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Emotional and Coping Mechanism to Patient's Adherence of Chronic Kidney Disease During Haemodialysis

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ABSTRACT Management of health problems in patients undergoing haemodialysis is still a concern in increasing messages, one of which is the emotional condition and coping abilities of the patient. The purpose of this study was to determine the patient's emotional factors and the ability to cope with chronic kidney failure patients' compliance with haemodialysis therapy. A correlation cross sectional study was conducted with 130 respondents that were selected using a simple random sampling method to choose the patient respondents with end stage renal disease during haemodialysis treatment in Sultan Agung Islamic Hospital, Central Java, Indonesia. The study used modification questionnaire that was developed by authors. Before the instrument was given to the respondents, it was test for its validity and reliability. Data was analysed using Chi Square. The respondents of this study were majority female (60.0%) and aged between 46-55 years old (42.3%). Educational background was at intermediate level (71.5%), 85.4 percent was married, the respondents working to their life (60.8%) and the income was less than minimum regional rate (52.3%). Emotional factors and coping mechanism have the significant relationship with patient's adherence ($p = 0.025$ and $p = 0.005$). Emotional factors and coping mechanism have correlation with patient's adherence, Normal Emotion and positive coping mechanism showed better adherence during haemodialysis.

INTRODUCTION

Management of health problems in patients undergoing haemodialysis is still a concern in increasing messages, one of which is the emotional condition and coping abilities of the patient. Health problems both physically and emotionally often arise in patients undergoing h**a**emodialysis therapy (Ghaffari et al. 2019). Therapy that is carried out continuously makes patients feel bored and does not comply with recommendations during therapy. The saturation that appears makes patients vulnerable to emotional stress, they give up easily and show destructive coping responses if they do not get support from others. This suggests that based on end-stage kidney diseases, patients should be monitored continuously so as not to cause complications and worsening health conditions (Dejvorakul et al. 2019).

Chronic disease is showing an increasing rate globally, affecting about ten percent of the adult population (Rehm and Shield 2019). Research conducted by Beerappa and Chandrababu (2019) showed that thirty to sixty percent of end-stage renal disease patients undergoing haemodialysis fail to comply with fluid and salt intake recommendations, and the estimate of non-adherence in the HD patient population is twenty-two to seventy-four percent. The non-adherence rates in patients receiving dialysis, food and fluid infections and physical activity ranged from 2.6 to 53.0 percent, 3.9 to 85.0 percent, 4.14 to 67.0 percent, and 6.4 to 70.0 percent, respectively. Therefore, patient non-compliance as a service is one of the important issues for health (Zarmehri et al. 2018). The patient's non-compliance condition is due to emotional factors, the patient experiences stress, decreased self-esteem, gets emotional easily and feels depressed because they have to undergo continuous therapy. Emotional problems that are often seen in patients who get angry easily when given health education and the patient gets angry with the family, so the patient can fall into a stressful state. Stressful conditions will make the patient's health deteriorate, the body's haemodynamic will change and become worse (McColl-Kennedy et al. 2017). Many patients also experience depression due to taking too long to undergo the therapy given, patients who feel bored, with negative responses who refuse to take medication, withdraw, do not want to do

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activities and are at risk of committing suicide. Emotional problems become a life threat if interventions are not given to provide peace to the patient (Wang et al. 2017). Nursing approach is needed in improving the patient coping during treatment and haemodialysis therapy. Constructive patient coping will build patient motivation to carry out routine therapy, and it is very important for families to maintain feelings and provide support to patients (Yangöz and Özer 2020).

Several ways to improve behaviour are to improve patient self-regulation because of behaviour that really requires control from the patient (Howren et al. 2016; Ghaffari et al. 2019). Haemodialysis patient self-regulation is a special skill that is done to help their own disease (Photharos et al. 2018). Therefore it is important to conduct research to explain the causes of the problems undergoing treatment of patients undergoing haemodialysis.

Objectives

The purpose of this study was to determine the patient's emotional factors and the ability to cope with chronic kidney failure in patients' compliance with haemodialysis therapy.

METHODOLOGY

This is a correlation cross-sectional study used a simple random sampling method to choose the patient respondents with end stage renal disease undergoing haemodialysis treatment in Sultan Agung Islamic Hospital, Central Java, Indonesia. The respondents chosen by inclusion criteria, such as, age must be 26 to 45 years old, with stable haemodynamic, using Bahasa and can write well, cooperative, and undergoing haemodialysis treatment twice in a week and minimum 3 months in treatment. The inclusion criteria were patients in emergency condition and cito haemodialysis. After selection with the criteria, 130 patients were included as respondents.

Data Collection Instruments

The study used modification questionnaire that was developed by the authors. Before the instrument was given to the respondents, it was test for validity and reliability for 30 patients with the same characteristics as the respondents of the study. The value of validity average was 0.486 to 0.647 (r table = 0.321) and the validity value was above 0.6. Emotional factors were measured using a modified questionnaire with 24 questions, coping mechanism measured by ways of a coping questionnaire with 18 questions and patient adherence also measured by a questionnaire namely, the self help of CKD index with 14 questions. Questionnaire scoring used a Likert scale with the value of responses showed normal with score 0-3, mild 4-6, moderate 7-9 and severe > 10.

Ethical Consideration

Ethical approval of this study was certified by the Ethical Committee of Sultan Agung Islamic Hospital, Semarang, East Java and the number of the certificates was 12/EC/KEPK/2020. The respondents first signed an informed consent, wherein they sign voluntarily after they got some explanation about the study from the researcher.

Data Collection

Data that was collected were tabulated and given the coding for analysis in SPSS version 21. Data was analysed using descriptive and inferential statistic were presented in tables, with mean, standard deviation and inferential statistic using Chi-square, all statistical correlation were presented with p value < 0.05.

RESULTS

The respondents of this study majority were female (60.0%) and aged between 46-55 years old (42.3%). Educational background was in intermediate level (71.5%), 85.4 percent were married, the respondents working to their life (60.8%) and the income was less than minimum regional rate (52.3%) (Table 1).

Emotional factors and coping mechanism have a significant relationship with patient's adherence. Emotional support with normal condition showed high adherence of patient during haemodialysis treatment (10.8%; p = 0.025). Furthermore, mild and moderate condition showed the adherence of patient was moderate (23.1%; 19.2%; p = 0.025). In addition, the severe condi-

Table 1: The characteristics of respondents

Characteristics	*Category*	*N*	*%*
Age	18-25 years	3	2.3
	26-35 years	6	4.6
	36-45 years	27	20.8
	46-55 years	55	42.3
	56-65 years	33	25.4
	> 65 years	6	4.6
Gender	Male	52	40.0
	Female	78	60.0
Educational	Basic	15	11.5
Background	Intermediate	93	71.5
	High	22	16.9
Marital Status	Single	8	6.2
	Married	111	85.4
	Widow/widower	11	8.5
Job	Not working	51	39.3
	Working	79	60.8
Income	<Minimum regional rate	68	52.3
	>Minimum regional rate	62	47.7

tion of emotional also showed in moderate condition (14.6%). Adherence also has a significant relationship with coping mechanism (p = 0.005), positive coping mechanism of patient showed moderate adherence during haemodialysis procedure (46.9%) (Table 2).

DISCUSSION

Haemodialysis patients have a complex life, which makes the patient having to make lifestyle changes both internally and externally. Patients with end stage renal disease will have weekly scheduled haemodialysis, modified dietary management to limit phosphate and sodium intake, and it is necessary to take multiple medications a day (Cupisti et al. 2021). Compliance with end stage renal disease patients who are undergoing haemodialysis has shown good results. This is related to the emotional condition of the patient and the patient's ability to carry out coping mechanisms (Shinde and Mane 2014; Mafi et al. 2018). Compliance will increase if the patient always has good emotional well-being and is able to show constructive coping. The results showed significant results on emotional conditions and coping mechanisms with patient compliance. If the emotional condition is normal and coping is positive, then patient compliance also increases.

Emotional factors indicate that haemodialysis that is carried out continuously will cause different responses. The importance of providing motivation to patients is very necessary to increase patient confidence (Dejvorakul et al. 2019). Emotional conditions that are not good enough will cause fear, saturation, fatigue and have an impact on the psychological health of the patient (Pourghaznein et al. 2018). The negative emotional effects can last for weeks and sometimes months, causing the patient's condition to deteriorate. This is in line with research, which shows that psychological factors are an important factor in maintaining the patient's haemodynamic during the action, patients who are psychologically awake and always happy will show a higher response to treatment adherence than those who give up easily, as a result the condition will become critical and they may pass (Naderifar et al. 2017; Dejvorakul et al. 2019).

The patient's emotional condition will determine their ability to manage feelings and stressful conditions, as well as generate coping responses in the face of each series of treatment that is obtained (McColl-Kennedy et al. 2017; Cheng et al. 2019). The dynamics of changing health conditions and long-lasting therapy

Table 2: The characteristics of variable and statistical analysis

Variable	*N (%)*	*Adherence*			*P value*
		High	*Moderate*	*Low*	
Emotional Factors					
Normal	39 (30.0)	14 (10.8)	21 (16.2)	4 (3.1)	0.025
Mild	40 (30.8)	8 (6.2)	30 (23.1)	2 (1.5)	
Moderate	29 (22.3)	2 (1.5)	25 (19.2)	2 (1.5)	
Severe	22 (16.9)	1 (0.8)	19 (14.6)	2 (1.5)	
Coping Mechanism					
Positive	77 (59.2)	8 (6.2)	61 (46.9)	8 (6.2)	0.005
Negative	53 (40.8)	17 (13.1)	34 (26.2)	2 (1.5)	

characterise emotional changes and coping in end-stage renal disease patients. Coping is a function of continuous assessment and reassessment of the patient's relationship to the shifting environment. Shifts may be the result of coping efforts directed to change the environment or inward-coping that change meaning or increase understanding (English and Zhang 2020; Torma 2020). Coping may also be the result of changes in the environment and new perceived health conditions. Changes in coping and other aspects of the psychological state when the encounter unfolds can occur over a period of time, such as in an argument that is quickly resolved or can continue for hours, days, weeks, or even years, such as when one is sad and accepting the fact that their kidney condition cannot be repaired. In both short-term and long-term cases there are on-going and shifting patterns of cognitive assessment and reassessment, coping, and emotional processing (Ghaffari et al. 2019).

The level of emotional problems for each individual starts with a normal response and is accompanied by adaptive coping so that all psychological problems can be resolved. A person's emotional level is influenced by the level of stress and anxiety faced by each person. Individuals who experience stress and anxiety will need special interventions to increase their psychological readiness (Amirkhani et al. 2021; Mawardi et al. 2017). These conditions of anxiety and stress must be resolved by adaptive coping mechanisms to prevent mental health problems. Based on the results of the study, it shows that the resulting coping still shows a lack of response, and the patient really needs a higher level of motivation and intervention to improve their coping. This is in line with research, which states that coping is a variety of efforts, both mental and behavioural, to control, tolerate, reduce, or minimise a stressful situation or event (Ghaffari et al. 2019; Gustems-Carnice et al. 2019). Coping requires motivation from within and outside the individual to be able to form adaptive coping abilities. Effective coping to implement is coping that helps someone to tolerate and accept stressful situations and not worry about pressures that they cannot master (Kassymova et al. 2019; Mahadeo and Mane 2014). The mental health condition of a person is generally influenced by three main factors, namely genetics, the presence of stressors from the environment and the coping skills themselves against stressful conditions (Gustems-Carnicer et al. 2019). The first two factors, namely genetics and external stress, are among the things that one cannot control. However, coping skills are character traits that can be learned and applied to maintain mental health. The coping mechanism that will be carried out must recognise what the real problem is being faced by reducing stress first, for example, diverting attention for a moment by relaxing or doing other work, by reducing stress levels, individuals can think more clearly and be able to solve problems more effectively (Ghaffari et al. 2019; Mafi et al. 2018; Mahadeo and Mane 2014). This is in line with research conducted that the problems felt by each individual can determine what coping mechanisms can be applied.

This study has limitations in the data collection process. The limitation of this study is that the number of respondents tends to be less so that it is not representative for conditions throughout Indonesia, but only limited to local research locations. In addition, it is hoped that the next researchers can provide interventions for sufferers of kidney failure to continue to improve patient compliance in undergoing haemodialysis therapy and be appropriate in maintaining recommendations for patient health so far.

CONCLUSION

Emotional factors and coping mechanism have correlation with patient's adherence. Emotional support with normal condition showed high adherence of patient during haemodialysis treatment. Positive coping mechanism also showed better adherence during haemodialysis procedure.

RECOMMENDATIONS

There needs to be a therapeutic approach to improve emotional factors and coping mechanisms in haemodialysis patients.

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