THE EFFECTIVENESS OF EFFICACY TRAINING TOWARD QUALITY OF LIFE PATIENT’S UNDERGO HEMODIALYSIS

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ABSTRACT
Introduction: The incidence of chronic kidney disease increases every year and can develop slowly. A common problem many patients undergoing hemodialysis were non-adherence of fluid restriction that can lead increasing the risk of cardiovascular and hypertension that affect quality of life. Cardiovascular disease is the leading cause mortality and morbidity in patients undergoing hemodialysis and can cause death by 50%. This study aims to determine the effectiveness of efficacy training to quality of life chronic kidney disease patient’s undergo hemodialysis. Method: This study design is quasi-experimental with pretest-posttest with control group. The sample in the study was 30 hemodialysis patients were divided into treatment groups (conducted training efficacy) and the control group (performed routine monitoring). Sampling with purposive sampling. This research was conducted in the hemodialysis unit Sultan Agung Islamic Hospital Semarang. Patients in the treatment group performed a total of 12 technical training sessions efficacy during hemodialysis. Measuring the quality of life questionnaire World Health Measurements are also performed in the control group. Result: Mc Nemar test results there are differences in quality of life before and after the training efficacy in the treatment group (p value 0.008). Chi Square test results showed there are differences in quality of life treatment group and control group ( p value 0.024). Conclusions: Efficacy training effeective to improve the quality of life chronic kidney disease patient’s who undergo hemodialysis

Key words: training efficacy, quality of life, hemodialysis

INTRODUCTION
Chronic kidney disease (CKD) is a process pathophysiological etiology varied, resulting in decreased kidney function irreversible and progressive where the ability of the body fails to maintain metabolism and fluid and electrolyte balance, causing uremia (retention of urea and trash more nitrogen in the blood) (Black, J.M., Hawks, 2009; Nursalam, 2006; Smeltzer, S.C., 2009; Sudoyo, 2006).

Chronic kidney disease is a chronic disease that increases the number of events evolved, slowly, hidden unnoticed for several years (Black, J.M., Hawks, 2009; LeMone P., Burke. K., 2008)(Horrigan, 2012; LeMone & Burke, 2008; Black & Hawk, 2014). CKD in the United States is one of the ten leading causes of death and more than 30% of the adult population is estimated to suffer from CKD (Mehrota R., Shah. A.P., 2012; Yahiro et al, 2012). In Indonesia based on survey data PGK number reached 30.7 million people and about 70 thousand people who require dialysis treatment and only 7,000 people who can perform dialysis therapy (Pernefri, 2013; Department of Health, 2009).

Renal function replacement therapy is therapy in patients with chronic kidney disease stage 5 with a GFR less than 15 mL / min. In the replacement therapy may include hemodialysis, peritoneal dialysis and kidney transplantation. At the end stage renal disease renal replacement therapy is needed to prolong life (Barnet et al, 2007; Suwitra, 2006). Patients with chronic kidney disease, hemodialysis will prevent deaths. However hemodialysis does not heal or restore kidney disease. Patients will continue to have a number of problems and complications as well as various changes in form and function in the body system (Knap B, Ponikvar B.J, Ponikvar R, Bren F.A., 2005; Smeltzer, S.C., 2009).

A common problem experienced by many patients undergoing hemodialysis regimen is non-compliance with terapiutik (Baraz et al, 2010; Mistiaen, 2010). Noncompliance is found in all aspects but non-compliance with the restriction of fluid intake is the most difficult aspect for most patients (Mistiean.P., 2010). Lack of adherence to fluid restriction can lead to excess fluid in chronic and increasing the risk of cardiovascular and
hypertension (Barnett. T et al., 2007; Mistiean.P., 2010).

Cardiovascular disease is the leading cause mortality and morbidity in patients undergoing hemodialysis and can cause death by 50%. Research shows 33-50% of patients do not adhere to hemodialysis fluid restriction. It can destroy the effectiveness of therapy resulting in disease progression is unpredictable and will likely increase the occurrence of complications. Therefore, efforts to avoid this situation by increasing patient compliance in undergoing therapy. Some studies mentioned factors - factors that affect patient compliance as knowledge, social support and self-efficacy.

Self-efficacy is the belief someone will be successful in doing self-care in order to achieve the desired result(Bandura, A., 1977) (Lev & Owen, 1996, Bandura 1997 in Tsay 2003). In patients with chronic kidney disease efficacy done in a structured training to improve adherence to fluid intake. Based on research that the efficacy of training is effective in increasing adherence to fluid intake(Sulistyaningsih, 2012; Tsay.L.S., 2011). The other study states that the most dominant factor affecting the quality of life of patients with chronic kidney disease is hypertension (Nurchayati., 2012). Increased compliance is expected to lower the risk of cardiovascular disease that will ultimately affect the quality of life.

Quality of life is important to measure to know how to influence the disease to life (Perlman et al, 2005). WHO (2004) defines quality of life is the individual's perception of his position in life in the context of culture and value system in relation to goals, expectations, standards and concerns. Quality of life can be measured by monitoring the functional status and subjective states of patients. Assessment of quality of life includes physical, psychological, social relations, the level of dependence, environmental and spiritual.

Islamic Hospital Sultan Agung Semarang patients with chronic kidney disease who undergo hemodialysis as many as 55 people. Based on preliminary data were obtained 4 out of 6 patients have difficulty to restrict fluid intake, experiencing shortness of breath and blood pressure fluctuate. Patients also experienced significant changes in their lives that lead to decreased productivity, fatigue, reliance on others. It sometimes makes the patient is not eager to live a life.

METHODS

This research is experimental, using quasi-experimental design with pretest-posttest design with control group. In this research, the initial test (pre-test) and final test (post-test). Test performed by measuring the quality of life using the WHOQoL.

The population in this study were all patients with chronic kidney disease who undergo hemodialysis at the Islamic Hospital Sultan Agung Semarang. Sampling in the study conducted by purposive sampling method. The number of samples is 30 respondents. Divided into 15 respondents as the treatment group and 15 respondents as the control group. Patients with early hemodialysis schedule as the control group and patients with hemodialysis schedule during the day as a treatment group. Inclusion criteria hemodialysis twice a week, at least 18 years of age, can eat and drink their own, are not impaired cognitive and psychological. Exclusion criteria decreased consciousness, experiencing complications intradialisis, rejecting respondent.

The treatment group was given training during hemodialysis efficacy. Efficacy Training consisted of 12 sessions, as scheduled hemodialysis. This training was around 30 minutes for each hemodialysis schedule. This training is done individually to each - each time hemodialysis patients. This training focuses on chronic kidney disease, pathophysiology, hemodialysis, treatment, complications, nutrition, fluid restriction, control thirst, management, stress. In this training in addition to be educated also conducted discussions, counseling. For the control group was given routine care during hemodialysis.

RESULT

The statistical test results showed p value 0.008. Thus, it can be explained that there are significant differences in the quality of life between in experimental group before and after treatment (table 1).
## Table 1. Demographic data (gender, occupation, education)

<table>
<thead>
<tr>
<th>Characteristic respondents</th>
<th>Treatment group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>9</td>
<td>60%</td>
</tr>
<tr>
<td>Female</td>
<td>6</td>
<td>40%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>9</td>
<td>60%</td>
</tr>
<tr>
<td>Secondary</td>
<td>4</td>
<td>26.7%</td>
</tr>
<tr>
<td>Tertiary</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work</td>
<td>8</td>
<td>53.3%</td>
</tr>
<tr>
<td>Jobless</td>
<td>7</td>
<td>46.7%</td>
</tr>
</tbody>
</table>

The statistical test results p value 0.024. Thus, it can be concluded that there are significant differences in the quality of life between the experimental group and the control group (Table 2).

## Table 2. Quality of life respondents in the treatment group and control group

<table>
<thead>
<tr>
<th>Tingkat insomnia</th>
<th>Treatment group</th>
<th>Control group</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Pre test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>4</td>
<td>26.7%</td>
<td>12</td>
</tr>
<tr>
<td>Less</td>
<td>11</td>
<td>73.3%</td>
<td>3</td>
</tr>
<tr>
<td>Post test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>12</td>
<td>20%</td>
<td>5</td>
</tr>
<tr>
<td>Less</td>
<td>3</td>
<td>80%</td>
<td>10</td>
</tr>
</tbody>
</table>

## DISCUSSION

Self-efficacy is the belief someone will be successful in doing self-care in order to achieve the desired result (Lev & Owen, 1996, Bandura 1997 in Tsay 2003). The formation process is done through a process efficacy of cognitive, motivational, affective and selection throughout life. Cognitive function allows individuals to predict events - events a day - a day that will result in the future. Much of the motivation generated from cognitive processes. With a person's cognitive motivation to motivate themselves and guide them through the anticipation actions forethought. To achieve success takes confidence and optimism. Person's beliefs problem-solving skills play an important role. The success of the activation process efficacy allows one to create an environment beneficial (Sulistyaningsih, 2012).

In patients with chronic kidney disease who undergo hemodialysis common problems that many experienced is in noncompliance against terapiutik regimen. Noncompliance is found in all aspects but non-compliance with the restriction of fluid intake is the most difficult aspect for most patients (Mistiean.P., 2010). Lack of adherence to fluid restriction can lead to excess fluid in chronic and increasing the risk of cardiovascular and hypertension (Barnett. T et al., 2007; Mistiean.P., 2010). Prevention and treatment of cardiovascular disease is important because 40% - 50% mortality of patients with chronic kidney disease caused by cardiovascular (Sudoyo, 2006). Prevention and treatment of cardiovascular disease include diabetes control, controlling hypertension, dislipidemia control, control of anemia, hyperphosphatemia control, treatment of excess fluid and electrolyte balance disorders (Sudoyo, 2006). Adherence to the treatment regimen and prevent or minimize complications is an important factor contributing to survive and quality of life (Barnett. T et al., 2007).

The results are consistent with research Tsay (2011) that self-efficacy training is effective to reduce the average weight between
dialysis time. Other studies conducted by Sulistyaningih (2012), namely that the self-efficacy training effectively improved its adherence to fluid intake in patients with chronic kidney disease who undergo hemodialysis.

The results achieved in the treatment group showed improved quality of life. Training efficacy done by providing education about chronic kidney disease, pathophysiology, hemodialysis, treatment, complications, nutrition, fluid restriction, control thirst, stress management (Tsay.L.S., 2011). Through the education provided can form a cognitive function. Patients will know more about chronic kidney disease can lead to various problems and complications. Because kidney function declining, one of the effects that occur when there is excess fluid there will be accumulation of fluid in the body. The excess fluid can increase the risk of cardiovascular and hypertension (Barnett. T et al., 2007; Mistiean.P., 2010). After the patient's cognitive formed through education, the patient will be motivated to comply with restrictions on fluid intake. With cognitive motivation a person can motivate them sendiridan act of anticipation through the forward thinking. The hope patients will form his belief that he was able to do the restrictions on liquids despite facing obstacles and pitfalls (Sulistyaningih, 2012).

Adherence to the treatment regimen and prevent or minimize complications is an important factor contributing to survive and quality of life (Barnett. T et al., 2007). Quality of life is an individual's perception of his position in life in the context of culture and value system in relation to goals, expectations, standards and concerns. Quality of life can be measured by monitoring the functional status and subjective states of patients. Assessment of quality of life includes physical, psychological, social relations, the level of dependence, environmental and spiritual (WHO, 2004).

Through training the patient efficacy will form the belief that he was able to conduct fluid restriction. The restrictions on liquids will be able to minimize the risk of cardiovascular and hypertension. Will thus be able to improve the physical health of which can reduce the shortness of breath, increased tolerance to activity, reducing pain and discomfort, reduce dependence on medical care, improve mobility, daily activities - day and earning capacity. It is intended to improve psychological health, social relationships, the level of dependence, environmental and spiritual.

CONCLUSION

Training efficacy has not been widely applied in the hemodialysis unit. The ability of nurses need to be developed in order to increase knowledge and skills in providing education and counseling in patients with chronic kidney disease who undergo hemodialysis. The nurse holds a strategic role in providing nursing care to patients with chronic kidney disease who undergo hemodialysis. Hemodialysis nurses play a role in meeting the basic needs of patients, especially the need for fluid balance considering the impact may increase the risk of cardiovascular and hypertension. Compliance someone to restriction of fluid intake may fluctuate so that the nurses as one of the spearheads service health at the hospital can continue to remind the patient to continually adherence fluid intake according to the needs that are expected to improve the quality of life of patients with chronic kidney disease who undergo hemodialysis.

Assessment of quality of life in this study conducted using questionnaires answered subjectively by patients. In the next research must be done by measuring the quality of life that can be subjectively and objectively assess the quality of life

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