EFFECTIVENESS OF HEALTH EDUCATION ON FAMILY ROLE CHANGES IN POST STROKE PATIENT REHABILITATION AT ARMY HOSPITAL, PEMATANG SIANTAR CITY, 2020

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Abstract
Stroke rehabilitation is a program designed to give abilities to sufferers with physical disabilities and/or chronic illnesses, so that they can live or work fully according to their capacity. The rehabilitation program is not only limited to recovering conditions, but also includes rehabilitation that is psychosocial in nature, full of compassion and broad empathy, in order to resurrect sufferers. This research was conducted at the Pematangsiantar City Army Hospital. This study aims to identify the effectiveness of health education on changing the role of the family in the rehabilitation of post-stroke patients. The research design used was a quasy-experimental. According to Arikunto (2006) if the population is less than 100, it is better to take all of them, so that the research is a population study. But if the amount is large, it can be taken between 10%-15% or 20%-25% or more. From the above information, a population of 20% of 105 people is taken with a sample of 21 respondents, and the sampling technique used is purposive sampling, which is based on a consideration made by the researchers themselves, based on previously known characteristics or traits. From the results of the study before health education was carried out, 14% had a bad role, 67% had a good role, and 19% had a very good role. After health education, 62% had a good role, 38% had a very good role. –t count > -t table (-3.914 > -2.086) with p value <0.05 (0.001 <0.05).

Keywords: Health Education, The Role of the Family

INTRODUCTION

In this era of globalization, stroke cases have attracted the attention of the World Health Organization (WHO), because stroke, which at first mainly affected the elderly, has now spread to young people. In addition, stroke is also the third cause of death, after cases of death from heart disease (Wardhana, 2011: 1).

In Indonesia, the age of stroke survivors generally ranges from 45 years and over. The modern and instant lifestyle like today has a great opportunity for someone to have a stroke at a young age, both productive women and men. Stroke is closely related to high blood pressure which affects the appearance of uneven damage to the blood vessel walls. As a result, dissolved substances such as cholesterol, calcium, and so on will precipitate on the walls of blood vessels, which is known as narrowing of the arteries. If the narrowing of blood vessels occurs for a long time, it will result in reduced blood supply to the brain, even stopping which in turn causes a stroke (Pudiastuti, 2011).

Stroke is a syndrome that has the characteristics of a sudden, non-convulsive attack caused by a non-traumatic brain circulatory disorder. This will cause stroke symptoms, ranging from mild to severe symptoms. Mild stroke attacks can be overcome and the patient's condition can fully recover, even be active and productive as before if a stroke is handled quickly and appropriately, and if treatment is delayed it will lead to death (Tarwoto, Wartonah, Suryati, 2007: 85)

In addition, post-stroke patients still experience sequelae, for example with: motor loss (hemiplegia) or there are also patients who go home with a state of total bedrest, loss of communication or difficulty speaking (dysatria), impaired perception, impaired cognitive function and psychological effects. bladder dysfunction, installation of a Naso Gastrium Tube (NGT) device, so that the care given must be continuously carried out so that the client's condition improves, the disease is controlled, the risk of re-stroke attacks decreases, complications or sudden death do not occur (Purwanti, 2008).

According to data provided by the Indonesian stroke foundation (Yastroki) in Jakarta, stroke cases are increasing from year to year. In the 1990s stroke cases were estimated to affect 500,000 people and those who died or were disabled due to stroke were estimated to reach 125,000 people. A number that is quite alarming and the number increased more after the 2000s. In 2004 the results of monitoring at several hospitals in Indonesia, stroke patients undergoing hospitalization were 23,636 people (Pudiastuti, 2011). In addition, based on the Stroke Unit of Dr Kariadi Hospital from 7 June 2000 – 19 July 2001, this unit has treated 658 stroke patients from a number of post stroke clients, 10% of clients can return to work without weakness, 40% have mild disabilities and 50% have severe disabilities. (Wardhana, 2011: 2).

RSUD Cianjur is the only referral hospital in Cianjur Regency where stroke is included in the top five diseases that are often found in this hospital. Based on the incidence of the disease, the number of patient visits for treatment with stroke was 586 from July to December 2008, with 330 cases of which were new cases, and based on the results of an initial survey from the Pematangsiantar City Army Hospital the number of stroke patients in 2020 was 105 people and the number of patients in January-February 2012 was 25 people (Puwanti, 2008).

According to Harsono (1996) which was adopted by Purwanti (2008) to overcome sequelae and avoid further complications in post-stroke patients, treatment is needed in the form of rehabilitation. Rehabilitation is a program designed to give abilities to sufferers with physical disabilities and/or chronic illnesses, so that they can live or work fully according to their capacities. The rehabilitation program according to Ibrahim (2001) is not only limited to merely recovering conditions, but also includes rehabilitation that is psychosocial in nature, full of compassion and broad empathy, in order to revive sufferers (Purwanti, 2008).

Rehabilitation of post-stroke patients includes medical, physical, speech, psychological and social rehabilitation. And in carrying out this rehabilitation, the role of the family is very necessary. According to the Indonesian Ministry of Health (1998) The family is the smallest unit of society consisting of the head of the family and several people

who gather and live in a place under one roof in a state of interdependence (Purwanti, 2008).

In order for this role to be carried out properly, health education is needed for families. The role of health education can create an effort or activity to create behavior that is conducive to health, while health education is a form of intervention especially on behavioral factors (Notoadmodjo, 2006).

Stroke is indeed a serious disease and often causes frustration for sufferers and their families due to the disability it causes. Thus, it is hoped that the role of rehabilitation for sufferers and their families can help increase the independence of sufferers in their daily life activities (Purwanti, 2008).

Based on the background above, the researcher is interested in taking the title "Effectiveness of Health Education on Changes in the Role of the Family in the Rehabilitation of Post-Stroke Patients at the Pematangsiantar City Army Hospital".

LITERATURE REVIEWS

Strokes

Stroke is a syndrome that has the characteristics of a sudden, non-convulsive attack caused by a non-traumatic circulatory disorder (Tarwoto, Wartonah, Eros, 2007:85). Stroke is a neurological disorder that is local or general in nature which arises suddenly or is secondary to a pathological process in the cerebral blood vessels which causes the cessation of blood supply to the brain so that brain function is damaged/lost (Educational Revolution, 2010).

Stroke is a cerebrovascular disease (brain blood vessels) due to death of brain tissue (cerebral infarction). The cause is reduced blood flow and oxygen to the brain due to blockage, narrowing or rupture of blood vessels (Pudiastuti, 2011: 153). Based on some of the definitions above, the researchers concluded that stroke is a circulatory disorder in the brain that causes brain function to be disrupted which can result in disruption to body functions.

Speech Rehabilitation

About half of acute stroke patients will initially experience language problems, including slurring, but only about one third of stroke patients continue to have these problems later in life. Persistent speech problems most often occur in patients with paralysis on the right side of the body (or occasionally on the left side of left-handed people). Patients may not understand other people's speech or be able to express themselves clearly verbally, or both. Other forms of speech problems are the inability to find the right words; the use of meaningless words or, in rare cases, profanity; inability to speak despite being physically able; inability to understand written language; and writing disabilities. (Agustina, et al, 2009).

People with speech and writing problems are prone to depression or frustration due to their difficulties. Therefore, it is very important to encourage patients to communicate-accept all forms of communication (written, signs, body language, pictures, attempts to

speak) and advances, even small ones, to further encourage patients. Patients should not be criticized often and do not insist that every word produced must be precise. Try to give the patient enough time to respond to your questions and ignore all mistakes (Agustina, et al, 2009).

Encourage the patient to be as independent as possible and participate in normal activities, such as having dinner with family or guests. Try not to ignore the patient when talking together. The patient needs to be involved as much as possible in family decisions and stay informed about important events. At the same time, try not to burden them with daily problems that will cause them to be tired and stressed (Agustina, et al, 2009).

People who have trouble finding the right words should be freed to use other methods of getting their point across. Patients are also greatly helped if they visualize the object they are trying to name (that is, form a mental image of that object). Stroke patients who can read, write, and understand other people's words, but have difficulty expressing words clearly (patients with dysarthria) can benefit from doing tongue and lip exercises twice a day (Agustina, et al, 2009).

Psychological Rehabilitation

Psychological rehabilitation is given to stroke survivors who experience emotional disturbances that cause stroke sufferers to experience depression. This emotional disorder is caused because stroke sufferers are not ready to accept their situation as a result of a stroke. Disabilities left behind as a result of a stroke, for example partially paralyzed limbs or difficulty speaking, limit movement and communication, causing stroke sufferers to experience stress. Through psychological rehabilitation, stroke sufferers will be self-aware to willingly accept the disability caused by a stroke (Agustina, et al, 2009).

Some emotional problems appear soon after a stroke, as a result of damage to the brain. For example, a person's inability to express himself due to language problems can lead to irritability. Other emotional problems arise at a later stage, for example when patients finally realize the full impact of stroke on their independence (Ernandini, 2010).

It should be remembered that people who have had a stroke are very susceptible to changes in their situation, especially if they are about to leave the hospital or when they are leaving the house for the first time. This is a normal physiological reaction, and patients should be encouraged to discuss their concerns about careers and family members so that the problem can be resolved as much as possible (Ernandini, 2010).

In most cases, emotional problems subside over time, but when they do occur, they can cause the patient to refuse therapy or lose motivation to go through the rehabilitation process, which can affect the patient's recovery. This reactive emotional problem can often be reduced substantially by encouraging patients to talk about their fears and anger. Patients should feel that they are valued members of the family. It cannot be underestimated about the importance of a supportive home environment, which encourages concern for others and free time activities, such as reading, cooking, walking, shopping, playing and talking (Ernandini, 2010).

Stroke patients whose families or carers are not supportive and who have a dysfunctional family life tend to have a poorer prognosis compared to other patients. Some stroke patients may feel comfortable sharing their experiences with other stroke patients (a list of stroke support groups can be obtained from your local community service organization). If needed, emotional problems can be overcome with individual counseling or group therapy (Agustina, et al, 2009).

Psychotherapy can also help some patients, for example those who experience severe apathy, depression, are not interested in or resist treatment. If the problem persists, especially depression, the doctor may recommend antidepressant medications (eg, fluoxetine and amitriptyline) or consult a psychiatrist or clinical psychologist. Early consultation is usually recommended for patients with major depression, especially those who may wish to commit suicide (Agustina, et al, 2009).

Role

Role is the behavior performed by someone related to the expected behavior of a particular position (Kathleen, 2007). According to Mubarok (2007), the role of the family is being able to recognize health problems, being able to make action decisions, being able to treat sick family members, being able to modify the home environment and being able to utilize existing health services. Based on the definition above, it can be concluded that roles are related to behavior.

Family

According to the Indonesian Ministry of Health (1988), the family is the smallest unit of society consisting of the head of the family and several people who are gathered and live under one roof in a state of dependence. Meanwhile, according to Friedman (1988) family is a unit of people who are related in marriage, are related by blood or adoption and live in one house (Setiawati, Dermawan 2008: 13).

Health Education

Education in general is any planned effort to influence other people, whether individuals, groups or communities so that they do what is expected of students (Notoadmodjo, 2007:108).

Health education is an application of the concept of education in the health sector (Notoadmodjo, 2007:108). Health education is considered as one component of health promotion. According to Towes in De Leeuw (1998), health education functions to generate awareness in the community about aspects of environmental health losses and social sources of disease, which ideally is followed by active community involvement. Health education seeks to help people take control of their own health by influencing, enabling, and strengthening decisions or actions in accordance with their own values and goals. According to Kok, et al (1990) adopted from Maulana (2009) revealed that health education is based on motivation by changing the three determinants of behavior, namely attitude,

METHODS

Research design

The research design used in this research is a quasy experiment, namely a design that seeks to reveal causal relationships (Nursalam, 2003).

The quasy experimental design used was the one group pre and post test design, namely research conducted by assessing the role of the family before being given health education using a questionnaire, then being given health education and then re-examining changes in family roles after being given health education using a questionnaire again. as well as in this study did not involve a control group.

Population and Sample

a. Population

Population is a generalization area consisting of objects/subjects that have certain quantities and characteristics determined by researchers to be studied and then drawn conclusions (Sugyono, 2004).

The population in this study were the families of patients at the Pematang Siantar City Army Hospital with a total of 105 stroke sufferers per year with an average monthly rate of 8 people per month.

b. Sample

The sample is part of the population to be studied or part of the total characteristics possessed by the population (Hidayat, 2007).

1. Number of samples and sampling technique

According to Arikunto (2006) if the population is less than 100, it is better to take all of them so that the research is a population study. But if the number of subjects is large, it can be taken between 10-15% or 20-25% or more. From the information above, the researcher took a sample of 21 people from a total population of 20% of 105 people. The sampling technique in this study used a sampling technique, namely quota sampling, where this technique determines populations that have certain characteristics up to the desired number (Hidayat, 2007).

2. Sample criteria

a) Family members who often care for the patient

b) Family members of patients who are willing to be respondents.

Location and Time of Research

This research was conducted at the Pematang Siantar Army Hospital. The researcher chose the Pematang Siantar Army Hospital as the research location because the research location was not far away and there were many families of stroke patients in the hospital

who did not carry out rehabilitation for stroke patients and from the results of the initial survey the number of population at the Pematang Siantar Army Hospital was sufficient for the population to do so. study. The time of the research was conducted in September-October 2020.

Research Instruments

In collecting data that will be carried out by researchers, researchers will use measuring instruments in the form of questionnaires. This questionnaire contains the role of the family in the rehabilitation of post-stroke patients. The family role questionnaire consists of 30 questions. Where the 30 questions consist of 10 statements about knowledge, 10 statements about attitudes, and 10 statements about actions.

Each sub-chapter consists of positive statements and negative statements. In statements about knowledge, negative statements are found in statements 2, 3, 5, 6, and 10, while positive statements are found in numbers 1,4, 7,8,9. In statements about attitudes, negative statements are found in numbers 5,6,7,8,9, while positive statements are found in numbers 1,2,3,4,10. In statements about action, negative statements are found in numbers 7 and 8, while positive statements are found in numbers 1,2,3,4,5,6,9, and 10. If positive statements the respondent answers (yes) then gets a value of 1 and answer (no) is worth 0 and if the statement is negative the respondent answers (yes) is worth 0 and if the respondent answers (no) is worth 1.

Data Collection Plan

Data collection was carried out by filling out questionnaires by respondents to determine the effectiveness of health education on changing family roles in the rehabilitation of post-stroke patients at the Pematang Siantar Army Hospital.

The procedure for collecting data is used by:

Submitting a letter of application for permission to conduct research at the Efarina Pematangsiantar University Bachelor of Nursing Study Program institution. Apply for a permit to the Pematang Siantar Army Hospital. After obtaining permission, then collect research data on respondents in the hospital who have met the criteria to be used as respondents. Ask for the consent of the prospective respondent to become a respondent by signing the consent form. Giving questionnaires to respondents to collect data. The questionnaire was taken back by the researcher, then the collected data was processed/analyzed.

Data Analysis

The data that has been obtained from the respondents is then processed in the following steps:

1. Editing
   Editing is an attempt to re-check the correctness of the data obtained or collected.
2. coding

Coding is an activity of giving a numeric code (number) to data consisting of several categories.

3. Data Entry

Data entry is the activity of entering data that has been collected into a master table or computer database then making a simple frequency distribution or you can also create a contingency table.

4. Perform technical analysis

Data analysis was carried out in a quasy experimental study using the Paired t Test statistical test. The use of this statistic is to test the effectiveness of a treatment on a variable that you want to determine (Riwidikdo, 2007). And researchers tested the effectiveness of health education on changing the role of the family in the rehabilitation of post-stroke patients.

RESULTS AND DISCUSSION

Research Result

In this study, researchers compared changes in family roles before and after health education interventions were given. Health education is given by means of discussions and lectures. The following will explain the research data as follows:

1. Variant Test

Univariant analysis describes the frequency distribution and variable categories of concern in this study. The role of the family before and after being given health education about the rehabilitation of stroke patients. The assessment of the role of the family is measured based on the total score of the questionnaire obtained from the answers of the respondents with a range of 0-30, where 0-7 roles are not very good, 8-15 roles are not good, 16-23 roles are good, and 24-30 roles are very good.

Table 1. Frequency Distribution of Respondents and Percentage of Family Role Assessment Before and After Conducting Health Education

No.	Rating Category	Before	After	Percentage Before	Percentage After
1	Very good	4 people	8 people	19 %	38 %
2	Good	14 people	13 people	67 %	62 %
3	Not good	3 people		14 %	
4	Not very good	21 people	21 people	100 %	100 %

Based on table 1, the frequency distribution of respondents regarding changes in family roles before and after health education carried out showed that before health education was carried out, there were 3 people (14%) respondents who had bad family roles. After the health education was carried out, there were no respondents who did not have bad family roles. Before the health education was carried out, the number of respondents who had a very good role was 14 people (67%) and after the health education was carried out, there were 13 people (62%). Before the health education was carried out,

the number of respondents who had a very good role was 4 people (19%), and after the health education was carried out, there were 8 people (38%), and there was an increase in changes in family roles after the health education was carried out to the respondents.

Table 2. Description of Family Roles Before and After Given Intervention

Family Role			
Before Intervention		After Intervention	
Means	standard deviation	Means	Standard deviation
19.76	3700	23,24	3520

Based on table 2, it shows that an increase in the role of the family occurred in the research subjects, namely respondents who were given health education about changes in family participation in the rehabilitation of post-stroke patients, obtained an average value (mean) of self-role before intervention of 19.76 with a standard deviation of 3700 while after intervention obtained a mean of 23.24 with a standard deviation of 3520.

2. Bivariate Test

Bivariate analysis was carried out to see whether there were significant differences in the role of the family in the rehabilitation of stroke patients before and after health education about changes in the role of the family in the rehabilitation of post-stroke patients which was carried out using a paired t-test.

Table 3. Results of the Paired Test Statistical Test on the Role of the Family in Patient Rehabilitation Post Stroke Before and After Health Education

Family Role Variables	Means	Standard Deviation	t-Count	P Value
The role of the family before health education	19.79	3,700	-3,914	0.001
The role of the family after health education	23,24	3,520		

These results indicate that the role of the family before and after the health education intervention has differences and this is shown from the value of –t count < -t table (-3.914 < -2.086) with a p value <0.05 (0.001 <0.05). So it can be concluded that health education is effective in changing the role of the family in the rehabilitation of post-stroke patients.

Discussion

Based on the presentation of research data management, in the frequency distribution table of respondents the role of the family in rehabilitating post-stroke patients at the Pematangsiantar City Army Hospital it is known that the role of the family before being given health education was in a very good category 4 people (19%) with a score of 98, good category 14 (67%) people with a score of 265 and not very well amounted to 3 (14%) people with a score of 43.

In the table of frequency distribution of respondents' role of the family in rehabilitating post-stroke patients at the Pematangsiantar City Army Hospital it is known that the role of the family after being given health education the number of respondents who had very good role changes totaled 8 (38%) people with a score of 215, the Good category totaled 13 (62%) people with a score of 273.

Based on the research, it shows that respondents experienced a change in role after health education was carried out. This is in accordance with Notoadmojo (2007; 108) that education in general is all planned efforts to influence other people, whether individuals, groups or society so that they do what is expected of students. According to KOK, et al (1990) adopted from Maulana (2009) revealed that health education is based on motivation by changing the three determinants of behavior namely attitude, social influence, and ability through communication.

Based on the answers from the respondents both through questionnaires before and after health education, it was shown that the respondents experienced a change in the role of the family in carrying out rehabilitation for post-stroke patients. From the results of statistical tests using paired tests with –t count < -t table (-3.914 <-2.068) and p value <0.05, there is a significant mean difference between the role of the family before and after health education. These data indicate that the hypothesis which states that health education is effective in changing the role of the family in the rehabilitation of post-stroke patients is the accepted hypothesis (Ha). In accordance with the theory Ho is accepted if -t count ≤ -t table and Ho is rejected if –t count < -t table or –t count > -t table. Ho is accepted if the p value > 0.05 and Ho is rejected if the p value < 0.05.

CLOSING

Based on the range of family roles before the health education was carried out, the 21 respondents studied showed that 3 people had a bad role and after the health education was carried out, all respondents experienced an increased role.

Based on the results of the study, it showed that health education greatly influenced the role of the family in carrying out rehabilitation for post-stroke patients. Based on the results of the paired test statistic, there is a significant difference in the positive significant change in the role of the family in the respondents.

This can be seen from the mean difference between before and after giving health education given by researchers. The t calculated value obtained is -3.914 which is smaller than t table -2.086 and p value (significance) = 0.001 which means it is smaller than 0.05. This proves that the health education provided is effective for family members who care for stroke patients and provide an increased role in a better direction.

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