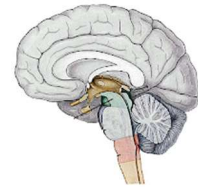


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EFFECTIVENESS OF REFLEXOLOGY ON HEMIPARESIS MUSCLE STRENGTH FOR STROKE PATIENTS IN PUSKESMAS GULUK – GULUK, SUMENEP REGENCY

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Correspondence:Email:
putramandalatrans@gmail.com**ABSTRACT**

There are several treatments for hemiparesis stroke patients, namely medical treatment (conventional) and complementary alternative medicine. So far, in rural areas treating hemiparesis stroke patients prefer complementary alternative treatments in the form of reflexology, namely massaging the hands, feet and other body parts by focusing on the nerves of the body. The purpose of this study was to determine the effectiveness of reflexology on hemiparesis muscle strength in stroke patients in the working area of the Puskesmas Guluk-guluk, Sumenep Regency. In this study using analytical methods. The variables in this study consisted of pre-test variables, namely muscle strength before being given reflexology and post-test variables, namely hemiparesis muscle strength after reflexology. The technique of collecting data is purposive sampling in getting 5 respondents. With research data using muscle strength observation sheets with data processing editing, scoring, coding, tabulating, and statistical tests using SPSS. The results of the output test statistics in the Mann-Whitney test found that the asymmp.sig (2-tailed) value in the upper and lower extremities of 0.007 is smaller than the probability value of 0.05. Based on the results of the p-value, there are differences in the results of muscle strength before reflexology and after reflexology. Because there is a significant difference, reflexology is effective in increasing the hemiparesis muscle strength of stroke patients. Therefore, good family support is needed for stroke patients in the rehabilitation phase who experience hemiparesis so that reflexology is carried out regularly.

INTRODUCTION

There are several medical treatment (conventional) and complementary alternative medicine treatments for hemiparesis patients because of stroke (Kamila, 2019). This far, in rural areas treating hemiparesis stroke patients prefer complementary alternative treatments in the form of reflexology, massaging the hands, feet and other body parts by focusing on the nerves of the body (Widyaningrum, 2013). According to World Health Organization (WHO) 15 million people had a stroke worldwide every year. Of this number, the number of patients who died with stroke was 5 million people, and another 5 million people were permanently disabled (Erawantini & Rinda Nurul Karimah, 2017) increasing to 13.7 million new cases of stroke and around 5.5 million deaths. due to stroke (Ministry of Health, 2019). In Indonesia, as many as 500,000 people suffered a stroke and 125,000 people died (Hanum Parida, Lubis Rahayu, 2018). In East Java, the number of patients suffering from stroke is 6,575 people (Anja, 2012). RISKESDAS stated that in Sumenep as many as 3.0% of stroke patients out of a total of 507 stroke patients in East Java (I, 2015). In Puskesmas Guluk-guluk, 26 patients had a stroke in 2020. While the stroke patients who experienced hemiparesis as many as 10 people. This study aims to determine the effectiveness of reflexology on hemiparesis muscle strength in stroke patients.

METHODS

This research used a quasi-experimental with one group pretest posttest design (Matsuroh Imas, 2018). Purposive sampling is used as a technique for sampling. The study was conducted on 5 respondents who suffered from stroke in the rehabilitation phase who experienced hemiparesis. The variables in this study were pretest muscle strength of patients who experienced hemiparesis before reflexology, and posttest muscle strength of patients who experienced hemiparesis after reflexology. This research used Standard Operating Procedure (SOP) of reflexology and standard muscle strength observation sheets that had been tested for validity and reliability. Analysis of the data using the Mann-Whitney statistical test with the help of the SPSS program.

RESULTS AND DISCUSSION

Table 1 Distribution of Respondents Frequency by Age

No	Age	Frequency	Percentage
1.	36 – 45 years	3	60%
2.	46 – 55 years old	1	20%
3.	>65 years old	1	20%
	Total	5	100%

Based on the Table 1, most of the respondents are aged 36-45 years, while those aged 46-55 years and over 65 years are only a small part.

Table 2 Distribution of Respondents Frequency by Gender

No	Gender	Frequency	Percentage
1.	Male	5	100%
2.	Female	0	0%
	Total	5	100%

Table 3 Distribution of Respondents Frequency by Last Education

No	Last education	Frequency	Percentage
1	No education	0	0%
2	Elementary school	2	40%
3	Junior high school	3	60%
4	Senior high school	0	0%
5	College	0	0%

Based on the Table 3, most of the respondents have an education at the junior high school level and none of them are no education, senior high school and college.

Table 4 Distribution of Respondents Frequency by Current Job

No	Profession	Frequency	Percentage
1.	Farmer	2	40%
2.	Self-employee	3	60%
3.	Employee	0	0%
4.	Retirement	0	0%
	Total	5	100%

Based on the Table 4, most of the respondents work as self-employee, and none of them work as employees and retirement.

Table 5 Distribution of Muscle Strength in Patients with Hemiparesis Before Reflexology

Muscle Strength	Value <i>per</i> item	Presentation	Interpretation
1	1	20%	Weak
2	0	0%	Weak
3	1	20%	Weak
4	0	0%	Weak
5	0	0%	Weak

Table 6 Distribution of Muscle Strength in Patients with Hemiparesis After Reflexology

Muscle Strength	Value <i>per</i> item	Presentation	Interpretation
1	5	100%	Strong
2	5	100%	Strong
3	5	100%	Strong
4	3	60%	Enough
5	2	40%	Enough

Based on the table above, the respondent's muscle strength after reflexology was mostly strong and a small portion of the muscle strength was sufficient.

Table 7 Distribution of the Effectiveness of Reflexology on Hemiparesis Muscle Strength in Stroke Patients

Ranks				
	Before and after	N	Mean Rank	Sum of Ranks
Muscle strength	Before treatment	5	3.00	15.00
	After treatment	5	8.00	40.00
	Total	10		

Tabel 8 Output test statistics in the Mann-Whitney

	Muscle Strength
Mann-Whitney U	,000
Wilcoxon W	15,000
Z	-2,685
asympt.Sig (2-tailed)	,007
Exact Sig [2 *(1-tailed Sig.)]	,008

Based on the results of the output test statistics in the Mann-Whitney test above, it is known that the asymmp.sig (2-tailed) value in the upper and lower extremities of 0.007. It can be concluded that H_1 is accepted, thus it can be said that the frequency of reflexology is effective in increasing hemiparesis muscle strength in stroke patients.

Based on the results of research that has been done, reflexology is found to be effective in increasing hemiparesis muscle strength in stroke patients. Reflexology is effective because it can open the nerve nodes of blood vessels so that it can make blood flow smoother, so that clean blood can be channeled throughout the body. Clean blood contains nutrients, oxygen needed by body tissues and blood vessels will bring back blood containing metabolic waste left in body tissues to the heart for processing so that it can help reduce muscle tension (Widyaningrum h., 2002).

Reflexology is able to improve muscles that were initially stiff to become weak and are able to make blood flow smooth, smooth blood flow will make the body healthy. If the circulation is not smooth then the blood containing oxygen and nutrients cannot be fulfilled properly, resulting in death of body tissues so that the body cannot perform its functions normally.

Effectiveness of reflexology is because it is also caused or supported by the age factor where the respondent's age is found to be mostly 60% aged 36-45 years where at that age is called late adulthood while a small portion of 20% is 46-55 years old and >65 years where at that age is called early old age, in the elderly there will be a decrease in hormones, bone density decreases or becomes brittle, bone strength and stability decreases, kyphosis occurs, gait disturbances, tendons shrink and undergo sclerosis, atrophy of muscle fibers or muscle fibers will begin to shrink which will cause movement. becomes sluggish and blood flow to the muscles decreases. All of these changes will result in moving the legs which will have difficulty treading strongly and muscle mass decreases by about one kilogram every three years so that it interferes with carrying out daily activities (Sobrina, 2019). And in old age there is an aging process in which the ability of the tissue to repair itself or maintain its normal function so that it cannot repair the damage suffered, and there are more metabolic and structural distortions or degenerative diseases such as stroke (Sobrina, 2019).

While in late adulthood, hormone levels will also decrease by 25% and muscle mass will decrease by one kilogram each year, energy and strength will be lost and the composition of the body will increase and will result in insulin retention, so that the ratio of blood vessel blockage increases (Sobrina, 2019) The muscle contractions of people at a younger age will be faster than those of an older age, because at older ages the number and size of muscle fibers decreases (Harmawan et al., 2016).

In late adulthood and old age muscle strength will deteriorate if it is not trained and massaged which can improve blood circulation, because a healthy lifestyle can maintain and increase muscle strength so that it does not decrease, in stroke patients who experience muscle weakness to increase activity or lifestyle Healthy people such as doing reflexology need excellent family support to facilitate the rehabilitation phase. Family support plays a very important role in patient compliance in undergoing rehabilitation, family support can motivate patients not to despair, facilitate patients to take treatment such as complementary medicine with reflexology, remind patients to do exercise regularly and maintain a healthy diet so that it can increase morale. the patient himself to achieve optimal health status in meeting his self-care needs. With family support the needs of hemiparesis patients can be met properly through information support, real support such as time, material assistance, emotional support, love and hope support such as support. Good family support occurs because of the close relationship between family members that is well established, family awareness that cares for each other between family members so that family functions can be well established. And the lack of family support is caused because the family feels burdened by the patient's health condition, the busyness of other family members, the lack of forms of assistance provided to the patient (providing means of transportation to take the patient through rehabilitation) and the limited economy of the patient's family members so that it can result in the healing process. In the past, poor family support occurred because of the lack of family awareness in giving attention and enthusiasm, seeking information about the benefits of rehabilitation. According to Friedman, the health status and illness status of family members greatly affect each other, family support is very important to maintain and maximize.

CONCLUSIONS AND RECOMMENDATIONS

Reflexology is effective in increasing muscle strength in stroke patients who experience hemiparesis. It is hoped that the results of this study can be a reference for the advancement of alternative medicine, in this case in the field of complementary nursing, in this case reflexology can be an alternative treatment in health care settings for stroke patients who experience hemiparesis.

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