Analysis of Factors Related to Self-Care In Terminal Renal Failure Patients Those Who Are Taking Hemodialysis

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ABSTRACT

This study aimed to examine factors related to self-care in end-stage renal disease (ESRD) patients undergoing hemodialysis. This study design is a comparative categorical analysis by cross-sectional. Was done to 92 hemodialyses this study was conducted at the hemodialysis unit of Dr. Muhamad Yunus hospital Bengkulu. Data was collected by a self-care measurement scale modified questionnaire. self-care level was 50% desirable. No correlation between age, sex, education level, HD duration, family income, and depression to self-care, there is a correlation between self-efficacy and social support to self-care. Self-efficacy is the most influential factor in self-care, it is important to increase self-efficacy by education program about ESRD and hemodialysis.

Keywords: Terminal Renal, Hemodialysis, ESRD
INTRODUCTION

GGK is currently an issue and a burden in the world, it is estimated that around 10-16% or more than 3 million adults suffer from GGK (Ok et al., 2016). The incidence and prevalence of GGK are increasing from year to year and are the seventh leading cause of death due to chronic diseases (Riskesdas 2013). GGK untreated properly will end up becoming terminal kidney disease (GGT). Globally, it is estimated that the GGT increase rate is 5-7% (2 million people)/year. The highest prevalence of GGT sufferers is Japan, Taiwan, Belgium, Mexico, and the United States. The increase in GGT in America is 5% per year, the incidence is 363 million / year (USRDS, 2013). The prevalence in developing countries is only 450 per million population. The prevalence of GGT in Indonesia is 0.2% of the total population. 30,554 GGT patients were actively undergoing dialysis therapy (IRR, 2015).

Bengkulu Province is in third place in Sumatra with a prevalence of 0.2% (Balitbangkes, 2013). GGT is an incurable disease and requires management in the form of renal replacement therapy (such as kidney transplantation and dialysis) to maintain optimal health conditions. HD can improve quality of life or prolong life but it is cannot restore kidney function. HD must be carried out and lived by patients to be able to maintain survival as well as change the lives of GGT patients (Ignatavasius & Workman, 2009; Daugirdas, Blake & Ing 2015).

METHODS

The design of this research was a categorical comparative analysis using a cross-sectional approach with a total of 92 GGT patients who underwent HD routinely at RSU Dr. M. Yunus Bengkulu municipality. The characteristics of respondents in this research were GGT patients who routinely underwent HD in the last 3 months, and were able to speak Indonesian. Self-care is measured by the SCMS questionnaire which consists of 47 question items. This questionnaire is a modification of the questionnaire developed by Sintaani (2014). The questionnaire used has been tested for validity and reliability. Invalid questions were excluded from the questionnaire, and the reliability obtained from the trial was obtained by Cronbach's alpha of 0.903, so it was concluded that this modified questionnaire was considered reliable. After all the data is collected and entered, then data analysis is carried out using SPSS version 18.

RESULTS AND DISCUSSION

In the univariate analysis, the data obtained; 71% of respondents are more than 45 years old, 58% of respondents belong to higher education, 53% are highly knowledgeable, 80% of respondents have comorbid diseases, 71% of respondents have HD more than 2 years, 22% of respondents are depressed, 64% of respondents are self-efficacy high, 97% of respondents have social
support, 68% of respondents have easy access to health services. At the level of self-care respondents, 55% is good.

From the bivariate analysis with the Chi-Square statistical test, it was found that there was no relationship between self-care with age, gender, length of HD, level of education, level of knowledge comorbid disease, depression, and access to health services. However, there is a relationship between self-care and self-efficacy with a p-value = 0.001 and social support with a p-value = 0.009. In multivariate modeling, the variable with the most dominant influence on self-care is self-efficacy with a B coefficient of 2.169.

Self-care is an individual task for GGT patients with various challenges that must be faced with this chronic pain condition. Patients will face various physical and psychosocial problems that harm their quality of life and self-care abilities. Respondents in this research were 92 people, it was found that 55% of respondents had good self-care. Almost the same as the proportion of self-care in Abdelaziz & Mahmoud's research that obtained a self-care rate of 60%, while Eilem and Mollaoglu found a self-care rate of 80%.

In this research, 71% of respondents were over 45 years old and there was no relationship between age and self-care. This result is not in line with the research of Atashpeiker, Jalilazar & heidarzadeh (2012) who found that age significantly reduces self-care ability, according to Han & Kim (2014) about the factors that influence self-care behavior in elderly hemodialysis patients, finding The older you get, the lower your self-care ability. Wu, Hsieh, Lin & Tsai (2016) on predicting self-care behavior based on GGT knowledge using self-efficacy as a mediator also found the opposite of this research, where age was positively related to self-care (r = 0.15 p = 0.01).

This research did not find differences in self-care abilities because the average age of the respondents was still classified as an adult and not yet a senior. Gender with self-care. The results of the bivariate analysis with the Chi-Square statistical test showed that there was no difference in self-care between the male and female sexes, self-care. Bag & Mollaoglu (2009) found that there was a difference in the proportion of self-care between male and female respondents, and there was no relationship between self-care and gender (p = 0.076). Research by Li, Jian & Lin (2014) on factors related to self-management in patients undergoing HD with a total of 216 respondents, obtained data that the level of self-care in women is higher than in men and there is a relationship between the significant difference between gender and self-care (p= 0.009).

Education is a process of changing the attitudes and behavior of individuals or groups of people (KBBI 2008). In this research, there was no relationship between self-care and education. Research conducted by Bodenheimer (2002) states that education level is not the main determining factor in the self-care of HD patients, but the understanding of treatment instructions and the
importance of self-care is more influential. The same results were obtained from the research of Schiffer et al (2007), Schenell-Hoehn et al (2009), Galagher et al (2010) & Pelle et al (2012) which said that the level of education did not affect self-care in patients with heart failure patients. Qobadi et al (2014) research on health literacy, negative emotional status, and self-care behavior found that there was a significant effect of education level on self-care, where respondents with higher education levels had high health literacy abilities. The results of this research are different from the research conducted by Atashpeiker, Jalilazar & Heidarzadeh (2012) which stated that there was a significant relationship between education level and self-care ability in GGT patients (p = 0.004). The absence of a relationship between the level of education and self-care in this research may be caused by the low literacy of respondents about GGT and HD.

HD should be performed routinely and continuously throughout the life of patients with terminal renal failure. Hemodialysis is an action taken to replace damaged kidney function in patients with chronic kidney failure. The results of the research were the same as those of Shretsa, Rajbanshi & Lopchan (2011) regarding knowledge of self-care in GGT patients and obtained the same results as this research (p = 0.53). Atashpeiker, jalilazar & Heidarzadeh (2012) and Bag & Mollaoglu (2009) also received the same research results as this research. Different results obtained from different studies with the results of this research are the results of research conducted by Gamze & Rabiye (2013) on the evaluation of self-care and self-efficacy in hemodialysis patients with respondents as many as 117 HD patients at the Nevsehir Hospital, Turkey. significant with self-care in HD patients (p = 0.023).

Relationship of Family Income Level with self-care.

It takes direct or indirect costs in doing HD regularly. But financially, patients experience problems due to existing morbidity so that sometimes GGT patients cannot go to work, reduce working hours, or are forced to quit work because they are no longer productive at work. The results of data analysis showed that there was no relationship between self-care and the income level of respondents. Rockwell et al (2001) research with a total of 209 respondents concluded that there was no relationship between socioeconomic status and self-care in heart failure patients. Meanwhile, according to Atashpeiker, jalilazar & Heidarzadeh about the ability to self-care in hemodialysis patients found that work status was not related to self-care (p; 0.16). Different results were also obtained from research conducted by Kohokola et al which stated that financial factors were an obstacle for individuals in doing self-care. The results of Qobadi et al (2015) research on negative emotional status health literacy and self-care behavior in dialysis patients with a total of 240 respondents found that there was no relationship between work status and self-care (p = 0.43). According to the results of research by Gamze & Rabiye (2013) found a difference in the proportion
of self-care at low-income levels with HD patients with sufficient income levels, where patients with low-income levels also have low self-care, and there is a statistically significant relationship between income level with self-care in HD patients (p = 0.023).

There is no relationship between income level and self-care in this research, due to the type of financing, where all respondents are participants of BPJS health. Comorbidities are often experienced by HD patients and affect clinical outcomes such as death, rehospitalization, and quality of life of GGT patients. Comorbidity refers to a specific medical condition other than the primary disease condition (Valderas, Starfield, Sibbald, Salisbury & Roland 2009).

The statistical test found that there was no relationship between income level and self-care in this research. The same result was obtained from the research of Bag & Mollaoglu (2009) which stated that there was no relationship between comorbid factors and self-care ability (p = 0.596). Different results were obtained from Gamze & Rabiye (2013) in a research on the evaluation of self-care and self-efficacy in hemodialysis patients with the group of HD patients who did not have comorbid disease self-care was higher and comorbid disease was significantly associated with self-care (p = 0.001).

One's knowledge is the basis of behavior, the level of knowledge will result in the results of the behavior or lifestyle carried out by a person. A person's self-care will be related to knowledge. In this research, there was no relationship between self-care and the level of knowledge of GGT patients. The same results were obtained from the research of Shrestha, Rajbanshi, and Lopchan (2016) which examined knowledge of self-care, found there was no relationship between the level of knowledge and self-care (p = 0.95). In line with the research conducted by Kato et al (2011) which concluded that there was no relationship between the level of knowledge and self-care. Different results were also obtained from the research of Wu, Hsieh, Lin & Tsai (2016) regarding the prediction of self-care behavior with a knowledge base, it was found that knowledge was positively correlated with self-care (p = 0.01).

Social support also affects the self-care of GGT patients. Social support can come from family, life partners. The results of the univariate analysis were more than some (71%) respondents who received social support had good self-care. The bivariate analysis concluded that there is a relationship between self-care and social support with the OR value concluded that respondents who have social support have 3,452 times the opportunity to do self-care compared to respondents who lack social support. Research by Vardanjani, S, Khalili, Dehkordi, Vardanjani, M, Vardanjani, A (2013) entitled "Perceived social support and depression factors in hemodialysis patients", found that if social support increases, it can also increase adherence to diet (p = 0.001). The results of this research are the same as research by Han & Kim (2012) on the factors that influence self-care behavior in elderly hemodialysis patients at a tertiary hospital in Seoul, which found a positive
relationship between social support and self-care behavior ($r = 0.612 \ p = 0.001$). Research by Plantinga et al (2010) proved that a high level of social support since the start of dialysis will increase self-care and reduce the risk of being hospitalized and increase satisfaction and quality of life in the first year on dialysis.

Depression is a psychological condition experienced by someone with less coping experience. Various factors can cause a high incidence of depression such as family support or hopelessness arising from the illness, lifestyle changes, social problems, and loss of freedom, and decreased self-perception can play a role in the onset of depression.

The results of the univariate analysis showed that 44 (61%) respondents who had good self-care were found in the group of respondents who experienced depression. Bivariate statistical analysis showed that there was no relationship between self-care and depression.

The results of Chen et al (2010) who researched "Depression and Suicide Risk in Hemodialysis Patients with Chronic Renal Failure" in Taiwan, found that almost the majority of CKD patients were depressed and had suicidal ideation, significantly lower body mass index and several comorbidities, greater levels of fatigue, and poor quality of life. The results of this research are in line with research by Schweitzer et al (2007) which states that there is no significant relationship between self-care and depression. The same conclusion is obtained from research by Cameron et al (2010) which states that depression has no significant effect on self-care behavior in heart failure patients.

Research by Riezebos, Nauta, Honig, Dekker and Siegert (2010) found that depression was closely related to low survival rates in GGT patients. Different results were obtained from Tsay & Healstead (2001) who examined self-care, self-efficacy, and depression in GGT patients and found that there was a negative relationship between self-care and depression ($p = 0.001$).

Ease of access to health services for GGT patients will benefit patients in improving their skills and knowledge. Access to health services will be affected by affordability and cost. Improving the quality of health services can strengthen the motivation of chronically ill patients such as GGT in doing self-care. The results of the analysis show that there is no relationship between self-care access to health services. There is no relationship between self-care and access to health services in this research, possibly due to the bias of the type of financing owned by respondents for HD financing, wherein in this research, all respondents (100%) were BPJS participants.

Multivariate analysis of the factors that influence self-care in GGT patients undergoing HD is self-efficacy, depression, level of knowledge, social support, and gender. From multivariate modeling, it was found that the factor that had the greatest influence on self-care was self-efficacy. From the OR value, it can be concluded that GGT patients who undergo HD routinely with low efficacy have an 8,750 times chance of experiencing less self-care when compared to GGT patients.
with high efficacy after being controlled by variables of social support, level of knowledge, and gender. From the OR of the depression variable, it can be concluded that respondents who are depressed have less chance of self-care by 3.365 times when compared to respondents who are not depressed after being controlled by variables of social support, level of knowledge, and gender. The final modeling analysis is based on the value of the coefficient obtained GGT patients undergoing hemodialysis with low self-efficacy with depression, lack of social support, male gender, and lack of knowledge had the opportunity to experience less self-care by 15.7%.

Data collection is done by recall experience or self-reported, the accuracy of the data depends on the patient's ability to remember the self-care behavior that has been done. The self-reported factor is also a limitation in this research, respondents may be over-reported or under-reported.

Data retrieval conducted in the HD room when the patient was undergoing hemodialysis using direct interviews for a rather long time might reduce motivation in answering the questions at the end of the questionnaire given, so it is likely to tend to answer spontaneously without thinking first. The first meeting and direct data collection can also cause the patient to not provide the right answers to personal questions because there is no mutual trust between the researcher and the respondent. The data taken from the patient is based on what was conveyed by the patient, the researcher did not make direct observations in the daily life of the respondent. The attitude of the respondent who knows that he is the object of research so that he gives answers that are different from reality or everyday behavior to get a good assessment from the researcher.

CONCLUSION AND SUGGESTIONS

GGT is a condition that persists in patients until the end of life. Good GGT management is needed to maintain optimal patient conditions. Nurses are expected to not only pay attention to and implement interventions for biological needs but also pay attention to psychological conditions, especially self-efficacy and depression in GGT patients.

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