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The Resilience of Elderly Patients with Chronic Kidney Disease Undergoing Hemodialysis

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ABSTRACT
The purpose of this study is to explain the resilience of elderly patients with chronic kidney disease undergoing hemodialysis. Chronic kidney disease is already a health problem for the global population. Chronic kidney disease is a disease that causes the patient to progressively lose metabolic function. To help the body perform metabolism, persons with chronic kidney failure must undergo treatment, one of which is hemodialysis therapy. Chronic kidney disease patients undergoing hemodialysis experience several changes, including changes in eating and drinking habits, physical changes, and changes in inactivity. Additionally, hemodialysis therapy also has physical, psychological, and financial impacts on patients. Changes and impacts that occur on patients make patients vulnerable, which will be worse if experienced by elderly patients. Elderly patients with hemodialysis feel physical pain associated with aging, and stress may be caused by social and economic difficulties. The aging process can increase the vulnerability level of the elderly patient. Therefore, patients with chronic kidney disease undergoing hemodialysis need good resilience in themselves. Resilience is the ability to adapt when experiencing difficulties or heavy pressure so that people can survive and achieve a better life. To investigate the emotional perception of patients in coping with this phenomenon, this research was studied using a phenomenological qualitative technique. Participants in this study are three elderly patients with chronic kidney disease and have been on hemodialysis for more than one year. This study was carried out from October to December 2020. The results showed that the participants experienced difficulties because of the disease and treatment they experienced. Participants can go through and overcome difficulties experienced, and also participants can achieve a better life.

Keywords: *Resilience, chronic kidney disease, hemodialysis, elderly*

1. INTRODUCTION

Cases of death from chronic disease have increased in the last five years. Carney's [1] new study reveals that the prevalence of chronic kidney disease was 9.1 percent in 2017 and there were 697.5 million cases globally, which is continuously rising every year. In 2018, the Ministry of Health of the Republic of Indonesia (Kemenkes RI) [2] resulted in Indonesia's prevalence of chronic kidney disease reaching 0.38%, an increase of almost two times from 2013. Data from Aisara et al. [3] reveals that the percentage of chronic kidney disease patients is mainly faced by men, amounting to 56.7 percent, while 43.3 percent are female.

Chronic kidney failure is a disorder where people lose their kidney function steadily over time [4]. The increase in the prevalence of chronic kidney disease also follows the increase in the prevalence of causative diseases such as diabetes mellitus and hypertension [5]. The highest percentage of chronic kidney disease was caused by hypertension by 39% and diabetes by 22%. Along with the increasing prevalence of diabetes mellitus and hypertension in the elderly, causing the highest prevalence of kidney failure in the elderly population. The results of the survey by the Ministry of Health of the Republic of Indonesia found that the highest percentage of chronic kidney disease cases was in the elderly range, 55-64 years at 0.72%, ages 65-74 years at 0.82%, >75 years at 0.74% [2].

Chronic kidney disease also affects the physical health of the patient and may cause symptoms such as fatigue, pain, dry mouth, muscle cramps, diminished appetite, decreased concentration, dry skin, sleeping problems, and constipation [6]. According to Kim et al. [7], many factors cause symptoms of chronic kidney disease to appear such as anaemia, uremic toxins, decreased kidney capacity, inflammation-related chronic disease, and psychological stress associated with long-term disease. In addition to chronic kidney disease, it can also cause premature death in sufferers.

According to Kemenkes RI in 2017 [8], the mortality rate due to chronic kidney disease in Indonesia is 1,243 people. The National Kidney Foundation [9] reports that most people with kidney failure have problems experiencing the initial signs. In most cases, patients only experience

symptoms when they are at a late stage. People with chronic kidney disease who are now at advanced stage care urgently to sustain their lives, one of which is hemodialysis therapy [10].

Hemodialysis is a treatment that replaces renal function by circulating blood through a dialyzer tube outside the body of the patient [11]. Hemodialysis is a therapy or treatment that significantly affects the physical, personal, family, work and social conditions [12]. There are also clinical signs of people undergoing hemodialysis, such as hiccups, nausea, anxiety, itching, weakness, impotence, menstrual irregularities, and neuropathy [13]. The long-term effects of hemodialysis will cause patients to feel nervous about employment or economic loss, decreased mobility, physical and mental ability, sexual function, and fear of death [14]. Patients of chronic kidney disease are included in a category of vulnerable individuals due to the many effects experienced [15]. Vulnerability is expected to increase in elderly patients, because elderly hemodialysis patients must face challenges such as changing roles, physical impairment, trouble managing everyday tasks, and self-care which can worsen the patient's physical and psychosocial condition (Racic, et al., 2015).

In dealing with these conditions, internal adaptation to stress is needed, such as resilience [16]. Resilience is required to make the state of the patient stable, so that patients can slowly recognize and respond to the disease [17] According to Grotberg [18], resilience has an important role in helping individuals overcome difficulties that occur.

Seeing the phenomenon above, a question arises: how is the resilience of elderly patients with chronic kidney disease undergoing hemodialysis?

1.1. Our Contribution

This paper presents some different responses that encourage a further study towards the description of the resilience of elderly patients with chronic kidney disease undergoing hemodialysis. It is expected that this study will have scientific renewal. Based on the explanation above, patients of advanced hemodialysis were vulnerable and had numerous physical and emotional disorders. On the other hand, a study by Desnauli et al. [19] found that the majority of elderly hemodialysis patients had adaptive coping mechanisms and a decent quality of life. The research of Wijayanti et al. [20] showed that older patients had greater self-control when it comes to hemodialysis. Following the statement of Smith et al. [21] stated that resilience is very important to help individuals control themselves. This adds up consideration to conduct this study.

1.2. Paper Structure

The rest of the paper is organized as follows. Section 1 introduces the preliminaries used in this paper, which phenomena that occur and the urgency of the study. Section 2 the theory that forms the basis for this study. Section 3 describes the method used in this study. Section 4 describes the findings of this study. Finally, Section 5 concludes the paper and provides direction for future research.

2. BACKGROUND

2.1. Resilience

Resilience is described by the American Psychological Association [22] as the mechanism of adaptation in the face of challenges, stressful situations, dangers, or other critical stress factors, such as family or relationship issues, severe health problems, or occupational and financial stress. Resilience is the capacity of a person to survive, bounce back, and adapt to difficult situations, according to Reivich and Shatte [23]. Increased resilience can play an important role in relieving stress due to illness and resilience can also decrease the risk of physical disruptions and restore trauma associated with stress [24].

Reivich and Shatte [23] explain that there are four basic functions of resilience. First function of resilience is overcoming, which can help individuals to overcome problems or obstacles that occur in life. Second, steering through function is needed so that individuals can go through difficulties or problems that occur in life. Third bounce back function, which can help individuals get back on their feet. Four reaching out function is also important for each individual to create a more meaningful life and to gain new learning.

Reivich and Shatte [23] also explain that to form resilience a person must have seven aspects of ability, that is emotional regulation, impulse control, optimism, causal analysis, empathy, self-efficacy, and reaching out. Patterson and Kelleher [25] have identified four stages of resilience. First deteriorating, this stage occurs when difficulties arise. Second stage is adaptation; this stage is a transition to a better condition. Third stage is recovering; this stage occurs when the individual is in a normal condition or has managed to reach a stable condition. Fourth stage is developing; this stage occurs when individuals can learn from previous difficulties.

3. METHODS

This study takes three patients as participants. There are some certain characteristics of parents who: (a) is currently in late adulthood development (> 60 years old); (b) male and married; (c) chronic kidney disease patients who were routinely undergoing hemodialysis therapy; (d) participants have undergone hemodialysis for more than one year and are adherent in carrying out hemodialysis therapy.

The sampling technique in this research is snowball sampling. Then, participants are being involved in an in-depth interview that is differed as two steps; pre-interview as a screening. Researcher composes the interview guidelines based on the concept of resilience dimension

[23][25]. Analysis data technique is done by composing the verbatim transcript for each participant, continued with the coding steps to categorize each theme from the interview results. The steps are continued with the construction of tabbed themes for each interview steps. After the interview data are written down, the next step is analysing interview data based on chronic kidney disease therapy and resilience.

Table 1 Participants description

Information	Participant 1	Participant 2	Participant 3
Initials	T	D	H
Gender	Male	Male	Male
Age	69	62	71
Religion	Islamic	Islamic	Islamic
Education	High school	Graduates	Graduates
Time undergoing hemodialysis	7 years 3 months	1 year 11 months	1 year 8 months
History of disease	Diabetes and Hypertension	Diabetes, Hypertension, and Uric acid	Diabetes

4. FINDINGS AND DISCUSSIONS

Three participants were chronic kidney disease patients and obedient to undergo hemodialysis. From the results of the study, it can be seen as a whole, that the three participants were able to identify the cause of their kidney disease. In participant 1, the causes of chronic kidney disease were diabetes and hypertension resulting from poor diet. In participant 2, the cause of chronic. In participant 2, the causes of chronic kidney disease were diabetes, hypertension, gout and kidney stones. Additionally, the cause of disease is also caused by genetic factors. In participant 3, the cause of chronic kidney disease is diabetes due to poor diet.

Each participant experienced symptoms due to chronic kidney disease. In participant 1 the symptoms experienced were nausea, swelling throughout the body, decreased appetite and even lost consciousness. Participants 2 had symptoms that included swelling of the body, foamy urine, decreased appetite and constipation. Participant 3 also felt symptoms of body parts swelling and feeling unwell.

Each participant experienced the impacts of chronic kidney disease. Participant 1 experienced such a physical impact weight loss and aches. Additionally, chronic kidney disease also has an impact on their daily activities. Participant 1 also experienced an economic impact.

Participant 2 experiences physical impacts which include eating badly, not feeling well, losing weight, cramps, aches, tightness and being unable to do small activities. Additionally, participant also experienced psychological effects including shock, emotional instability, anxiety and doubt. Participant 2 experienced changes in activity after being diagnosed with chronic kidney disease and had to undergo hemodialysis.

Participant 3 experienced cramps and had to accept the pain of being injected twice a week. Participants also experience economic impacts.

Three participants showed different attitudes of resilience. All participants were able to fulfil the emotional regulation dimension. Participant 1 said that the first time to feel the difficulty. But trying to let everything go to God and trying to accept his current condition. Participant 2 can also adjust their feelings to accept the difficult situation they are experiencing. Participant H can also adjust their feelings to feel happy.

All participants were able to fulfil the impulse control dimension. Each participant is able to demonstrate the ability to control impulses with the same attitude. All participants have an attitude of limiting drinking so that fluid intake in the body is not excessive.

In the optimism dimension, participant 1 has the belief that hopes can be realized. Participant 2 hope to enjoy the rest of their lives and participant believe to make it happen. Participant 3 is optimistic that all of his hopes will be met and he will recover.

The determination of the causes of the illness they undergo can be identified by each person. In other words, each participant is able to analyze the cause of the problem. Even though, the participant said that he did not have any regrets. participant 2 is able to identify foods that can make him feel uncomfortable. Participant 3 does not blame anyone for his current condition.

Two out of three participants were able to show empathy. Participant 1 was bad for other patients and participants said they liked to support other patients. Participant 2 also said that he often gives advice to others and can make others feel better.

In the aspect of self-efficacy, participant 1 has spirit for living his life and participant is able to maintain their health condition by checking them regularly. Participants 2 also have their own way of anticipating problems during the hemodialysis process. participant 3 can maintain their hemoglobin in their own way. Participant 1 shows the attitude of reaching out for a religious approach. Participant 2 felt better and more comfortable after undergoing hemodialysis. Participants also have a lot of knowledge related to the disease and treatment they are experiencing. participant 3 is able to change their lifestyle

by saving on expenses in order to survive despite experiencing financial impacts.

Three participants had also passed four resilience. Participant 1 felt that the conditions they experienced were difficult. Participant 2 experienced reducing health conditions. Participant 3 also experienced stress and difficult conditions.

Each participant is able to go through the difficulties they experience. Participant 1 and 2 had no problems while undergoing hemodialysis. Three participants were able to achieve better conditions. Participant 1 showed an attitude of religiosity despite experiencing physical constraints due to the treatment experienced. Participant 2 was able to find ways to overcome obstacles during hemodialysis.

Discussions: Each participant who is a patient with chronic kidney disease experiences difficulties, obstacles and negative effects from the disease and from the treatment they experience. Following the statement of Patel et al. [26] patients who suffer from chronic kidney disease and undergo hemodialysis will feel the impact both physically and psychologically. From the findings of this study, diabetes is a disease cause that can lead to chronic kidney disease.

Each participant shows resilience with a different attitude. Following the statement from Sippel et al. [27] explained that resilience is determined by the characteristics, circumstances, and environment of individual. In the findings of this study, there is one participant who cannot meet the empathy. According to the research of Paleari et al. [28], social support from others can affect one's empathy. This is related to the social support they get from those around them, participant H only gets real support from his wife. Whereas according to Xu and Ou [29] emotional support has the most effect on resilience compared to real support.

Three patients showed drinking-limiting actions such that fluids were not excessive in the body. Three participants were able to identify the cause of the disease they were experiencing. This study also shows that there is one participant who shows increased religiosity, able to meet the seven characteristics of resilience. Research conducted by Aisha (2014) also shows that religiosity affects resilience.

5. CONCLUSIONS

Based on data obtained from entire series of interviews with the participants, it can be concluded that three participants were able to identify the cause of their kidney disease. All participants had the same disease before being diagnosed with chronic kidney disease, which was diabetes. Each participant also experienced some of the same symptoms. All participants experienced body swelling and two participants also experienced decreased appetite.

Each participant experienced different physical impacts. There are participants who experience aches and there are also those who experience muscle cramps. When he was first diagnosed with dialysis, there are participants who experienced the psychological impact, such as shock, mentally unstable, restless, and uncertain. Additionally, there are participants who experienced the financial impact. There are participants also experienced changes in activity after being diagnosed with chronic kidney disease and had to undergo hemodialysis.

From the difficulties experienced, there were participants who were able to fulfil the seven characteristics of resilience. The same participants also receive social support. Participants who lack emotional support are unable to fulfil the characteristics of resilience. the unfulfilled trait is empathy. Each participant can go through the resilience stage as well. The results of the interviews showed that all participants were able to get through difficult times, were able to adapt to changes, were able to reach a state of recovery, and were able to continue to develop to achieve a better life.

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