

Relation of Family Support with Emotional Response of Post Stroke Patient in Polyclinic of Neurology at RSUD Koja North Jakarta

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Abstract— Stroke is a clinical syndrome with symptoms of disturbance cerebral function in global or vocal scale. That case could cause death or disorder which would happen more than 24 hours without any causes. Post stroke's patient would suffer emotional disturbance due to the change of physical. Family support could help the patient who suffers that disease. The purpose of this research is to find the relation between family support with the emotional response of post stroke's patient that have controlled with confounding variable (age, gender, education, occupation, and ethnic group) in Polyclinic of Neurological at RSUD Koja. The design of this research is descriptive analytic by using cross-sectional study approach. The number of samples is 168 respondents by using consecutive sampling. The variable of this research is family support (dimension of informational, the dimension of emotion, the dimension of instrumental, the dimension of appreciation) and emotional response. The data collected by using questionnaires. The result of this research is contained significant relation between dimension of emotion (QR= 1.299), dimension of instrumental (QR= 1.212), dimension of information (QR= 0,345) and dimension of appreciation (QR= 0.022) with emotional response. The conclusion of this research is the relationship between family support with emotional response of post stroke patient to emotional dimension, instrumental dimension, information dimension, and apresias dimension

Keywords: *stroke, family support, emotional response*

I. INTRODUCTION

Stroke is a functional disorder of the central nervous system which occurs as a result of normal blood supply to the brain is disrupted as in [1]. According to the World Health Organization (WHO), stroke is a clinical syndrome with symptoms of focal or global brain dysfunction which can cause death or abnormalities persisting for more than 24 hours without causing others except for vascular disorders as in [2].

According to Soen in Hartanti (2002) who adds that family support can help patients to face of illness due to the involvement of family members and can provide social support and encouragement to follow a healthier lifestyle.

Deterioration of mobility or reduction in physical strength, difficulties in work and the reducing of cognitive function is a trigger factor occurring psychological problem such as depression in patients with post-stroke. It was reported that depression occurs in some vulnerable people as in [3] approximately 26% - 60% of stroke clients allegedly showing clinical symptoms of depression. Occurring disability or the remaining of post-stroke not only causes psychological problems such as depression but also a great risk to social problems. The patient is not able to work as usual, and most of the post-stroke patients become a burden to the family. Approximately 50% of stroke patients who are still alive cannot work anymore as in [4].

Therefore, it can be concluded that post-stroke patients have a greater risk the occurrence of physical, social and psychological problems, and indeed this will affect the client's health status and the quality of life as in [5]. Vulnerability occurred in post-stroke patients can be the combination of poor health as a result of stroke, high risk, and limited resources belonging; hence, the family support is needed in the recovery of post-stroke patients. The family is an important resource in the provision of health services, both in terms of individuals and families. As in [6] states that family involvement has been shown to increase the effectiveness caring of the patient because family plays a supportive role in healing and recovery. If the support does not appear, then the success of healing or recovery become difficult to achieve [7].

Family support is defined as a process occurred throughout life with the nature and type of social support that varies on each cycle of family life [6] that the family has four support functions including informational support (family serves as a search and disseminator information), esteem support (family acts as a systems supervisor feedback, guides and helps to solve problems and is a source as well as the validator identity family members), instrumental support (the family as a source of practical assistance and concrete) and emotional support (family helps mastery of emotional and improves family moral). The incidence of stroke varies among countries. Stroke is the third largest in the developed countries and the third leading cause of death after heart attack and cancer, with a

mortality rate of 18% to 37% for the first stroke and 62% for recurrent stroke as in [8].

The results of RISKESDAS diagnosis in 2007 by health professionals and the symptoms state that national prevalence stroke is as much as 0.8%, then 11 provinces were reported to have a stroke prevalence of the national prevalence, one of which is Jakarta.

Based on the survey data of treated patient in the Polyclinic of Neurological of Koja Hospital North Jakarta in January 2012 to December 2012, data obtained: the number of visits in the clinic nerves was as much as 10.303 clients, with the details of post-stroke patients were as many as 3,292 patients (31.97%), and post-stroke patients ranked the first out of ten neurological disease. The researcher also conducted an interview in the post-stroke patients and their families. Seven out of ten post-stroke patients were interviewed at the neurological clinic in the hospital stated that the emotional post-stroke patients extremely unstable and even more after the patient's discharge from the hospital or after a stroke attacked. According ref[9], she states that approximately 80% to 90% post-stroke patients experience emotional problems.

II. METHOD

This research is a descriptive analytic using cross-sectional study approach that the researcher took measurements or research at a time. The specific objective of the cross-sectional study was to describe the phenomenon or effect of various phenomena or influence between independent variables and dependent variable in a time or a moment [10].

This research uses cross-sectional approach because it is to know whether there is correlation or influence between dependent variable to an independent variable in using a questionnaire to the respondent. Population in this study was 785 patients, who were post-stroke patients visited in January to April 2013 and the sample obtained was 84 people. However, this study uses both the family support and the emotional responses. Therefore minimum sample is multiplied by two, hence sample required in this study were 168 post-stroke patients who visited the Polyclinic of Neurological again. In this study, multiple logistic regression analysis was carried out to see whether the variable family support (emotional support, informational support, esteems support and instrumental support) and characteristics of clients that including, age, gender, education, occupation and ethnicity as a factor which is dominant in influencing the treatment in post-stroke patients, then a confounding assessment, by omitting a covariate variable / confounding one by one starting from the biggest P value (P value), after being omitted which is obtained by the difference OR factor (primary variable) between before and after the covariate variable had been omitted more than 10%, then the variable is stated as confounding and should remain in the model.

III. RESULT

The result of this research on the relationship of family support with the emotional responses in post-stroke patients in the Polyclinic of Neurology

TABLE I. TABLE I. CHARACTERISTICS RESPONDENT

Variable Characteristics		Total	
		n	%
1. Support			
Family			
a. Informational	Good	98	58.3
	Support	70	41.7
b. Emotional	Good	92	54.8
	Support	76	45.2
c. Instrumental	Good	78	46.4
	Support	90	53.6
d. Esteem Support	Good	61	36.3
	Poor	107	63.7
2. Emotional Response			
	Adaptive	75	44.6
	Mal-adaptive	93	55.4
3. Covariate			
a. Age	< 55 Years Old	61	36.3
	≥ 55 Years Old	107	63.7
b. Gender	Female	63	37.5
	Male	105	62.5
c. Education	Low	88	52.4
	High	80	47.6
d. Occupation	Unemployed	44	26.2
	Employed	124	73.8
e. Ethnic	Betawi	26	15.5
	Jawa	45	26.8
	Batak	42	25
	Madura	55	32.7

Based on the analysis in Table I respondents according to the Independent Variables, for the Family Support Variable, it shows the distribution which can be seen that the respondents have the most information with the category information good of 98 people (58.3%), emotional support respondent has an emotional most with category good of 92 people (54.8%), the support of the respondent has an instrument with the highest category instrument poor of 90 people (53.6%), and the esteem support respondent has the highest esteem category poor of 107 people (63.7%).

Based on the dependent variable, for the variable maladaptive emotional response with the number of 93 people (55.4%) and respondents with adaptive emotional responses were 75 people (44.6%).

While based on the Covariates Variable, for Covariates variable, it shows the distribution which can be seen based on the age, obtained respondents mostly categorized aged > 55 years of 107 (63.7%), the average age of respondents was

55.66 years with the lowest age was 33 years and the highest age was 72 years. By gender, most respondents were male with the number of 105 people (62.5%), whereas female respondents with the number of 63 (37.5%). Based on education, more respondents had low education with the number of 88 people (52.4%), while respondents with higher education were 80 people (47.6%), and based on the occupation more respondents were employed with the number of 124 people (73.8%), while the respondent was unemployed were 44 (26.2%). Most ethnic tribes were Madura (32.7%).

TABLE II. TABLE 2. THE ANALYSIS OF THE RELATIONSHIP BETWEEN FAMILY SUPPORT AND EMOTIONAL RESPONSE

Variable	Emotional Response				p-value	OR (95% CI)
	Adaptive		Maladaptive			
	n	%	n	%		
Informational Support						
<input type="checkbox"/> Good	34	34.70%	64	65.30%	0.002	0.376 (0.200 – 0.707)
<input type="checkbox"/> Poor	41	58.60%	29	41.40%		
Emotional Support						
<input type="checkbox"/> Good	29	31.50%	63	68.50%	0,00	0.300 (0.159 – 0.567)
<input type="checkbox"/> Poor	46	60.50%	30	39.50%		
Instrumental Support						
<input type="checkbox"/> Good	29	37.20%	49	62.80%	0.07	0.566 (0.305 – 1.050)
<input type="checkbox"/> Poor	46	51.10%	44	48.90%		
Esteem Support						
<input type="checkbox"/> Good	3	4.90%	58	95.10%	0,00	0.025 (0.007 – 0.086)
<input type="checkbox"/> Poor	72	67.30%	35	32.70%		

According to the table 2 the analysis of the relation between the family support and the emotional response shows that there were 34 people (34.7%) had better information on adaptive emotional response, while the poor information obtained was 41 people (58.6%) toward the adaptive emotional response. Statistical test result was obtained by value $p = 0.002$; therefore, it can be concluded there is a significant relationship between the information and emotional response.

For analysis of the relationship between family support and emotional response. Statistical test results was obtained by value $p = 0,000$; hence, it can be concluded that there is a significant relationship between an emotional with emotional response.

For analysis of the relationship between family support and emotional response shows that the statistical test result was obtained by value $p = 0.070$; hence, it can be concluded there is

no significant relationship between the instrument and the emotional response.

Based on the analysis of the relation between family support and emotional response, it shows that there were 3 people (4.9%) were good esteem on the adaptive emotional response, while the poor esteem were 72 people (67.3%) on the adaptive emotional response. The statistical test result was obtained by value $p = 0,000$; hence, it can be concluded there is a significant relationship between the esteem and the emotional response.

TABLE III. TABLE 3. THE ANALYSIS OF THE RELATIONSHIP BETWEEN THE CONFOUNDING FACTOR AND THE EMOTIONAL RESPONSE

Variable	Emotional Response				p-value	OR (95% CI)
	Adaptive		Maladaptive			
	n	%	n	%		
Age						
<input type="checkbox"/> < 55 Years Old	24	39.3	37	60.7	0.297	0.712 (0.376 – 1.349)
<input type="checkbox"/> > 55 Years Old	51	47.7	56	52.3		
Gender						
<input type="checkbox"/> Female	19	30.2	44	69.8	0.003	0.378 (0.195 – 0.732)
<input type="checkbox"/> Male	56	53.3	49	46.7		
Education						
<input type="checkbox"/> Low	41	46.6	47	53.4	0.594	1.180 (0.641 – 2.172)
<input type="checkbox"/> High	34	42.5	46	57.5		
Occupation						
<input type="checkbox"/> Unemployed	20	45.5	24	54.5	0.9	1.045 (0.524 – 2.087)
<input type="checkbox"/> Employed	55	44.4	69	55.6		
Ethnic						
<input type="checkbox"/> Betawi & Jawa	29	40.8	42	59.2	0.397	0.766 (0.412- 1.421)
<input type="checkbox"/> Batak & Madura	46	47.4	51	52.6		

Based on Table 3, the result analysis of the relationship between the confounding and the emotional response in post-stroke patients in polyclinic nerves of RSUD Jakarta Utara obtained that age, education, occupation and ethnicity factor do not have a significant relationship to the emotional response because the p value > 0.05 , while the gender factor has a significant relationship because the p value was < 0.05 .

For the analysis of the relationship between the age factor and emotional response. The statistical test result was obtained by p -value = 0.297; therefore, it can be concluded there is no significant relationship between age and emotional response.

Based on the analysis of the relation between gender factor and emotional response. The statistical test result was obtained by p -value = 0.003; hence, it can be concluded that there is a

significant relationship between gender and emotional response.

Based on the analysis of the relation between education factor and emotional response. The statistical test result was obtained by p-value = 0.594; hence, it can be concluded there is no significant relationship between education and emotional response.

Based on the analysis of the correlation between employment status and emotional response. The statistical test result was obtained by p-value = 0,900; hence, it can be concluded there is no significant relationship between gender and emotional response.

Based on the analysis of the relation between the ethnic and emotional response, it shows that there were 29 people (40.8%) of Betawi and Jawa tribe on the adaptive emotional response, while the Batak tribe and Madura were 46 people (47.4%) on the adaptive emotional response. The statistical test result was obtained by p-value = 0397. As a result, the conclusion is that there is a significant relationship between gender and emotional response.

TABLE IV. TABLE 4. THE SELECTION OF BIVARIATE INDEPENDENT VARIABLE AND CONFOUNDING

Variable	P Value
Confounding Variable	
<input type="checkbox"/> Age	0.297
<input type="checkbox"/> Gender	0.003
<input type="checkbox"/> Education	0.594
<input type="checkbox"/> Occupation	0.9
<input type="checkbox"/> Ethnic	0.397
Independent Variable	
<input type="checkbox"/> Informational Support	0.002
<input type="checkbox"/> Emotional Support	0,000
<input type="checkbox"/> Instrumental Support	0.07
<input type="checkbox"/> Esteem Support	0,000

Based on the Table. 4, the results of the bivariate analysis p value for the variable were age (p = 0.297), gender (p = 0.003), education (p = 0.594), occupation (p = 0.900), ethnic (p = 0.391), information (p = 0.002), emotional (p = 0.000), instruments (p = 0.070) and esteems (p = 0.000).

From these results, the conclusion is that there is a relationship between gender, information, emotional, instrumental and reward has a value of p <0.25; Thus, these five variables can enter into multivariate modeling. However, age, education, employment, and error variables can not enter into multivariate modeling because p > 0.25.

TABLE V. TABLE 5. THE BEGINNING MODEL OF INDEPENDENT VARIABLES AND EMOTIONAL RESPONSE

	variable	Coefficient	P value	OR (95% CI)
Step	Gender	-1,068	0,012	0,344 (0,149-0,791)
I	Informational Support	-1,052	0,038	0,349 (0,129-0,943)
	Emotional Support	0,309	0,547	1,361 (0,499-3,713)
	Instrumental Support	0,098	0,818	1,103 (0,478--2,548)
	Esteem Support	-3,831	0,000	0,022 (0,006-0,083)
	Constanta	3,999	0,000	54.523

TABLE VI. TABLE 6. FINAL MODEL OF INDEPENDENT VARIABLE AND EMOTIONAL RESPONSE

Step	Variable	coefficient	P Value	OR (95% CI)
Step	Informational Support	-1.064	0,034	0,345 (0,129-0,921)
2	Support			
	Emosional Support	0,261	0,603	1,299 (0,484-3,483)
	Instrumental Support	0,192	0,645	1,212 (0,535-2,746)
	Esteem Support	-3.806	0,000	0,022 (0,006-0,084)
	Constanta	3.275	0,000	26.449

From the results of the multivariate analysis in Table 5 using enter method, there are 3 steps to get the result. Multivariate analysis is carried out with the initial selection to determine whether a variable can be involved in the modeling. It obtained the fourth biggest variable is gender (P.value = 0,012) who were subsequently expelled from the second modeling, the biggest variable 1,2 and 3 are still involved in subsequent modeling and will not be omitted as a component of the variable family support in substance.

The next step is to simplify the model by testing analysis of multivariate by observing changes in the value of OR in the variable by reducing the variable that its influence is not exceeded significant, starting from the biggest p-value, if the change is more than 10 percent, then the variable is considered as confounder

Based on the final model relationship of family support and emotional response in the post-stroke patients, it is obtained that 1) the respondent with good emotional support had risk/probability of adaptive emotional responses as 1,299 times

compared to those having poor emotional support (95% CI: 0.484 to 3483), 2) the respondent with good instrumental support had risk/probability of adaptive emotional response as 1,212 times compared to poor instrumental support (95% CI: 0535-2746), 3) the respondent with good informational support had risk/probability of adaptive emotional response as 0.345 times compared to poor informational support (95% CI: 0129-0921) 4) respondents with good esteem support had risk / probability of adaptive emotional response as 0022 times compared to the poor esteem support (95% CI: 0.006- 0084). The order strength of family support component with the emotional responses of the most powerful is the emotional support, instrumental support, informational support, and esteem support.

IV. DISCUSSION

The relationship between Emotional support and emotional response in the post-stroke patients is very significant. In this study, it shows that there was a significant association between emotional support and emotional response in the post-stroke patients using statistical test result obtained by the P value <0.05.

The Relationships can be understood from the value of OR = 1,299 which means that respondents with good emotional support have a risk/probability of adaptive emotional responses 1,299 times than those with poor emotional support (95% CI: 0.484 to 3483). Emotional support had the strongest relationship; this is possible because the emotional is closely related to one's emotional response.

The journal ref [11] which states that the emotional aspect needs support of those who is closest to the family, in this case, is a requirement considered as a very important role in the process of recovery of the stroke patient. Another study conducted ref [12] states that there is a relationship of emotional support family and hypertension in the elderly behavior in controlling health. [2]) states that emotional support is an important aspect of the patient and can affect functional status.

Family emotional support will help clients to achieve constructive coping [13]. According to Roth as in [6] emotional support is considered to reduce or prevent the stress effects and improve mental health of an individual or family directly. Reducing stress occurred is one necessary factor in the treatment of post-stroke to achieve healing and prevention of recurrence.

The relations instrumental support with emotional responses in patients with post-stroke.

In this study, it shows that there was a significant association between instrumental support and emotional response in the post-stroke patients based on statistical test results obtained by the P value < 0.05. The relationship can be known from the OR value = 1,212 which means that respondents with good instrumental support had risk/probabilities of adaptive emotional response as 1,212 times compared to the poor instrumental support (95% CI: 0535-2746).

The results of research conducted by ref [14] states that the influence of the empowerment role of the family could increase the independence of post-stroke clients. According ref [15] states that the family is a source of practical and concrete assistance for clients both at home and in the hospital. Instrumental support is the dominant factor in the treatment of post-stroke at home. That statement is in line with the statement of ref [16] that he says the instrumental support and emotional support are highly most beneficial for stroke patients. Factors causing the instrumental support of family as the dominant factor in caring post-stroke patient at home can be caused by the post-stroke remaining symptoms. Clients post-stroke usually experienced varying dysfunction, such as motoric dysfunction, sensory dysfunction, cognitive disorders, communication disorders and problem in swallowing as in [17]. The impaired function can be temporary and permanent as in [4].

Informational support relationships and emotional responses in patients with post-stroke. In this study, it shows that there was a significant relationship between the informational support and emotional response in post-stroke patients using statistical test result obtained by the P values < 0.05.

Research by ref [12] stated there is a significant relationship between the informational support families and behavior of elderly hypertension in controlling the health. Provide positive information and advice to people who know or do not as in [18]. Families function as collectors and disseminate information because the information provided can contribute to the individual as in [15]. Activities undertaken may include sharing resources (books, websites, the name of the service provider), providing education on family members as needed for the family members and information about group support.

These findings show that informational support provided by the family will affect family members. Therefore, in giving the information by health officer also should involve the family. The national stroke association in the UK affirms that the importance of providing information to families and institutions recommends (1) Families need to get information because families are involved in decision making and planning, therefore Provide support to family members should be from the beginning (2) give information to the families

The Relationship between esteem support and emotional response in post-stroke patients.

In this study showed that there is a significant relationship between the esteem support and emotional response in post-stroke patients with statistical test results obtained by the P values <0.05.

Post-stroke clients are encouraged to carry on their hobby, do recreation and use of leisure time and interact with their friends as in [1]. Interact with their friends is one way of helping the client having a stroke to reduce their saturation and reduces the stress that can occur as a result of the illness. The client should be valued on the ability he has done because it will encourage clients to increase his activity, included in social activities through participation and involvement in the

activities undertaken. Aggregate adult post-stroke are valued in conducting their activities and condition after a stroke will make them think positively and increase the motivation in their life activity. In adulthood, someone usually has more attention to the pursuit of work and social, trying to prove to their socioeconomic status as in [19].

V. CONCLUSION

The study result of the relationship between family support and emotional response in post-stroke patients in polyclinic nerve Koja Hospital - Jakarta Utara showed that the most respondents characteristics are categorized age > 55 years, the most gender was male, the low education and employed. The research variables showed that most respondents had good informational support, good emotional support, poor instrumental support, poor esteem support and maladaptive emotional response.

Family support (informational support, emotional support, instrumental support and esteem support) had a significant association with emotional response. Emotional support had the strongest association with emotional response.

Confounding factors are age, gender, education, employment and the tribe did not have a significant relationship to an emotional response.

Health public centers and hospitals as a health care institution in general and nursing care institutions, in particular, can develop service to improve family support, especially informational support, emotional support, and esteem support in caring for stroke patients so that they can defend emotional response adaptively. As a professional health caretaker, it is the obligation to educate and do a counseling to patients and families.

Educational institutions can use the results of this study as one of the studies that are beneficial to the learners and can develop nursing care in stroke patients with the attention and increase collaborative approach with the family to maintain adaptive emotional response in stroke patients.

This study has resulted in a number of data which can be used as a reference for other researchers to develop and carry out more research on the emotional response in stroke patients with other quantitative and qualitative research such as mixed methods research or cohort study design.

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