

## STRATEGY TO INCREASE FAMILY KNOWLEDGE AND SKILLS TO CARE OF POSTSTROKE PATIENTS

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### ABSTRACT

**Background** The way to get a disability of post-stroke is by rehabilitation. One of some rehabilitation way of stroke patients is with exercise therapy. Intensity to increase exercise is proportional to improving quality of life. Exercise therapy is one way to accelerate the healing of illnesses and diseases with management by using active and passive of range of motion. For that reason, the provision of knowledge and skills for stroke family about the procedure of home stroke treatment will be very useful in helping the stroke patient. The purpose of this research is to know the effectiveness of training on community knowledge about post-stroke care. **Methods** The research design is pretest-posttest one group design in the form of non-randomized control group pretest posttest Results: statistical test there are significant differences of knowledge of respondents before and after training ROM. p-value 0.000 means  $\alpha < 0,05$  which means there is influence of training to increase knowledge of society where training before ROM training was 1.10 with SD .305 and after training of ROM average society 1.60 with SD .498 further test result, there is the effect of ROM training to the community environment (p-value = 0.001;  $\alpha = 0.05$ ). **Conclusion** to improve post-stroke knowledge and skills in the village of Sea Satu. **Suggestion** so that people are motivated to continue to increase skills related to active and passive range of motion and can play a role in taking action for families suffering from stroke.

Keywords: *Training, Post Stroke, Knowledge, Skill, Family*

### INTRODUCTION

Stroke is the occurrence of focal and global brain functional disorders suddenly and acutely, lasting more than 24 hours caused by disruption of blood flow. The cause could be due to blockage of the arteries due to the presence of thrombus and embolus (Suyono, 2005). Clinical manifestations include loss of motor function, impaired communication and perception, impaired cognitive function, and bladder dysfunction. Therefore handling must be done quickly and precisely.

The prevalence of stroke in Indonesia is based on Basic Health Research data of 2013 was diagnosed as 12.1 per thousand population. In North

Sulawesi province, stroke prevalence was 10.4%. In 2010, stroke occupied the second position of most diseases (new cases) and in 2011 stroke again occupied the first position of most diseases (new cases) with the number of cases as many as 228 cases. The death of brain tissue due to stroke can lead to decreased or even loss of function controlled by the network. One of the symptoms is muscle weakness in the affected part of the gestures like the fingers of the hand. The function of the hands is so important in performing daily activities and is the most active part, the lesion in the brain that causes weakness in the extremities will greatly hinder and interfere the ability and daily activities of a person.

Physical therapy exercises routinely performed by stroke sufferers have shown positive results in increasing lower limb capability, functional mobility (balance and walking) and quality of life (Dalgas et al., 2008; Motl and Gosney, 2008).

In the village of Sea Satu, in 2013 there was one stroke patient who died at home with decubitus conditions accompanied by respiratory distress due to pneumonia. Year 2016 repeated again with the same case of a stroke sufferer died at home with paralysis condition, accompanied by decubitus on the back.

The way to minimize disability after a stroke is by rehabilitation. Rehabilitation of stroke patients one of them is exercise therapy. Exercise therapy is one way to accelerate the recovery of patients from injury and disease and in its management using both active and passive movements. Increased intensity of exercise has an impact on improving the quality of life. Providing knowledge and skills about the procedures for handling stroke patients at home (home programme) for families with stroke will be very useful in restoring motion and function in post-stroke patients. Proper handling of post-stroke patients is a form of love within the family.

**METHODS**

This research method used pre-experimental design by using one group pre- and post-test that in this research design there is no comparison group (control), but at least the first observation (pretest) been done that allows to test the change that happened after experiment (program). This research was conducted in the village of Sea Satu, Pineleng sub-district, Minahasa regency with 30 respondents were given treatment in the form of range of motion training. Variable of knowledge, instrument used is questionnaire with 20 questions using Guttman scale, score 1 for correct answer and score 0 for wrong answer. Skill variable is using an observation sheet with 10 steps. This is done by analyzing the knowledge and skills before and after training on range of motion in families with stroke patients. The researchers used the Wilcoxon Signed Rank Test.

**RESULT**

Based on the results of research conducted in August 2017 towards 30 respondents, univariate and bivariate analyzes are shown in the table of distribution of subjects as follows:

1. Univariate analysis

Table 1. Distribution of Respondents by Age

No	Age Classification	Number	Percent %
1	31 - 35	8	27
2	36 40	7	23
3	41 45	12	40
4	46 – 50	3	10
Total		30	100

Based on data in table 1 above, respondents aged 41 - 45 years old (40%)

Table 2 Distribution of Respondents by gender

No	Gender	Number	Percent %
1	Male	17	57
2	Female	13	43
	Total	30	100

Based on the data in table 2 above, male respondents are 17 (57%)

Table 3. Distribution of respondents by educational level

No	Education	Number	Percent %
1	Elementary school	2	7
2	Junior High school	3	10
3	Senior High school	24	80
4	Bachelor degree	1	3
	Total	30	100

Based on data in table 3 above, respondents' education are Senior High School (80%)

Table 4. Distribution of respondents based on knowledge before training

Variable	Category						Total	
	Good		Enough		Less		n	%
	n	%	n	%	n	%		
Respondents knowledge <i>Pretest</i>	0	0	4	13	26	87	30	100

Based on the data in table 4 above, it shows that the knowledge of the respondents before the training was in less category, 87% percent.

Table 5. Distribution of Respondents Based on Knowledge after Training

Variable	Category						Total	
	Good		Enough		Less		n	%
	n	%	n	%	n	%		
Respondents knowledge <i>posttest</i>	28	93	2	7	0	0	30	100

Table 5 shows that the knowledge of the respondents after the training is in good category, 28 people (93%) and enough 2 people (7%).

Table 6 Distribution of Respondents by skill before to training

No	Skills category	Frequency	Percent (%)
1	Unskilled	27	90
2	Good enough	3	10
3	Skilled	0	0

Table 6 shows that the skills of the respondents before the training were 90% in the unskilled category.

Table 7 Distribution of Respondents by skill after training

No	Skills category	Frequency	Percent (%)
1	Unskilled	0	0
2	Good enough	0	0
3	Skilled	30	100
Total		30	100

Table 7 shows that the skills of respondents after training are 100% in the skilled category.

## 2. Bivariate Analysis

Table 8 Results of Knowledge Analysis Before and After Training

Variable	n	Mean	Deviation Standard	p-value
Respondents' knowledge before training	30	9.1333	2.73840	0.000
Respondents' knowledge after training	30	21.7667	1.88795	0.000

Table 8 shows the analysis of statistical tests that there were significant differences in the knowledge of respondents before and after training. Value p-value 0.000 means  $\alpha < 0.05$  which means there is influence of training to increase knowledge of respondents.

Table 9 Results of Skill Analysis Before and After Training

Variable	n	Mean	SD	p-value
Respondents' skill before training	30	1.10	305	0.001
Respondents' skill after training	30	1.60	.498	

Table 9 shows the analysis of statistical tests that there were significant differences in the skill of respondents before and after training. Value p-value 0.001 means  $\alpha < 0.05$  which means there is influence of training to increase skill of respondents.

## DISCUSSION

Based on research conducted on August 2-7, 2017, most of the respondents were at the age of 41-45 years old (40%) who were in the productive age. Based on population data of target of health development program in 2007-2011, productive age in people aged 51-64 years old. So, it shows that this age is very potential for non-infectious diseases, especially stroke. Stroke began to occur in people who are productive (Health

Ministry of the Republic of Indonesia, 2008). The results of statistical tests show that there are significant differences of knowledge of respondents before and after training on post-stroke patient care. Value of p-value 0.000 means  $\alpha < 0.05$  which means there is influence of training to increase knowledge of respondents.

The result of Wilcoxon Signed Rank Test statistics on the skills of the respondents also has significant influence where p-value = 0.001 ( $\alpha < 0.05$ ), which

means there is an effect of active and passive motion skills training. The results showed an increase in active and passive movement skills of respondents in the skilled category before being given training to 83%. The skills of the respondents before the training were 27 respondents (90%) in the unskilled category and after the training there were 20 respondents (67%) in the skilled enough category with the p value of 0.001 which means  $p < 0.05\%$ . This shows that the skills of the respondents have increased after being given active and passive motion training.

Skills are talents that are learned, possessed to perform a task, skills may change through training or experience (Ivancevich, 2007). In addition, skills are also trained so that the individual is able to perform the task effectively. According to Janet WH Sit (2004), home care for post-stroke patients is difficult for family members that they require support from families such as education and home care. Similarly, it was suggested by May Lui (2005) that the training to the families of patients with stroke proved to be useful for promoting physical and psychosocial health.

According to McKenzie (2010), education is the process of changing a person's health behavior so as to reduce the incidence of disease. This theory strongly supports the results of research where the respondents experience improvement skills after training. Another study conducted at Dr. M. Djamil Padang hospital by Agonwardi and Hendri (2013) showed the results of average skills research before doing ROM education had a score of 16.27. After the education, the score becomes 77.67. Health education

about ROM exercise has an effect on family skills with P value = 0,001.

Another study conducted by Yayang (2009), obtained the family skills to take care of stroke patients in performing range of motion exercises in the experimental group with  $p = 0.00$  or  $p < 0.05$  indicating that family skills in performing ROM in the experimental group had a significant increase.

Sunaryo (2015) through his research using the Wilcoxon Signed Ranks Test found the results of research regarding ROM on family motivation to care of family members affected by stroke obtained results  $p = 0.01 < 0.05$  which means there is influence of ROM on family motivation to care of family members affected by stroke. Education and distribution of direct leaflets can improve family understanding of post-stroke care as well as how to do range motion (ROM) movements. Methods of intervention through ROM skills such as shoulder, elbow, forearm, wrist, finger, thumb, hip, knee, ankle, and toe movements through demonstration, can significantly improve family skills. Researchers conduct an evaluation to the family home after the completion of the research, to remind again about how to do ROM as the family knowledge. Ibrahim (2009) mentioned that the practice method is done repeatedly and evaluated very effectively to improve family skills in doing ROM.

Based on the results of the study, researchers assume that lack of skilled respondents in the measurement before the training can be caused by the lack of education on active and passive motion. Good skills for active and passive movement are required by the community, as the improvement of these skills is

inevitably linked to active and passive motion training interventions. Training is provided by practicing directly using probandus so that the skill level indicates a change after being given active and passive motion training, in which the ability of the community in active and passive motion skills is supported by its physical development as well as the outcome of its learning.

### CONCLUSION

Based on the results of research on Strategies to Improve Family Knowledge and Skills About Post-Stroke Patients' Care in the Village of Sea Satu, Pineleng sub-district towards 30 respondents in August 2017, it can be concluded that the strategy to increase knowledge and skill of the family about post-stroke patient care by providing training.

### RECOMMENDATIONS

It recommends that the community to be motivated to continue increasing skills related to active and passive motion and can play a role in taking action for families suffering from stroke and for the Department of Nursing Health Polytechnic, Ministry of Health Manado is expected to contribute to the community-based evidence of research that provides education and active and passive motion training for the people of North Sulawesi who have not been exposed to active and passive motion training.

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