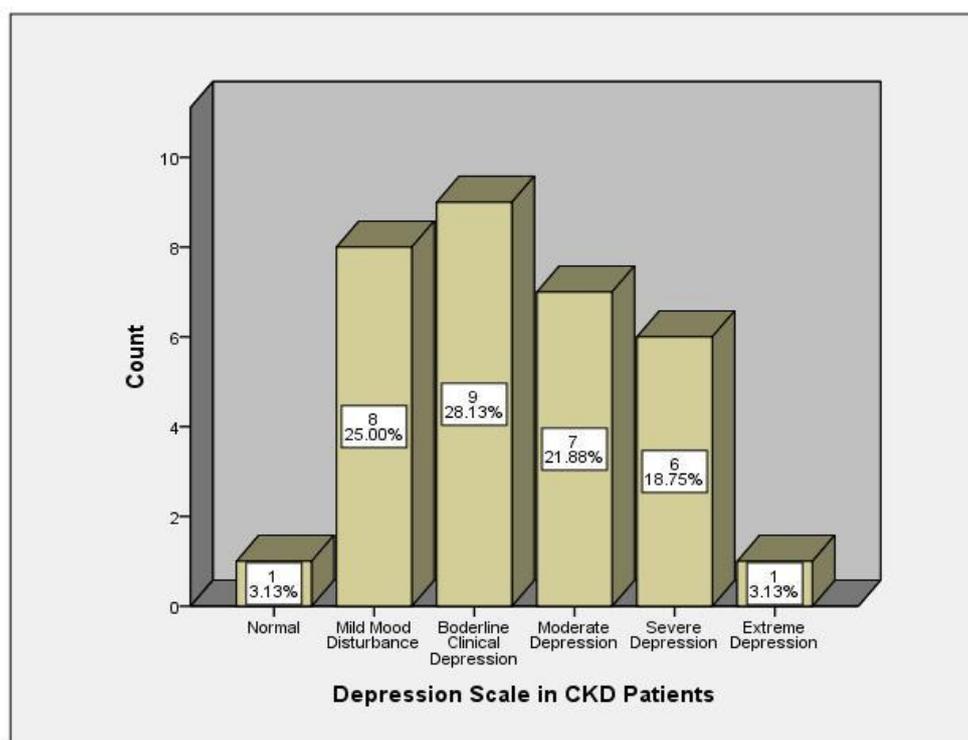
It was an observational cross – sectional Hospital based study. The study was conducted in Haemodialysis units at King Khalid Hospital, Almajmaah and Hurameula General Hospital, Hurameula, Kingdom of Saudi Arabia. The area in which the study was conducted is the General Hospitals in Almajmaah and Hurameula cities. The population of the Majmaah city is around 45,000, whereas, the Population of Hurameula city is approximately 30,000. The

inclusion criterion was patients of either sex on haemodialysis between age group of 17 – 80 years suffering from chronic kidney disease. The data was collected from 33 CKD patients using complete enumeration sampling method from August 2012 – November 2012 i.e. for a period of 3 months. A pre-defined self validated questionnaire (Beck Depression Inventory) was used to measure the severity of depression. To evaluate the Quality of Life of CKD, WHOQOL questionnaire was adapted and modified to the current situation. The reliability of the latter questionnaire will be checked by Cronbach's Alpha. The data was entered and analyzed using SPSS 20.0. Mean  $\pm$  S.D was given for quantitative variables like age etc. Frequencies and percentages were given for qualitative variables. Pearson chi-square and Fisher exact tests were applied to observe associations between qualitative variables. A p-value of  $<0.05$  will be considered as statistically significant.

## RESULTS

The prevalence of depression in CKD patients was 44%. The average age of patients was  $44.87 \pm 17.88$  years. The ratio of males and females was 1:1. Majority of the patients had depression at the beginning of the condition 29 (90.6%), about 3/4 of the patients 24 (75.0%) were leading normal social life despite of being diseased. Majority of the patients 26 (81.3%) were not involved in any sports activities. Almost half of the patients were following healthy diet. Major chunk of the patients adhered adaption to the new conditions 27 (84.4%). About 3/4 of the patients had intention for renal transplantation.

Significant association was observed between depression scale and depression at the beginning of the condition ( $p=0.43$ ), showing that majority of the patients had borderline depression ( $n=8$ , 27.6%), ( $n=7$ , 24.1%) had moderate depression, whereas, ( $n=6$ , 20.7%) had severe depression. Significant association was observed between depression scale and the QoL scale ( $p<0.001$ ), showing that those with acceptable quality of life had borderline depression ( $n=9$ , 33.3%) and those with not acceptable quality of life, majority of them had severe depression ( $n=4$ , 80%). No significant association was observed between depression scale and normal social life ( $p=0.72$ ), depression scale and involvement in sports ( $p=0.61$ ), depression scale and eating healthy diet ( $p=4.86$ ), depression scale and adaption to new condition ( $p=0.63$ ), depression scale and intention for renal transplantation ( $p=0.46$ ). Gender was also not significantly associated with the depression scale ( $p=0.39$ ).



N= 32		
Barometers	yes n(%)	No N(%)
Depression at the beginning of the condition	29 (90.6)	3 (9.4)
Normal social life	24 (75)	8 (25)
Following diet	13 (40.6)	19 (50.4)
Doing sport	6 (18.8)	26 (81.3)
Adaption to the new condition	27 (84.4)	5 (15.6)
Intention to renal transplantation	24 (75)	8 (25)

### Recommendations

Depressive disorders are common in patients with CKD. Regular screening of depressive disorders in this population is essential. Adaption of the CKD patient to the new condition requires medical staff cooperation with patient's family and his friends. Blood pressure and serum cholesterol can be reduced in chronic kidney disease by dietary and lifestyle modifications. A larger group of patients will need to be studied for a longer period of time to confirm the effects observed in this study and to determine if assessing psychological status, QOL, diet and lifestyle modifications can help in slowing the progression of the chronic renal disease. Financial aid whether from governmental or private institutions should be provided to CKD patients in order to help improving their quality of life. Social and psychological consultation sessions should be offered to the CKD patients regularly. As we a health care provider we must do a lot of researches and studies about the available options or the

alternative methods of CKD treatment such as “artificial kidney”, I think it is an important thing to think about and try to do researches on it.

## CONCLUSION

A high proportion of CKD patients experience several symptoms of subclinical depression, resulting in impaired quality of life for the patients. Also large percentage of them ignores the ideal diet which it provided for them from their health care professionals. Low percentage of CKD patients used to do sport and excises regularly. Majority of CKD patients show their high intention to have renal transplant in the near future. Normal social life returned back to the majority of CKD patients after they adapt to the new condition. Further studies are still needed to assess the association of the different depressive disorders with outcome of CKD, but the available evidence suggests that both depressive affect and clinical depression are associated with impaired QOL and poorer survival in these patient groups.

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