

Effect of Family Support Towards Elderly Hemodialysis Patients' Anxiety Level

Andri Nugraha¹*, Ghina Utari Rahmah¹, Purbayanti Budhiaji²

¹STIKes Karsa Husada Garut

²General Hospital of Dr. Slamet Garut

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*Corresponding author:

E-mail:

andrinugraha@outlook.com

ABSTRACT

One of many ways to decrease the morbidity and mortality rates on elderly hemodialysis patients is by decreasing their anxiety level on therapy sessions by family support. This research's purpose is to find out the effect of family support on the elderly hemodialysis patients' anxiety levels. The participants were 50 elderly hemodialysis patients. This research used a cross-sectional design. The questionnaire was adopted from House's theory, the anxiety level was measured with Self-Rating Anxiety Scale (SAS), and ordinal regression was used for statistical analysis. The results showed that there was a significant correlation between family support and elderly hemodialysis patients' anxiety level ($P=0.026$). The absence of family support affected the anxiety level from mild to moderate range. Patients without family support had 4,4 times higher chance to get mild to moderate anxiety than those with family support. Patients with chronic kidney failure who are under hemodialysis therapy treatment and having family support can increase their quality of life.

Keywords: Hemodialysis, anxiety, family support, elderly

Introduction

When someone got older, chronic diseases can affect not only his ability to live independently but also his quality of life. One of the common chronic diseases is kidney failure [1]. Chronic renal failure (CRF) is the continuous and irreversible decrease of kidney tissue function that the kidney cannot sustain body metabolism, fluid, and electrolyte balance for at least three months. [2], [3]. A patient can be categorized as CRF and should be under a hemodialysis therapy if the creatinine level test and GFR test show $<15\text{ml/min/1,73m}^2$. This phase is called end-stage renal disease (ESRD) [4]–[6].

Hemodialysis is a process of metabolic waste in blood disposal, such as urea, creatinine, and water, through a machine that has a semipermeable membrane that functions as a blood separator and dialysate fluid in artificial

kidneys, and diffusion, osmosis, and ultrafiltration [4]. The purpose of hemodialysis is to eliminate the accumulation of toxins from the oxidative processes that could decrease body endurance and damage the normal body cell function [6].

Based on the Riskesdas results in 2013, CRF in Indonesia had an increase in prevalence along with the increasing age. A sharp increase occurred in the 44-70 years-old age group compared to 25-34 years-old age group. The prevalence was also higher in men (0.3%) than women (0.2%) [7].

The complications that could occur during hemodialysis therapy are headaches, muscle cramps, nausea and vomiting, fever, hypotension, hypertension, disequilibrium syndrome, hemodialysis-related infections, and thrombocytopenia; those could trigger patients' anxiety [8]. Besides, the long-term effects of hemo-

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dialysis can make the patients feel anxious because of losing their job or economy, decrease in mobility, physical and cognitive strength, loss of sexual function, and the fear of dying [9].

Anxiety is a feeling of discomfort or concern about the psychiatric symptoms but it is often overlooked on patients with ESRD who undergo hemodialysis [10]. Anxiety is a non-specific symptom, characterized by feelings and emotions in relation to uncertainty and fear [11]. Anxiety is a psychological problem and becomes the leading cause of fatigue on patients that leads to the decrease of adherence to treatment, such as the duration of the dialysis session, and adherence to an inadequate nutritional diet characterized by a weight loss [12]–[15].

Family support plays an essential role in the well-being of patients. Family support is the assistance of other family members who will provide physical and psychological comfort, such as attention, appreciation, or helping the patient to accept their conditions [15]–[17].

Elderly patients with chronic kidney failure under hemodialysis therapy and excellent support from their family will have their quality of life improved [12], [16]. Because of the higher number of elderly patients who do hemodialysis and the impact caused by the restrictions and changes in lifestyle, they need support from all parties, particularly from their family as a support system for patients [14]–[16].

Material and Methods

This study used a cross-sectional study design. Ethical permits were submitted to the research unit of the Institute of health science Karsa Husada, Garut until the writers obtained research permission and publication information. The subject was 50 people, selected by

a purposive sampling technique. The subjects who met the requirements for this study were elderly patients who were undergoing hemodialysis therapy at RSUD Dr. Slamet Garut, the patient's awareness was *compos mentis*, and able to communicate, read, and write well.

Data was collected using a questionnaire about the characteristics of respondents and family support, which was adopted from previous studies [18] according to House theory [19]. The patient's anxiety measurement was adopted from the Zung Self-Rating Anxiety Scale (SAS) [20], [21] that was declared valid and reliable.

Univariate analysis was used to describe the distribution frequency and the percentage of respondents' characteristics. The bivariate analysis was Fisher's exact test. Ordinal regression statistical test was used to estimate the effectiveness of family support to the anxiety level of patients undergoing advanced hemodialysis therapy.

Results and Discussion

Table 1 shows that the majority of the sample in this study were elderly (74%), male (62%), and elementary/ junior high school (32%). Table 1 also shows that the majority of respondents are self-employed (62%) and have been doing hemodialysis for <2 years (58%).

In Table 2., Fisher's exact test results show that there is a significant relationship between the family support and anxiety level with a *p-value* of 0.026 ($P < 0.05$).

The ordinal regression test results in Table 3 show that the absence of family support affects the level of mild-moderate anxiety and the chance of an elderly hemodialysis patient feeling mild-moderate anxiety is 4,441 times higher if the patient does not get any family support compared to patients with family support.

Table 1. The Distribution of Hemodialysis Patients Based on Respondents Age, Gender, Education, Occupation, and Duration of Hemodialysis

Variables	Frequency (f)	Percentage (%)
Age		
Pre-Elderly (45-59 years-old)	13	26
Elderly (>60)	37	74
<i>Continue to....</i>		

Sex		
male	31	62
Female	19	38
Education		
Elementary	15	32
Junior high school	16	32
Senior high school	16	30
University	3	6
Occupation		
Housewife	14	28
Self-employment	31	62
Civil servant/ private employees	5	10
Hemodialysis duration		
- ≤24 month	26	58
- >24 month	24	42

Table 2. The Correlation between Family Support and Elderly Hemodialysis Patients' Anxiety Level

Family support	Anxiety level			P-Value
	Normal (N)	Mild- Moderate (N)	Severe (N)	
Supportive families	8	12	15	0,026*
Unsupportive families	3	8	4	

*Significant when P < 0,05

Table 3. The effects of Family Support on Elderly Hemodialysis Patients' Anxiety Level

Variables	Category	Coef. (E)	Exp (E)	P=Value
Family support	Unsupportive family	1,491	4,441	0,09*
Anxiety level	Normal	0,691	1,995	0,88 *
	Mild – moderate	1,288	3,625	0,04*

*Significant when P < 0,05

This study shows that there is a relationship between family support and the level of anxiety of elderly hemodialysis patients. This is consistent with studies that show that elderly hemodialysis patients can experience anxiety because of the presence of stressors, such as limited economic conditions, changes in social relationships with the community and marital relations, limited time for rest and recreation, hospitalization, fear of disability or death, the uncertainty of recovery from illness, and fatigue [22], [23]. The results of this study also per the statement that there is a significant relationship between the level of social support, family support, and the quality of life on elderly hemodialysis patients with chronic kidney failure [14], [24]. Other studies stated that to reduce anxiety in adult and elderly pa-

tients who undergo hemodialysis, social support is needed, especially family support. [14].

Effective and efficient family support is the key to improve the well-being of patients undergoing hemodialysis therapy, especially in the elderly [25], [26]. Family support for the elderly in form of giving emotions, expressed in behaviors such as listening and paying attention that makes the person feel noticed, and social support in daily life assistance, such as material and financial support or in daily activities, can improve the patient's quality of life [1], [14], [27].

The effect of the absence of family support gives elderly patients mild to moderate anxiety. This is following the study that states that older people have a higher risk of anxiety and depression compared to other ages who are

undergoing hemodialysis therapy [28] especially in patients who do not get any family support [29], [30]. This happens because most older people, who undergo hemodialysis therapy, experience a decrease in interpersonal relationships, socio-economic and cognitive levels, and the adherence to the therapy [30], [31], while having an increased risk of accidental falls [32]. Falling in elderly patients can cause many complications, like an injury to extremities, disability and loss of independence, poor quality of life, increased cost for treatment, and increased patient morbidity and mortality. The absence of family support and social support results in an increased risk of death and decreased adherence to treatment, especially the duration of the dialysis session and weight gain [14], [33].

Conclusion

Chronic kidney failure patients with hemodialysis therapy treatment and family support can increase their quality of life. There was a significant correlation between family support and elderly hemodialysis patients' anxiety level and the absence of it affected the anxiety level from mild to moderate range. It is expected that the hospital can improve and maintain in providing counseling about family support. For further research, it is expected that explore the experiences of families caring for older people with hemodialysis.

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