Anxiety And Depression in Chronic Kidney Disease (CKD) Patients in The Initial Phase of Hemodialysis Therapy

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Abstract

Anxiety and depression are psychological conditions that hemodialysis patients often suffer. Unresolved anxiety can cause depression. The research aims to determine the description of anxiety and depression in chronic renal disease (CKD) patients who undergo hemodialysis (HD) therapy in the initial phase. The study was a quantitative descriptive with a survey approach involving 43 HD patients for less than eight months. The research instrument implemented was the Hospital Anxiety and Depression Scale (HADS) questionnaire. The data were analyzed using descriptive analysis by presenting frequency and category distributions. The results discovered that 29 (62.8%) respondents suffered from anxiety; mild (32.6%), moderate (25.6%), and severe category (4.7%). Furthermore, 16 respondents (37.2%) experience depression; mild (20.9%), moderate (40.0.6%), and severe (2.3%) categories. Anxiety and depression are common symptoms among male and female respondents with direct vascular access, respondents with two times per week HD in the first two months of HD process, adult, pre and elderly and aoccupied respondents. Screenings are carried out routinely to detect anxiety and depression as early as possible and to provide interventions according to the needs of patients through nursing care approaches.

Keywords: Anxiety, Depression, Hemodialysis, Chronic Renal Disease, HADS

■1.0 INTRODUCTION

Anxiety and depression are patients' common psychological conditions that undergo hemodialysis therapy, and it is associated with high mortality, morbidity, and hospitalization (Kojima, 2012). The prevalence of anxiety and depression in hemodialysis patients is 20-40%. The results of previous studies report the prevalence of anxiety is 27% (Cukor *et al.*, 2007), 47.8% (Vasilopoulou *et al*., 2016), 41.7% (Najafi *et al.,* 2016), 34% (El Filali *et al*., 2017), 22% (Schouten *et al*., 2019), and 29% depression (Cukor *et al.,* 2007), 38.2% (Vasilopoulou et al., 2016), 31% (Najafi *et al.,* 2016), 2016), 52, 2% (El Filali *et al*., 2017), 44.5% (Suparti dkk, 2018), 42% symptoms of depression (Schouten *et al*., 2019).

The research results by Cwiek *et al*., (2017) mentioned that anxiety and depression were problems often faced by hemodialysis patients and influenced by marital status, low education, unemployment, and low income. Women significantly experience anxiety and depression more often. The most common depression in dialysis patients is anhedonia (loss of interest), feelings of sadness, feelings of worthlessness, guilt, hopelessness, sleep disturbance followed by decreased appetite, and decreased level of sexuality (Saraha et al., 2013).

Patients diagnosed with chronic renal failure and receiving hemodialysis experience physical and psychological effects. The results of Sopha, R.F., & Wardhani, (2016) find a state of stress and a high level of anxiety in patients when he is determined to undergo hemodialysis therapy. It is related to the patient's characteristics (age, sex, marital status, and work status) and chronic kidney disease. Anxiety and depression also occur in pre-dialysis patients, CKD and End Stage Renal Disease (ESRD). Patients with ESRD have a higher frequency of depression compared to CKD and pre-dialysis patients (Shafi & Shafi, 2017). Changing the pre-dialysis condition to renal replacement therapy (RRT) is a tense moment in the course of the final stages of CKD. Deciding to go through dialysis is complex and challenging. This condition can cause susceptible patients to experience anxiety, mood disorders or even worsen existing psychological problems(Turkistani et al., 2014). Depression, anxiety, and stress experienced by end-stage CKD patients are not related to the choice of peritoneal dialysis or hemodialysis. However, the exact cause of anxiety in the initial phase of dialysis is still unknown (Bezerra et al., 2018). So far, a number of research types have focused on anxiety and depression in patients, and only a few have looked specifically at the initial phase of undergoing hemodialysis therapy. The urgency of this research is to know the description of anxiety and depression in the initial phase of the first eight months undergoing hemodialysis. Therefore, it can make guidelines for providing comprehensive nursing care to reduce anxiety and minimize the incidence of depression.

■2.0 METHODOLOGY

This study was a quantitative descriptive with a survey approach involving 43 patients who undergo HD for less than eight months. An accidental sampling technique was implemented to obtain the sample. The research instrument used was the Hospital Anxiety and Depression Scale (HADS) questionnaire. The HADS instrument showed 14 items questions which evaluated depression, anxiety, and severity. A score of ≥9 establishes a diagnosis of anxiety and depression (Rudy, 2015) and divide into 4 criteria normal, mild, moderate and severe (Mackenzie et al., 2014). The study was conducted in Purwokerto and the research inclusion criteria were the patients undergoing hemodialysis therapy ≤ 8 months, willing to be respondents, and being able to read, write, and communicate verbally and non-verbally. The research exclusion criteria are the traveling hemodialysis, emergency patients, and incomplete documents. The research in March 2018 in the Hemodialysis Unit of Prof. Hospital dr. Margono Soekarjo. The ethics was obtained from the Ethics Commission of the Margono Soekarjo Purwokerto Hospital with number No.420/025279/III/2018. After the letter of approval from ethics was obtained, the research data of patients' information with suitable criteria were collected. Moreover, prior to the patients' hemodialysis process, the objective of the research was explained to them in order to make them understand and sign the form of informed consent. The questionnaire of the research was then distributed to the respondents completed with the guidance of the researcher. The data were analyzed using a descriptive analysis with display of frequency and category distribution.

■3.0 RESULTS

Table 1 illustrated that the patients' characteristics as follow; female were female (58.1%), were 16-25 years old (42.2%), low level education (67.4%), married (93.3%), hemodialysis less than 4 months (60.5%), vascular access (51.2%) and employed (58.1%). Furthermore, the table presented that in the early phase of hemodialysis, the patient experienced mild and moderate symptoms of anxiety and depression, and there were only 1-2 patients (out of 43) with severe level.

Table 1 Characteristics, crosstab anxiety, and depression of hemodialysis patients

Characteristic	Frequency (n)	Anxiety				Depression			
		Normal	Mild	Moderate	Severe	Normal	Mild	Moderate	Severe
Sex									
Female	25	17	6	2	0	7	10	5	1
Male	18	10	3	4	1	9	4	6	1
Age									
Adolescents	19	3	0	0	0	3	0	0	0
Adult	16	4	5	1	0	9	0	1	0
Pre and Elderly	10	9	9	9	2	15	9	5	0
Education									
Low Level Education	29	6	8	10	2	13	7	5	1
High Level Education	14	10	6	1	0	14	2	1	0
Marital Status									
Unmarried	3	3	0	0	0	3	0	0	1
Married	40	13	14	11	2	24	9	6	0
Length of HD									
≤ 4 months	26	6	9	9	2	13	6	6	1
> 4 months	17	10	5	2	0	14	3	0	0
Access of hemodialysis									
Vascular	22	5	6	9	2	10	6	5	1
AV shunt	20	10	8	2	0	16	11	1	0
Double lumen catheter	1	1	0	0	0	1	0	0	0
Occupation									
Not occupied	18	6	5	6	1	10	3	4	1
Occupied	25	10	9	5	1	17	6	2	0

The results show there are 29 respondents experiencing anxiety (62.8%), with mild (32.6%), moderate (25.6%), and severe (4.7%) categories. Moreover, there are 16 respondents experiencing depression (37.2%) with mild (20.9%), moderate (40.0.6%), and severe categories (2.3%) (table 2).

Table 2 Level of anxiety and depression of the patients in the initial phase of hemodialysis

Category	Depression		Anxiety	
	Frequency(n)	Percentage (%)	Frequency(n)	Percentage (%)
Normal	16	(37.2)	27	62.8
Mild	14	(32.6)	9	20.9
Moderate	11	(25.6)	6	14.0
Severe	2	(4.7)	1	2.3

■**4.0 DISCUSSION**

The results reveal that both male and female respondents experience anxiety, but men are in higher extent. Meanwhile, the depression is experienced by a number of female respondents. These results are supported by some previous research stating that men are more stressed and anxious compared to women. Seeing the differences of culture in Indonesia, men take important roles in daily life such as the obligation to meet economic needs, to provide a sense of security, and to make decisions. The determination to get HD therapy can be a stressor for men. Men consider that HD therapy bothers their obligations, (Sopha, R.F., & Wardhani, 2016). There is a significant correlation between the intensity of depressive symptoms and disease acceptance (r = 0.5; p <0.001). Poor mood in patients undergoing hemodialysis is associated with an increased maladaptive attitude towards chronic kidney disease. This research also confirms that there is a very high depressive disorder associated with dialysis patients (Kokoszka *et al.*, 2016).

Most respondents experiencing anxiety and depression have direct vascular venous access and are married. Even 3 respondents with unmarried status do not experience anxiety and depression. The presence of comorbidities, loss of vascular access, and poor quality of life are associated with anxiety symptoms among dialysis patients. Depression and anxiety are common conditions of patients who experience dehydration syndrome in dialysis patients rather than transplant patients, (de Brito *et al.*, 2019). The respondents with no Arterio fistula shunt installed experience anxiety, considering that every HD process must be carried out by injection. Moreover, respondents feel scared if the HD does not run well and bleeding occurs.

Anxiety and depression symptom are experienced by HD patients twice a week, in the first two months until four months in adulthood, pre and elderly respondents, low education respondents and employed respondents (Table 1). CKD and HD are even rising to negative emotional experience called stressors. Properly treated stressors makes individuals grow more mature, and improper treatment will trigger psychological responses such as anxiety, depression, anger, fear, guilt, and even death (DeLaune, S.C., & Ladner, 2011). Anxiety and depression symptom often occur in the initial phase, as proven by the research findings that it happen in the first 1 to 4 months, and patients begin to adapt in the 6th month. Patients who have undergone long process of hemodialysis show less anxiety and depression (de Brito *et al.*, 2019). Anxiety experienced by employed respondents is due to concerns of being unproductive and being fired from work. The occurrence of depression in chronic disease patients is the result of complex multifactorial interactions. These factors include the patient's personality, coping mechanisms, the presence or absence of social support, and genetic or biological predispositions. The high incidence of depression and anxiety in pre-dialysis patients is a contribution of the patient's role in the family, workplace factors, loss of physical activity, hospital visits, psychological stress, sexual dysfunction, and dialysis treatments that will be undertaken soon (Bulantekin & Demir, 2011; Cantekin *et al.*, 2014). The pre dialysis and dialysis patients in the initial phase experience high anxiety and depression, which results in a decrease in quality of life, even psychopathological problems, anxiety and depression which increase along with age (Hedayati *et al.*, 2012; Lee *et al.*, 2013).

In the final phase, anxiety symptoms are independently associated with an increased risk of death and one-year hospitalization. Anxiety symptoms are clinically relevant risk anxiety of pre-dialysis patients and provide the support needed to overcome anxiety and depression, so that the quality of life of patients can improve (Cantekin *et al.*, 2014). The limitation of this research includes the description of anxiety and depression only in the early phase of hemodialysis with survey method and instruments of questionnaire and the small number of respondents only from one hospital. To claim that anxiety and depression are considered as disorders, further investigation is required. There needs to be a collaborative research among nurses, doctors, and psychologists to do screening as well as diagnosing the anxiety and depression with quantitative approach and mix method involving more respondents from more hospitals.

■**5.0 CONCLUSION**

Anxiety and depression are the main problems in the initial phase of therapy especially in the first two months and last for up to 4 months in the respondents with vascular access, adult respondents, pre and elderly respondents, employed and low education respondents. Anxiety and depression screening is carried out routinely to be detected as early as possible and to provide interventions according to the needs of patients through nursing care approaches.

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