The Impact Of Family Support On Increasing Muscle Strength Rehabilitation Post-Stroke Adults In Bukittinggi City 2023

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Abstract

 *Background: Stroke is still the main cause of disability in the world. The impact of a stroke relies heavily on the location and extent of damage, and age. Post-stroke is the most difficult period for patients in they personal care. Family support is essential to increase confidence for rehabilitation in post-stroke patients. Rehabilitation in post-stroke patients is done so that post-stroke patients are able to perform daily activities independently. **The aims** of this study to determine the relationship family support with increasing muscle strength rehabilitation in post-stroke adult. The **Method** : This research was an analytical observational and was conducted in Bukittinggi City on July, 2023. The variables studied family support with muscle strength. This research is a quantitative research with Cross-sectional design. The population in this study were post-stroke patients 50 people and the sample amounted to 42 respondent. **Results** : The result of this research shows that there is a strong relationship between family support and increasing muscle strength in rehabilitation p-value 0.006<0.05. **The conclusion** is family support has impact to inceasing muscle strength rehabilitation of post-stroke adult patients. It is recommended for health workers to provide counseling to improve family support in curing stroke patients. The study confirms the importance of family support in terms of information support and awards support to the quality of life of patients with post-stroke.*

Key words: Family Support, Muscle Strength, Rehabilitation, Post-stroke Adults

INTRODUCTION

Stroke is a condition where the blood supply to the brain is disrupted, resulting in oxygen starvation, brain damage and loss of function and it is most frequently caused by a clot in an artery supplying blood to the brain, a situation known as ischemia. Stroke is still the main cause of disability in the world. The impact of a stroke relies heavily on the location and extent of damage, and age (AHA, 2021). Stroke has already reached epidemic proportions. Globally 1 in 4 adults over the age of 25 will have a stroke in their lifetime. 13.7 million people worldwide will have their first stroke this year and five and a half million will die as a result (WSO 2019). The burden of stroke remains a huge public health concern. In 2019, stroke was the second leading cause of death and disability worldwide (Uysal, 2022).

In the United States, there are 800,000 new strokes every year. There is one new stroke every 40 seconds. Stroke is the 5th leading cause of death and the first leading cause of disability (Prasanna Tadi & Forshing Lui, 2021). China faces the greatest challenge from stroke in the

world. The death rate for cerebrovascular diseases in China was 149.49 per 100 000, accounting for 1.57 million deaths in 2018. It ranked third among the leading causes of death behind malignant tumours and heart disease (Derang, 2020). In Indonesia alone, strokes are the highest cause of death in hospitals, with a mortality rate of 15.4%, and the prevalence of strokes has increased from 7 cases per 1,000 per capita in 2013, to 10.9 cases per 1,000 per capita in 2018 (Rikesdas 2018). In 2016, the number of stroke patients in Bukittinggi City increased by 5,494 cases Bukittinggi National Stroke Hospital is a special stroke hospital in Bukittinggi City, West Sumatra Province There were 1,478 stroke cases in 2014, 3,774 cases in 2015, and 5,494 cases in 2016 In addition, the prevalence of stroke in Indonesia based on the diagnosis of health workers is seven per mile, and that (health workers) or symptoms is 12.1 per mile. So, as many as 57.9% of strokes were diagnosed by health workers (Stroke Hospital, 2020).

Stroke in young adults is expected to cause an increasing public health problem in both developed and developing countries due to increasing incidence and high morbidity and mortality and longterm psychological, physical and social consequences. Differences in geography, ethnicity and sex, and in the exposure of vascular risk factors explain in part the wide variation of incidence of ischaemic stroke in young adults observed throughout the world (Boot et al., 2020).

The post-stroke can be regarded as the most difficult time for patients with post-stroke, they will experience a disability and inability to move as usual so that they will have difficulty in self care (Ismatika & Soleha, 2018). If somebody had stroke, the role of family is important, because they are with the patient every day. So quite often we'll try and bring the carer in for treatment session, you know, how to transfer somebody safely, go through the exercise with them, because some stroke patients think why am I doing this, it's not relevant to me, but once they know the importance of it, much better results happened (Alatawi, 2019).

Stroke is a common cause of disability in adults. After a stroke, it is common for the individual to have difficulty in seft care managing everyday activities such as walking, showering, dressing, and participating in community activities. Many people need rehabilitation after stroke, this is usually provided by healthcare professionals in a hospital or clinic setting. Recent studies have investigated whether it is possible to use technologies such as the telephone or the Internet to help people communicate with healthcare professionals without having to leave their home (Bakara, 2016).

The loss of muscle strength is a common occurrence in patients who have suffered a stroke. This debilitating condition can greatly impact their ability to perform daily tasks and have a negative effect on their quality of life. Understanding the importance of addressing

muscle weakness in patients post stroke is crucial for providing optimal care and support to those affected by this condition. One of the major consequences of stroke is the impact it has on muscle strength. One of the primary benefits of family support is creating a positive environment for the stroke patient's recovery. When family members provide encouragement, love, and understanding, it helps the patient feel motivated and optimistic about their rehabilitation journey. Positive reinforcement from loved ones can enhance the patient's mental state, leading to improved physical progress (Adam, 2015).

A stroke can have a significant impact on an individual's physical, emotional, and cognitive abilities. Rehabilitation plays a crucial role in helping stroke survivors regain their independence and improve their quality of life. However, the support and involvement of family members are equally important in the recovery process. Here's why family support is crucial in rehabilitation post-stroke (Buijck, 2018). Family members are often instrumental in assisting stroke patients with daily activities they may struggle with due to physical limitations. From helping with personal hygiene routines to aiding in mobility exercises or accompanying them to therapy sessions, family support ensures that the patient receives consistent care and assistance throughout their recovery process. Navigating the complex healthcare system can be overwhelming for stroke patients. Family members play an essential role in advocating for their loved one's proper medical care. They can communicate with healthcare professionals, ask questions about treatment plans or medications, and ensure that their loved one receives appropriate follow-up care after being discharged from the hospital (Stephenson, 2019).

METHODES

Correlational research method with a Cross-Sectional Study approach with adult post-stroke patient. The population in this study were post-stroke patients 50 people and the sample amounted to 42 respondent. This research was an analytical observational and was conducted in Bukittinggi City on July, 2023. The variables studied family support with muscle strength. Sampling technique used purposive sampling and instrument consist of questionnaire. Data was analized used chi square test of statistic that is to find correlation. Inclusion criteria for our study were: Willing to be a respondent after discharge from hospital, Diagnosis by a doctor is a stroke with hemipegic upper and lower extremity without complication, Age of respondent is 26-45 years old, Fully and not experiencing mental disorders, The longest post-stroke is less than 6 months, and can communicate well. Exclusion criteria in this study: Not continue to be a respondent more than 3 days, Undergoing other complementary therapies, there is no network around the house of respondent, Unstable physical condition.

RESULTS AND DISCUSSION

Results

Characteristics of respondents in this study including gender, education level, employment, marital status and income ecomonic. Distribution respondents based on gender, level education, employment, marital status, and income ecomonic are presented in the following table:

Table 1 Distribution of characteristic respondents

Variables	n = 42	(%)
Gender		
Female	12	(28.6)
Male	30	(71.4)
Married		
single	8	(19.0)
married	29	(69.0)
widow/widower	5	(11,9)
Education		
Senior High School	14	(33.3)
Diploma	4	(9.5)
Bachelor	16	(38.1)
Master	7	(16.7)
Doctor	1	(2.4)
Occupation		
housewives	5	(11.9)
civil servants	3	(7.1)
private employees	6	(14.3)
retirees	1	(2.4)
farmers/laborers	9	(21.4)
entrepreneurs	15	(35.7)
others	3	(7.1)
Income economic status		
< Rp. 1.000.000	12	(28.6)
> Rp. 3.000.000	19	(45.2)
Rp.1.000.000-3.000.000	11	(26.2)

The characteristics of respondents by type of gender in this study shows that The gender of most respondents was male 30 people (71.4%) and 12 people (28.6%) women. From

the table above it can be seen that the highest level of education is a bachelor's degree with a total of 16 people (38.1%). On This research can be seen that the respondents 15 people (35,7%) work as entrepreneurs. Marital status of respondents in the study This shows that the majority of respondents 29 people are married (69.0%), the last from the table above it can be seen that the highest level of Income economic status is >Rp. 3.000.000 with a total of 19 people (45.2%).

Family support is divided into 2 categories namely good support and poor support. Distribution of respondents based on family support can be seen in table below. In this research it can be seen that respondents who received good support from families as many as 22 people (52.4%), meanwhile respondents who received less support as many as 20 people (47.6%).

Table 2 Distribution of Family Support

Variables	n = 42	(%)
Family Support		
good	22	52.4
poor	20	47.6
Total	42	100

Muscle Strength is divided into 2 categories namely increase and not increase. Distribution of respondents based on muscle strength can be seen in table below. In this research it can be seen that respondents who increase muscle strength in rehabilitation are 25 people (59.9%), meanwhile respondents who received not increase muscle strength in rehabilitation are 17 people (40.5%).

Table 3 Distribution of Muscle strength

Variables	n = 42	(%)
Muscle strength		
Increase	25	59.9
Not increase	17	40.5
Total	42	100

Bivariate analysis aims to find out Relationship between support of families with increasing muscle strength in undergoing rehabilitation at home. The relationship of respondents based on family support and muscle strength can be seen in table below. The results of bivariate

analysis stated that showing: family support with increasing muscle strength Rehabilitation (p-value 0,006< 0,05) it mean family support has impact to inceasing muscle strength rehabilitation of post-stroke adult patients.

Table 4. The relationship between family Support in increasing muscle strength

No	Family Support	Muscle Strength						P-Value
		increase		Not increase		total		
		n	%	n	%	n	%	
1.	good	18	81.8	4	18.2	22	100	0,006
2.	poor	7	35.0	13	65.0	20	100	
	Total	25	59.5	17	40.5	42	100%	

Discussion

Relationship family Support with increasing muscle strength in undergoing rehabilitation In this research it can be seen that respondents with good family support there is increasing muscle strength Rehabilitation (p-value 0,006< 0,05) which means there is a strong relationship between family support to inceasing muscle strength rehabilitation of post-stroke adult patients. Family support will make the patient stroke feels appreciated and accepted, so it can increase his enthusiasm and motivation. Low family support for stroke patients, will affect the patient's psychological condition. Patient can withdraw from society and feel more sensitive, so the patient is more easily irritated. In this research there is a relationship strong relationship between family support and obedience undergoing rehabilitation in stroke patients (winstein, 2016). Strokes can affect muscle strength in various ways. It can cause weakness in the muscles of the upper and lower limbs, as well as affect the respiratory system. Additionally, stroke-related disabilities can lead to poor physical performance, especially among older adults, and can result in sarcopenia, which is the loss of muscle mass and strength. Inspiratory muscle training (IMT) has been found to improve respiratory muscle strength, trunk control, balance, and functional capacity in stroke patients (Mweshi, 2016). Study in line with Rosiana's (2012) research that there is a family support relationship with Compliance with physiotherapy in post-patients strokes. This research is also in accordance with research Kosassy (2011) states that there is a relationship the role of the family in caring and motivating post-stroke patients with patient compliance in participating in rehabilitation. Study Angleni (2010) states that apart

from family support, health worker support also related to stroke patient compliance in participating in medical rehabilitation. Family support is an important factor which can affect a person's compliance in treatment or therapy. Family is a unit closest to the patient who has role as a motivator or supporter as well as an educator for other family members in implementing health programs independent. The family is also the main caregiver for the child other family members who are having problems health. Thus, if there are members a family that is sick then a family that others must provide support or motivation for his recovery. If there is no support from family, then successful recovery (rehabilitation) getting smaller. Therefore, family support very necessary in accompanying stroke patients following rehabilitation (Friedman et al., 2003). Family support plays a crucial role in the rehabilitation process. Research and expert opinions emphasize the positive impact of family involvement and support on an individual's recovery. Families can provide emotional, instrumental, and motivational support, convey the individual's needs and preferences to the rehabilitation team, and help the individual adjust and become more confident in their abilities. Family members can provide crucial support to their loved ones during rehabilitation. family members can support their post-stroke patient during rehabilitation at home, according to the search Offer encouragement and emotional support: Communicate words of encouragement often and let them know that they have your love and support. Provide space for open communication: Create a safe and accepting place for your loved one to communicate their emotions, struggles, or fears they experience during early recovery. Attend family therapy sessions: Attend therapy sessions with your loved one to learn how to support them better and rebuild trust. Be compassionate: Show your loved one that you care by giving them encouraging phone calls and letting them know how proud you are of their progress. Offer logistical support: Help your loved one with practical tasks such as providing transportation to appointments or helping them pick up or drop off things. It is important to note that family members should avoid enabling or being codependent and should support their loved one's recovery aspirations without hindering their progress

CONCLUSIONS AND SUGGESTIONS

Characteristics of stroke patients in the Rehabilitation show that gender in this study was male 30 people (71.4%) and 12 people (28.6%) women, the highest level of education is a bachelor's degree with a total of 16 people (38.1%). Occupation the respondents 15 people (35,7%) work as entrepreneurs. Marital status of respondents majority 29 people are married

(69.0%), that the highest level of Income economic status is >Rp. 3.000.000 with a total of 19 people (45.2%).

Family support is highlighted as an active and essential part of rehabilitation, not just a passive role, and is recognized as a source of strength and encouragement for individuals undergoing rehabilitation, including those recovering from addiction. Therefore, the relationship between family support and rehabilitation is significant, with family acceptance and support playing a vital role in helping individuals deal with issues related to self-esteem, self-image, and recovery. Description of family support for patients stroke who underwent increasing muscle strength in rehabilitation is known that the majority received support the good from the family. Collaboration between nurses, doctors and families necessary to increase compliance patients undergoing rehabilitation, because of the program Rehabilitation is important for stroke patients prevent re-strokes and reduce level of disability. Suggestions for future researchers to research other factors that influence compliance undergoing medical rehabilitation, such as support health workers, therapeutic factors, service facilities health, and socio-economic factors.

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Disclosure

The authors report no conflicts of interest in this work so far.

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