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Research Article

THE ASSOCIATION OF DEATH ANXIETY, QUALITY OF LIFE AND PSYCHOLOGICAL STRESS BETWEEN LIVER AND RENAL TRANSPLANT PATIENTS

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Abstract:

Objective: The aim of our study was to examine the association of death anxiety, stress on quality of life and psychological stress between liver and renal transplant patients.

Study Design: A descriptive study.

Place and Duration: This study was conducted at Holy Family hospital Rawalpindi for the duration of six months starting from March, 2020 to September, 2020.

Methodology: In our present study 300 patients receiving liver and kidney transplantation were diagnosed on the quality of death anxiety scale, life scale and depression. According to gender distribution the number of females were 31.3% and the number of males were 68.7%. SPSS v. 20 were used to find the results of various statistical analyzes such as linear regression, Pearson correlation, independent sample t-test and ANOVA.

Results: According to our study the results show that stress had a significant relationship with death anxiety (0.31) and negative association was found with quality of life (-0.29). Quality of life is significantly predicted for depression (13%) and death anxiety (25%). The results explained quality of life (32%). Mediation with death anxiety were found incomplete. At the end of our study the results show that in liver and renal recipient patients the quality of life and death anxiety significantly different. In different age group stress level were also different between patients.

Conclusion: At the end of our study, we conclude that the quality of life between liver and renal transplant recipients were deeply affected with stress and death anxiety.

Keywords: Psychological Stress, Renal Transplant, Quality of Life, Recipient, Death Anxiety, Liver.

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INTRODUCTION:

Organ replacement is a stressful experience due to change of body organ. Fear of death, body stress, drugs side effects, nutrient modification, restlessness, sexual issues, recognition of socio-economic behavior and public relationship. Advance studies of liver and kidney transplantation point out the psychological and emotional strain due to rejection of graft in acute phase [1]. In such patients, depressiveness and hopelessness, anxiety, violent behavior, expectation, and assurance would be different in an irregular pattern, instead of steady process of adaptation. In the last stage of organ failure, the patient has less life hope and wants for organ transplantation. Before and after the transplantation patient have some mental problems like anxiety disorders [2].

Health-related Quality of Life (QoL) is an important measure of how a disease affects the lives of patients. The Quality of Life (QoL) domains include physical, psychological, and social functioning and general satisfaction with life [3]. Numerous studies have demonstrated that these patients have a lower Quality of Life (QoL) than that of healthy populations [4,5]. Depression is strongly correlated with decreased health related Quality of Life (QoL), especially in mental dimensions [6]. Furthermore, several studies have shown that patients with poorer Quality of Life (QoL) had a higher incidence of anxiety and fatigue [7], and longitudinal follow-up showed increased mortality [8]. Death is a powerful human anxiety which give an idea as a strong inspiring force behind most inventive appearance and philosophical query all over the age's death anxiety is a phrase use to give idea about nervousness generated by death consciousness [9]. Many studies have been conducted at national and international level for measuring quality of life, psychological distress and death anxiety in pre liver, pre renal donor and recipient patients [10]. This research planned to evaluate the quality of life, mental stress and death anxiety in pre liver transplant and pre renal transplant patients including donor and recipient. A number of tools designed in past few years for measurement of transplanted patient's Quality of life and psycho social response. Transplantation reflected the complex cognitive, emotional and behavioral effects [11].

Death anxiety is termed as the fear caused by death awareness, fear related to one's existence and becoming a non-being [12,13]. In chronic diseases, the occurrence of death related thoughts has been explored. Some investigations have shown that females have more fear of death (death anxiety) than their counter part [14]. Whereas some other studies

reported higher level of death anxiety in relationship with physical and psychological problems among elderly people [15]. Levels of depression, anxiety and death anxiety were explored among patients with some chronic diseases. A positive relationship between disease duration and death anxiety was found [16].

Existing literature provided evidences about the relationship between psychological and physical problems [17]. Patients with different chronic illnesses has already been investigated, very few has been reported among patients of liver and renal transplant recipient. This study was aimed to explore these phenomena among these patients. The rationale of our study was to evaluate how death anxiety and stress have an impact on quality of life of patients. Furthermore, it was aimed to investigate the mediating role of death anxiety in relationship between stress and quality of life. The main objective of the study was to explore the relationship between Psychological distress, death anxiety and quality of life among pre liver and pre renal transplant recipients.

METHODOLOGY:

This Descriptive cross-sectional study was conducted at Holy Family hospital Rawalpindi for the duration of six months starting from March, 2020 to September, 2020. All transplant participants were selected through purposive sampling technique and comprises of enrolled patients of liver and renal transplant recipients at Holy Family Hospital Rawalpindi. Patients with other diseases (like heart disease, stroke, diabetes mellitus, asthma, cancer, arthritis and osteoporosis) were not included in this study. The demographic variables used were registration number, name, address, age, gender, profession, income per month, monthly cost on disease, total cost on disease and duration of disease. The quality-of-life scale by Flanagan was used, it has 16- items. It is applicable to chronic diseases patients. It is widely used to check the quality of life during disease in five domains i.e. Physical, emotional, financial, sexual relationship and social. It is a 5-likert scale with five response categories. Responses were scores as highly satisfied (1), satisfied (2), neutral (3), dissatisfied (4), strongly satisfied (5) [18].

The death anxiety scale (DAS) by Templers was used, it has 15items. This scale has incontestably been used all over the world rather than other death attitude instruments. It is a 5-point Likert scale with five response categories. Responses were scores as strongly agree (1) agree (2), neutral (3), disagree (4), strongly disagree (5) [19]. The depression anxiety and stress scale (DASS) by Lovibond, and Lovibond, was

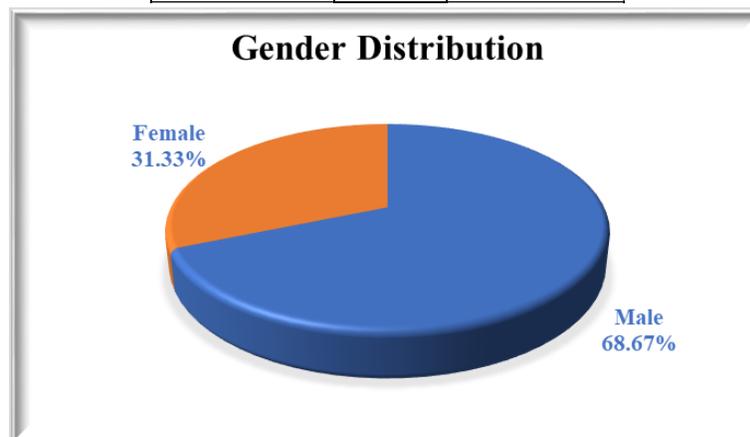
used, it has 42 items. The DASS is self-report inventory that yield 3 factors: Depression; Anxiety; and Stress. Researchers can use score of any one factor out of three for their study as this scale provide separate score for all three factors. Responses were scores as Normal (1), Mild (2), Moderate (3), Sever (4), Very severe (5) [20]. Data was collected by using these instruments and one of the researchers had collected the data. SPSS v. 20 were used to find the results of various statistical analyzes such as Pearson correlation, linear regression, ANOVA and independent sample t-test.

RESULTS:

Total 300 patients both male (n=206, 68.67%) and female (n=94, 31.33%) with mean age of 32.70 years and all were diagnosed patients. Most of the patients were illiterate. (Table 01) Majority of the patients were renal recipients 79.7%, only 20.3 % were liver donors in the sample. Most of the patients (38.3%) reported their monthly family income between twenty to 40,000 rupees and only 6.7% claimed that their monthly income is more than 80,000 per month. Around 47% of patients reported that cost spending on their illness were 16,000 to 25,000 rupees per month.

Table No 01: Gender Distribution

Gender	Qty	%age
Male	206	68.67%
Female	94	31.33%
Total	300	100%



Correlation analysis showed that stress has significant positive correlation with death anxiety ($r = 0.31$, $p < .01$). It means that as stress increases, death anxiety also increases. However, stress has significant negatively correlation with quality of life ($r = 0.21$, $p < .01$) which means that as stress increases quality of life decreases. Significant negative correlation was found between death anxiety and quality of life which reflects that as death anxiety increases quality of life decreases ($r = -0.29$, $p < .01$). (Table 02)

Table No 02: Bivariate Correlation Between Stress, Death Anxiety and Quality of Life

Variables	Stress	Death anxiety	Quality of life
Stress	1	0.31	-0.21
Death anxiety		1	-0.29
Quality of life			1
P-value= < 0.01			

Hierarchical regression for assessing the mediating role of death anxiety in the relationship between Stress and Quality of Life was done. A series of regression equations were done to test mediation [21]. First analysis was performed in

order to see the prediction of Stress on quality of life. Model 1 explained 31 % variance in quality of life ($p < .000$) with stress, which means that stress has significant impact on quality of life. (Table 03)

Table No 03: Hierarchical Regression Analysis for Stress and Death Anxiety

Predictors	Death Anxiety			P-value
	B	Std. Error	Beta	
Constant	26.05	1.90		
Stress	0.31	0.05	0.31	0.000
Note. R2 = 0.31, Adjusted R2 = 0.30, (F= 33.61, $p < = 0.01$)				

Results of second regression analysis showed that stress has significant impact on quality of life. Death anxiety negatively significantly predicts quality of life and death anxiety partially mediated the relationship between stress and quality of life. Overall results explained 32 % variance in the quality of life ($p < .000$). The first model explained 21 % variance in the quality of life ($p < .000$). Stress negatively significantly predicts Quality of Life ($p < .000$). (Table 04)

Table No 04: Hierarchical Regression Analysis for Stress and Death Anxiety as Predictors of Quality of Life

Variables	Quality of Life		
	B	Std. Error	Beta
Constant	51.52	2.02	
Stress R2 = 0.21	-0.21	0.05	-0.21
Death Anxiety R2 =0.26	58.37	2.50	
	-0.13	0.05	
	-0.26	0.06	-0.25

DISCUSSION:

This study was aimed to explore the relationship between death anxiety, stress and quality of life. Correlation analysis showed that Stress significantly positively correlated with Death Anxiety. Patients with higher level of stress also have higher level of death anxiety. It might possible that their chronic illness is the one major because of their stress and this stress is producing death anxiety. These findings are in the line of previous investigations where occurrence of death related thoughts has been explored among patients of chronic diseases. Some investigations have shown that females have more fear of death (death anxiety) than males. Whereas some other reported higher level of death anxiety in relationship with physical and psychological problems among elderly people. Cross cultural studies found that gender and education was associated with higher death anxiety. Complex relationship between age and death anxiety was also explored and it was found that age plays a significant factor in the perception of death anxiety.

Correlation analysis further revealed negative relationship of stress with Quality of Life. Patients

with higher level of stress had poor life quality. There are many other potential factors which might affect like illness, financial burden psychological etc. These findings are in the line of previous national and international level for measuring quality of life, psychological distress and death anxiety in pre liver, pre renal donor and recipient patients [21]. Result of previous study showed pre transplant anxiety and depression affect quality of life and mental health [22]. Constant liver illness considerably deteriorates the patient's health and life quality. A research in patients with chronic liver disease showed that these individuals experience significant impairments in their health-related quality of life [23]. The patients' after organ treatments can have improved quality of life, reduced fear of death and uncertainty of life [24]. Demographic characteristics of the patients showed that most of the participants were males in the sample and most of the patients were between 40-61 years. The prevalence of liver cirrhosis and renal failure was higher in males. Numerous studies have demonstrated that kidney patients have a lower QoL than that of healthy populations [25].

Hierarchical regression was conducted to assess the impact of stress on quality of life and mediation of Death anxiety between these relationships. Results revealed that stress has significant impact on Quality of Life. In the Second Regression analysis Quality of Life was regressed by Stress in the first analysis and Death anxiety in second phase of analysis. Death anxiety negatively significantly predicts Quality of Life and death anxiety partially mediated the relationship between Stress and Quality of Life. Previously death anxiety appears to be a basic fear at the core of a range of mental disorders, including, panic disorder, hypochondriacs, depressive disorders and nervousness. Similarly, awareness of fear of death and mortality is a big issue of individuals according to past record throughout the life [26]. The findings of the study found relationship between stress, death anxiety and quality of life and mediating role of death anxiety.

CONCLUSION:

At the end of our study, we conclude that the quality of life between liver and renal transplant recipients were deeply affected with stress and death anxiety.

REFERENCES:

1. Calia R, Lai C, Aceto P, Luciani M, Camardese G, Lai S et al. Emotional self-efficacy and alexithymia may affect compliance, renal function and quality of life in kidney transplant recipients: Results from a preliminary cross-sectional study. *Physiol Behav.* 2015. 1; 142:152-54.
2. Grover S, Sarkar S. Liver transplant psychiatric and psychosocial aspects. *J Clin Exp Hepatol.* 2012. 1; 2(4):38292.
3. Drayer RA, Piraino B, Reynolds III CF, Houck PR, Mazumdar S, Bernardini J et al. Characteristics of depression in hemodialysis patients: symptoms, quality of life and mortality risk. *Gen. Hosp. Psychiatry.* 2013.1; 28(4):306-12.
4. Goetzmann L, Saraca N, Ambühl P, Boehlerb A, Iranib S, Muellhaupt B et al. Psychological response and quality of life after transplantation: a comparison between heart, lung, liver and kidney recipients. *Nation.* 2018; 5(6) 447-83.
5. Schulz KH, Kroencke S. Psychosocial challenges before and after organ transplantation. *Transplant Res. Risk Manage.* 2015. 4; 7: 45-58.
6. Tsay SL, Healstead M. Self-care self-efficacy, depression, and quality of life among patients receiving hemodialysis in Taiwan. *Int J Nurs Stu.* 2015.1; 39 (3):245-51.
7. Kao TW, Lai MS, Tsai TJ, Jan CF, Chie WC, Chen WY. Economic, social, and psychological factors associated with health-related quality of life of chronic hemodialysis patients in northern Taiwan: a multicenter study. *J Artif Organs.* 2012. 33 (1):61-68.
8. Perlman RL, Finkelstein FO, Liu L, Roys E, Kiser M, Eisele G et al. Quality of life in chronic kidney disease (CKD): a cross-sectional analysis in the Renal Research Institute-CKD study. *Am J Kidney Dis.* 2013.1; 45(4):658-66.
9. Wolcott DL, Nissenon AR, Landsverk J. Quality of life in chronic dialysis patients: Factors unrelated to dialysis modality. *Gen. Hosp. Psychiatry.* 2016. 1; 10(4):267-77.
10. Young AL, Rowe IA, Absolom K, Jones RL, Downing A, Meader N et al. The effect of Liver Transplantation on the quality of life of the recipient's main caregiver—a systematic review. *Liver Int.* 2017. 37(6):794-801.
11. Chen CK, Tsai YC, Hsu HJ, Wu IW, Sun CY, Chou CC et al. Depression and suicide risk in hemodialysis patients with chronic renal failure. *Psychosomatics.* 2015. 1; 51(6):52828.
12. Kring DL, Crane PB. Factors affecting quality of life in persons on hemodialysis. *Nephrol Nurs J.* 2018. 1; 36(1):1527.
13. Lehto R, Stein K. Death anxiety: an analysis of an evolving concept. *Res Theor Nurs Pract.* 2014. 23, (1): 23-41.
14. Flanagan JC. A research approach to improving our quality of life. *Am Psychol.* 2015. 33(2):138-47.
15. Templer DI. The construction and validation of a death anxiety scale. *J Gen Psychol.* 2016.1;82(2):165-77.
16. Lovibond PF, Lovibond SH. The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behav Res Ther.* 2017. 1; 33(3):335-43.
17. Couser WG, Remuzzi G, Mendis S, Tonelli M. The contribution of chronic kidney disease to the global burden of major noncommunicable diseases. *Kidney Int.* 2011. 2; 80(12):1258-70.
18. Baron RM, Kenny DA. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J Pers Soc Psychol.* 2014. 51(6):1173-82.
19. Schulz KH, Kroencke S. Psychosocial challenges before and after organ transplantation. *Transplant Res. Risk Manage.* 2015 4; 7:45-58.

20. Miller LR, Paulson D, Eshelman A, Bugenski M, Brown KA, Moonka D, et al. Mental health affects the quality of life and recovery after liver transplantation. *Liver Trans.* 2013. 1;19(11):1272-78.
21. Pérez-San-Gregorio MÁ, Martín-Rodríguez A, Domínguez Cabello E, Fernández-Jiménez E, Bernardos-Rodríguez Á. Quality of life and mental health comparisons among liver transplant recipients and cirrhotic patients with different self-perceptions of health. *J Clin Psychol Med S.* 2013 1; 20 (1):97-106.
22. Perlman RL, Finkelstein FO, Liu L, Roys E, Kiser M, Eisele G et al. Quality of life in chronic kidney disease (CKD): a cross-sectional analysis in the Renal Research Institute-CKD study. *Am J Kidney Dis.* 2014 1;45(4):658-66.
23. Schulz KH, Thaiss F. Long-Term Survival in Chronic Renal Insufficiency. *Federal Health Gazette Health Research Health.* 2012. 1; 55 (4): 543-51.
24. Iverach L, Menzies RG, Menzies RE. Death anxiety and its role in psychopathology: Reviewing the status of a transdiagnostic construct. *Clin psychol rev.* 2014 1;34(7):580-93.
25. Eshbaugh E, Henninger W. Potential Mediators of the Relationship between Gender and Death Anxiety. *J Individ Differ.* 2013. 1; 11(1) 22-30.
26. Van Hout HP, Beekman AT, De Beurs E, Comijs H, Van Marwijk H, De Haan M, et al. Anxiety and the risk of death in older men and women. *Br J Psychiatry.* 2018; 185(5):399404.