

Depression and Anxiety among Patients undergoing Dialysis: An Observational Study

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ABSTRACT

Introduction: Depression and anxiety are the most prevalent psychological disorders among end-stage renal disease patients and are associated with various conditions that result in poorer health outcomes, e.g. reduced quality of life and survival. Along with the psychological problems of patients undergoing hemodialysis, sleep quality also plays a negative role in patient health status. Frequent reports have documented that patients having complicated health and mental status may lead to poor health quality and may lead to mortality. We aimed to investigate the prevalence of depression and anxiety among patients undergoing renal dialysis therapy.

Material and methods: A total of 95 patient's data were collected by using DASS questionnaire. DASS questionnaire scores were evaluated, result was tabulated and interpreted. Scoring of questionnaire test is based on the a 0 – 3 scale which indicates various range of depression, anxiety and stress scale.

Results: Our study indicate that among 95 patients, many of the patient having mild psychological problems includes depression, anxiety and stress. Maximum range of 13.68% of patients have found out with anxiety and stress and no depression state. But there were patients with no sign of anxiety, stress and depression. Previous studies state that psychological variables include depression, stress, and, anxiety took part to get more health complications along with sleep disorders. But by providing right time health care and mental support, it is possible to get back patient health to normal state. Our result concluded that none of the patient has found with complicated mental and health issues.

Conclusion: Current study contributed that, among 95 patient's data analysis we have found out few number of patient with mild psychological abnormalities. But these problems did not reach to highly complicated state. So our research study aimed to suggest nephrologists to aware of the quality of life in their patients and should consider the screening of patients for various symptoms to improve the quality of life.

Keywords: Depression and Anxiety, undergoing Dialysis Patient

including depression and anxiety and the role of pain and sleep disorders are having a significant correlation with the quality of life of ESRD patients.³ Many studies have shown that QOL in dialysis patients found to be lower than that in the general population.^{1,2} QOL may have influenced by sleep disorders, pain, and psychological factors. This may lead to mortality in a variety of condition including ESRD.⁴

Some recent studies have contributed relevant results suggesting that proper in-time dialysis treatment may reduce the chances of getting complications in ESRD patents including anxiety and depression. However, the prevalence of sleep disturbances and pain in those patients has a significant impact as well as more chance to get a poor quality of life.⁵ Past studies have significant data that states that ESRD patients are known to have depression, anxiety, pain, and sleep disorders. In which sleep disorder and pain imparts an active part in ESRD patients than other complication such as depression state.⁵ The purpose of this study was to evaluate the patient QOL by the analysis of the presence of depressed mood and the degree/ range of pain in ESRD patients. We hypothesized that psychological status may have a more prevalent role in the QOL of ESRD patients. Because right-time dialysis treatment might have the advantage to reduce complications in ESRD patients such as psychological problems including depression and anxiety.⁶

Aim of our study was to evaluate the presence and degree of psychological mood in haemodialysis patients during treatment period. A total of 95 patients have enrolled for the study and we planned to do an investigational analysis to check the presence and range of depression and anxiety mental state. This may help nephrologist to understand the mental status of their patients and may can give better treatment support.

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MATERIAL AND METHODS

The prospective cross-sectional study was conducted on 95 patients undergoing hemodialysis in the dialysis department at Yenepoya Medical College in 2020. The literate participant above 18 years old in both the gender undergoing hemodialysis who are willing to participate in the study was considered. The exclusion criteria were as follows: Patients with no hemodialysis and who having kidney disorders other than ESRD will be excluded from the study.

The participants who are willing to take part in the study were ensured about the details including the need for the study and how to complete the questionnaire were explained. Study data have collected using Depression, Anxiety and Stress scale (DASS); The demographic and clinic questionnaire contained questions about age, gender, place of residence, dialysis frequency, HD(Haemodialysis) duration.⁷ DASS 21 questionnaire has 21 items to evaluate the severity of mental disorder symptoms associated with three various grade including mild, moderate, and severe results.⁸ This health tool can able to evaluate the severity of the behaviour and emotional symptoms that are correlated with depression, anxiety disorder, and stress scale. Here these 21 items of questions have scored and the test took around 3-5 minutes. It is not a diagnostic test moreover, a self-report scheme, and should be followed by a complete psychological or psychiatric evaluation.⁸ DASS 42 was a 42 item self- report inventory that yields three factors: Depression, Anxiety, and Stress. This measure proposes variables such as physical anxiety and mental stress. DASS 42 scale designed to measure emotional ranges of depression, anxiety, and stress. Clinicians are using this protocol to measure the current state of change in the state during the treatment course.⁹

All statistical analysis of PSQI- test was performed by using bar diagram pictorial representation concerning dialysis-treatment duration, serum creatinine- level, age, and gender. All the bar- diagram results were expressed as a percentage.⁷

RESULT

Patients with hemodialysis from Dialysis department, Yenepoya medical college were approached and a total of 95 volunteer patients were recruited for the study.

Depression anxiety stress scale (DASS) questionnaire has given the quantitative measure of mental distress condition and physical anxiety of hemodialysis during the treatment. DASS scores in terms of grades such as normal, mild, moderate, and severe indicates the mental and physical states of hemodialysis patients facing during the treatment period. Out of 95 patients we have recruited for the study,

the majority of the patients did not have any inconvenience both mentally and physically. Table 1 shows that in this study, 3.15% of patients were found affected by only anxiety conditions. Among that 66% of patients was suffering a very mild range of personal anxiety. 5.26% of patients neither had depression or anxiety condition but then slightly faced mental stress. Data shows that 80% of hemodialysis patients among them have gone through a normal range of stress situation. Among all 95 patients, we have analyzed for the study 4.21% of patients have none of the problems regarding the DASS questionnaire test. 13.68% of hemodialysis patients have shown stress and anxiety problems with 1-4 grades but did not face any depression situation during the treatment. Among 95 patients, only 8.42% of patients have faced depression conditions with a range of 1-4 and they did not have any of the scales includes stress and anxiety. Among that, 12.5% of patients have shown score 4 of the DASS scoring test. Remaining patients were having a normal and mild range of DASS scores.

DASS 42 questionnaire has 42 sets of question which measures the various scales of depression, anxiety, and stress. Among the 95 patients, we have included for the study all the patients had a normal and mild range of depression, physical anxiety, and stress scale. Fortunately, all these 95 patients who have been undergoing hemodialysis did not have complicated mental stress and anxiety problems.

DISCUSSION

The investigational study among 95 patients have demonstrated that, our haemodialysis patients did not have any abnormal psychological mental states. From the data we have gotten by questionnaire study states that, a maximum of 13.68% patients have mild mood change of stress and anxiety and no depression state. Stress and anxiety test score have divided as 1-4 scales in which 1-3 scale grade have mild scores. So result shows that these 13.68% of patients have faced slight variation in the anxiety and stress mood change but not a complicated stage one. Among 95 patients 4.21% of patients did not have any of these abnormalities. Hence we can state that not all the haemodialysis patients can have psychological problems or stress. All these abnormalities have faced by the patients is depends upon the associated factors include age, BMI (Body mass index), economical status, travelling problems for regular visit of hospital, family support, and of course disease severity.¹⁰ Mild anxiety level has seen in 3.15% of haemodialysis patients with no depression and stress. It may be due to the anxiety of dialysis process and treatment failure.¹¹ Stress scale 1-3 have shown as 5.26% in patients with no presence of depression and anxiety. These 5.26% of patents faced mild stress problems may be because of the multiple reasons include economic problems, tension for treatment procedure, regular visit of hospital etc.¹² 8.42% of patients has depression state, but there was no stress or anxiety showing in those patients. Associated studies published in the last few years have contributed that, issues regarding psychiatric problems in renal failure patients had a striking role and which can be

Grade	SCALE			Percentage
	Depression	Stress	Anxiety	
Grade	Nil	Nil	1-3	3.15%
	Nil	1-3	Nil	5.26%
	Nil	Nil	Nil	4.21%
	Nil	1-3	1-3	13.68%
	1-3	Nil	Nil	8.42%

Table-1: DASS 21 Questionnaire score

lead to complete poor mental and health status of patients.¹³ But then most of the issues was not a complicated one as like we have analysed in our study. If we have not consider the emotional problems and did not provide support and care accordingly, then it may lead to poor health status. Study on emotional and psychological support in end-stage renal disease patients published in 2016 by BMC Nephrology also had a relevant result analysis states that, variables includes emotional mood and psychological abnormalities which untreated can have considerable negative impact on patient's life.¹⁴ But with the knowledge of related research studies and our own result analysis we can state that, it is possible to lower disease condition by providing good mental and health care support and thereby can bring back the patients to good and healthy state.

From patient's data analysis our study demonstrated that, few number of patients have shown psychological abnormalities in a grade of 1-3 scales. But then these mental stress and related problems have not made patient's health status as poor. After our questionnaire study, we have analysed and found out that 95 patients recruited for the study did not have any complicated psychological problems.

CONCLUSION

This study revealed that depression and anxiety are common conditions among chronic kidney disease patients and that they occur more frequently among those undergoing dialysis than among those undergoing transplantation. Lower quality-of-life scores were associated with symptoms of depression in both types of renal replacement therapy. Presence of comorbidities, loss of vascular access and worse quality of life were associated with anxiety symptoms among dialysis patients but then in our study there was no evidence of patients having high scale anxiety problems. Also our study data investigated and concluded that none of the patients among 95 enrolled had complicated problems in depression, stress and anxiety mood. Treatment of affective disorders needs to be effectively included within the routine care provided for chronic kidney disease patients and should be maintained across the continuum of care. Further investigations are warranted to identify major risk factors and design better interventions for management, control and prevention.

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