The Relation BetweenPatiens' PerceptionOfCountinuous Ambulatory Peritoneal Dialysis (CAPD)And Self-Efficacy InPatiens With CAPD

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ABSTACT

Background: CAPD is one of a few therapy that can be used to replace the kidney function. A good patient perception of CAPD can increase the self-efficacy of patients undergoing CAPD. The majority of CAPD patients are HD patients who have a perceived experience of both physical and psychological discomfort. The research objective was to determine the relation between perceptions of CAPD measures and self-efficacy in patients undergoing CAPD. **Methods:** This study used a cross-sectional approach. The number of samples of 75 respondents was selected by consecutive sampling technique. **Results:** The logistic regression test results show that there is a relation between perceptions of CAPD measures and self-efficacy in patients undergoing CAPD with the confounding variable that affected by social support. **Conclusions:** Nurses need to improve their abilities when assessing patient perceptions and increasing the role of social support, so that the information obtained becomes the basis for increasing self-efficacy in patients undergoing CAPD.

1. Background

According to the National Kidney Foundation - Kidney Disease Outcome Quality Initiative (NKF-KDOQI), terminal renal failure is a progressive and irreversible decrease in kidney function with a glomerular filtration rate <60 ml / minute / 1.73 m2 for more than 3 months, where the body's ability fail to maintain a balance of metabolism, fluids and electrolytes which results in the accumulation of urea and other nitrogenous wastes in the blood (Landreneau& Ward, 2007; Black & Hawks, 2009).

Results of Basic Health Research (Riskesdas) in 2013 reported that the prevalence of terminal renal failure diagnosed by doctors in Indonesia was 0.2% (around 2000 people per one million population). This prevalence increases with age, increases sharply at age 35-44 years (0.3%), followed by age 45-54 years (0.4%), and age 55-74 years (0.5%), the highest age group ≥75 years (0.6%) (Balitbangkes, 2013). These data indicate that there is an increasing need for renal replacement therapy with the increasing number of terminal renal failure patients who need serious and effective treatment (Sukandar, 2006).

The development of renal replacement therapy are currently divided into three way, namely Hemodialysis (HD), Peritoneal Dialysis (PD), and Kidney Transplantation (Rayyani, Malekyan, Forouzi, &Haghdoost, 2014). CAPD action is one of the options in the renal replacement therapy which is still newly developing in Indonesia and not many people know about it compared to HD action (Prodjosudjadi&Suhardjono, 2009).

The results of the study involving 134 HD's patients and 43 CAPD's patients showed that the perception of self-acceptance of the physical health status of HD's patients was better than that of CAPD's patients and the self-acceptance of mental health status of CAPD's patients was better than HD's patients in the first year of undergoing dialysis. Physical health status includes the patient's ability to work, while mental health status concerns the patient's anxiety and depression (Sanjeev & Vandana, 2001). Another study involving 240 HD's patients and 54 CAPD's patients from 14 dialysis centers in Taiwan showed that aspects of the quality of life of CAPD's patients were better than HD's patients, namely in terms of role function, social function, physical health, mental health, pain complaints and vitality os patients (Chiang , Peng, Yang., Et al., 2004).

Self-efficacy is a person's confidence to be able to perform self-care so that they get the desired results. A person's ability to think, learn from past experiences, motivate oneself and act can influence the formation of self-efficacy (Bandura, 1997). The self-efficacy study of terminal renal failure patients was mostly conducted in patients who underwent HD than CAPD. Based on the above phenomena, the researcher is interested in knowing the relation between the patient's perception of the condition of the disease and the selected treatment / dialysis action (CAPD action) with his ability to believe (self-efficacy) to carry out the CAPD dialysis procedure appropriately.

2. Method

The research design in this study was descriptive with a cross sectional approach, with a total sample of 75 respondents. The variables measured in this study were age, gender, education level, length of time undergoing CAPD, social support, depression, perceptions of CAPD and self-efficacy. The research data were analyzed using univariate, bivariate and multivariate variables for age, gender, education level,

length of time undergoing CAPD, social support, depression, perceptions of CAPD and self-efficacy of undergoing CAPD. Bivariate analysis using Chi Square test and multivariate analysis using logistic regression test.

3. Result and Discussion

Result

Table 1 shows that most respondents who undergo CAPD are adults (26 - 45 years) as many as 40 respondents (53.3%), male gender as many as 57 respondents (76%) and have a low level of education as many as 51 respondents (68%).

No	Characteristics	Total	ercentage (%)
1.	Age		
	Adult (26-45 years)	40	53,3
	Elderly (46-65 years)	34	45,3
	Seniors (> 65 years)	1	1,3
2.	Gender		
	Male	57	76.0
	Female	18	24.0
3.	Level of Education		
	Low	51	68,0
	High	24	32.0

Table 1
Distribution of Respondents by Age, Gender and Education Level

No	Characteristics	Total	Percentage (%)
1.	Duration of CAPD		
	New (<18 months)	35	46.7
	Long Time (≥18 months)	40	53.3
2.	Social Support		
	Less	34	45.3
	Good	41	54.7
3.	Depression		
	Not depressed	25	33.3
	Depression	50	66.7
4.	Perception of CAPD		
	Less	14	18.7
	Good	61	81.3
5.	Self-Efficacy in Undergoing CAPD		
	Less	41	54.7
	Good	34	45.3

Table 2
Distribution of Respondents Based on Length of Living with CAPD, Social Support, Depression Levels, Perceptions of CAPD and Self Efficacy of Undergoing CAPD

Table 2 shows that most of the respondents (53.3%) had been undergoing CAPD for a long time (≥18 months). Besides that, most of the respondents received good social support as many as 41 respondents (54.7%). The majority of respondents experienced depression as many as 50 respondents (66.7%), had a good perception of CAPD as many as 61 respondents (81.3%) and had less self-efficacy when undergoing CAPD as many as 41 respondents (54.7%).

Characteristics	Self Efficacy				OR (95% CI)	*P value*
	Less		Good			
		%		%		
Age						
Adult	23	57,5	17	42,5	-	0,377
Elderly	17	50,0	17	50,0		
Seniors	1	100	0	0		
Gender						
Male	29	50,9	28	49,1	1,521	0,589
Female	12	66,7	6	33,3	(0,37 - 3,57)	
Level of Education						
Low	29	56,9	22	43,1	1,318	0,578
High	12	50,0	12	50,0	(0,49 - 3,48)	
Duration of CAPD						
New	17	48,6	18	51,4	0,630	0,448
Long Time	24	60,0	16	40,0	(0,25 - 1,57)	

Table 3
Results of the Analysis of the Relation between Age, Gender, Education Level and Length of Living with CAPD with Respondents' Self Efficacy in Undergoing CAPD

Table 3 shows the results of statistical tests explaining that there is no relation between age and self-efficacy of undergoing CAPD (p value 0.377; α 0.05), there is no relation between gender and self-efficacy (p value 0.589; α 0.05), no there is a relation between education level and self-efficacy (p value 0.578; α 0.05) and there is no relation between the length of undergoing CAPD and self-efficacy (p value 0.448; α 0.05).

Social Support	Self-Efficacy				OR (95% CI)	*P value*
	Less		Good			
		%		%		
Less	18	52,9	16	47,1	0,580	0,038
Good	23	56,1	18	43,9	(0,02 - 0,88)	

Table 4
Results of the Analysis of the Relation of Social Support with Self-Efficacy of Respondents Who Underwent CAPD

Table 4 shows the results of statistical tests that there is a relation between social support and self-efficacy (p value 0.038; α 0.05). Based on value OR, it can be concluded that respondents who get good social support have a 0.580 times chance of showing good self-efficacy compared to

respondents who don't get social support (95% CI: 0.02 - 0.88).

Depression Levels	Self-Efficacy				OR (95% CI)	*P value*
	Less		Good			
		%		%		
Less	12	48,0	13	52,0	0,668	0,412
Good	29	58,0	21	42,0	(0,25 - 1,75)	

Table 5
Results of the Analysis of the Relation between Depression Levels with Self-Efficacy of Respondents Who Underwent CAPD

Table 5 shows that the majority of respondents who did not experience depression had good self-efficacy while the majority of respondents who experienced depression had less self-efficacy in undergoing CAPD measures. The results of statistical tests showed that there was no relation between depression level and self-efficacy (p value 0.412; α 0.05).

Perceptions of CAPD	Self-Efficacy				OR (95% CI)	*P value*
	Less		Good			
Less	4	28,6	10	71,4	0,259	0,030*
Good	37	60,7	24	39,3	(0,07 - 0,92)	

Table 6
Results of the Analysis of the Relation between Perceptions of CAPD with Self-Efficacy of Respondents Who Underwent CAPD
*significant at α = 0,05

Table 6 shows the majority of respondents whose perceptions of CAPD lacked good self-efficacy, while respondents whose perceptions of CAPD were good had less self-efficacy in undergoing CAPD actions. The results of statistical tests showed that there was a relation between perceptions of CAPD and self-efficacy (p value 0.030; α 0.05). Based on the OR value, it can be concluded that respondents with good perceptions of CAPD have a 0.259 chance of showing good self-efficacy compared to respondents whose perceptions of CAPD are less (95% CI: 0.07 - 0.92).

No	Variabel	B	Wald	*P value*	OR (95% CI)
1	Perception of CAPD	1,345	4,313	0,028	0,261 (0,07 - 0,92)
2	Social Support	1,088	3,033	0,036	0,316 (0,05 - 1,15)
3	Depression	0,168	0,103	0,748	0,845 (0,30 - 2,35)
	Constant	1,260	1,248	0,024	0,213

Table 7
Multivariate Results of Logistic Regression Test for Independent Variables with Confounding Variables with Self-Efficacy of Respondents Undergoing CAPD

Table 7 shows two variables that have a significant relation with self-efficacy, namely patient perceptions of CAPD and social support. The depression variable was still included in the model because depression was considered substantially important and had an effect on self-efficacy. Based on Table 5.8, it can be seen that there is a relation between patient perceptions of CAPD with the self-efficacy of respondents undergoing CAPD (p value 0.028, α: 0.05) and there is a relation between social support and self-efficacy of respondents undergoing CAPD (p value 0.036, α: 0, 05).

Discussion

1. Relation between age and self-efficacy of patients undergoing CAPD

The results of the study on patients who underwent CAPD showed that the youngest age was 32 years, the oldest age was 66 years and the average age of the respondents was 48 years. The statistical results also show that most of the respondents are in the adult age range (26 - 45 years), which is 53.3% compared to the elderly (46 - 65 years) and seniors (> 65 years). c of the same study conducted by Collins, Hao &Xiantang (2006) stated that patients who do CAPD are in the age range of 40 - 60 years as much as 30-40%, ages 61 - 75 years as much as 15-25% and age> 75 years as much as 9 - 13%. This condition indicates that terminal renal failure patients are

increasingly being experienced by the younger age group. The results of the research analysis showed that there was no significant relation between the age of the respondent and the self-efficacy of undergoing CAPD, so that regardless of the age of terminal renal failure patients who underwent CAPD, it would not affect the patient's level of self-efficacy while undergoing CAPD. The results of this study are the same as the research conducted on terminal renal failure patients who underwent HD in terms of the relation between demographic characteristics, namely the age of the respondents in the range of 40 - 50 years and the compliance of respondents in carrying out HD measures (Blame, Petersen & Wray, 2008).

2. .Relation between gender and self-efficacy of patients undergoing CAPD

The results showed that most of the respondents who underwent CAPD in this study were male as many as 76% while female respondents were 24%. The results also showed no significant relation between gender and self-efficacy of undergoing CAPD. This is different from the results of a study on terminal renal failure patients undergoing HD which stated that self-efficacy was related to and influenced by the patient's gender and physical condition. In this study, it was found that the self-efficacy in male patients was higher than that of women (Wenger, 2000).

3. Relation of education with self-efficacy of patients undergoing CAPD

The results showed that most of the respondents who underwent CAPD were in the low education category, namely 68% and 32% in the high category. The results also showed that there was no significant relation between education level and self-efficacy of undergoing CAPD. This is in contrast to research on the influence of culture on non-compliance with treatment, which shows the level of education a person has in deciding whether to seek treatment or not. Patients with higher education tend to be more active in seeking health information, visiting health care places for treatment and are more adherent to undergoing medical procedures than patients with low education (Charonko, 2010).

4. The relation between the length of time underwent CAPD and the self-efficacy of patients undergoing CAPD

The results showed that most of the respondents had been undergoing CAPD for a long time with a time of more than 18 months, namely 40 respondents (53.3%), while those who were less than 18 months were 35 respondents (46.7%). The results also showed that there was no relation between length of undergoing CAPD and self-efficacy of undergoing CAPD. This is different from Bandura's (1997) theory which states that the longer a person takes or performs an action based on the learning process from personal experience and the experience of others, the more trained and confident a person will be to carry out an action.

5. Relation of social support with self-efficacy of patients undergoing CAPD

The results showed that 50 respondents (66.7%) experienced depression while undergoing CAPD. The results also showed no relation between depression level and self-efficacy of patients undergoing CAPD. This is different from studies to determine the effect of self-efficacy on psychological factors (depression) in kidney transplant patients and HD. The results showed that the level of depression had a relation with the patient's ability to self-efficacy, where patients who had high levels of depression had low self-efficacy (Gencoz&Astan, 2006).

6. Relation between depression and self-efficacy of patients undergoing CAPD

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different from studies to determine the effect of self-efficacy on psychological factors (depression) in kidney transplant patients and HD. The results showed that the level of depression had a relation with the patient's ability to self-efficacy, where patients who had high levels of depression had low self-efficacy (Gencoz&Astan, 2006).

7. The relation between perception and self-efficacy of patients undergoing CAPD

The results showed that most of the respondents had a good perception of CAPD actions, as many as 61 respondents (81.3%). The results showed a significant relation between patient perceptions of CAPD and self-efficacy of undergoing CAPD. This is consistent with the perception of GGT patients about the use of kidney replacement therapy that has been done in Japan. This study involved 437 patients who chose HD from the start and 17 patients who chose CAPD from the start. The results showed that the patient was happy and satisfied with each choice of modality chosen. HD patients are satisfied to choose HD modality, whereas PD patients are also satisfied with their choice of choosing PD (Muranaka, 2013).

4. Conclusion

There is a significant relation between patient perceptions of CAPD and patients' self-efficacy of undergoing CAPD. Respondents who had good perceptions about CAPD measures had 0.273 times chance of having good self-efficacy compared to individuals who had poor perceptions of CAPD measures after being controlled by social support variables (95% CI: 0.05 - 0.87). Nurses need to improve the assessment process in exploring the patient's views or perceptions of CAPD actions and the patient's ability while undergoing CAPD (CAPD patient self-efficacy), including psychological conditions in the form of social support and the level of depression experienced by the patient. Nurses need to involve the role of social support from both the health care team, family members and relatives of the patient in an effort to prepare patients before, during and after undergoing CAPD action.

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