



CORRELATION OF FAMILY SUPPORT ON PHYSICAL REHABILITATION COMPLIANCE IN STROKE PATIENTS

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ABSTRACT

As a result of suffering from stroke disease, stroke patients experience disability, lose the ability to live independently, and affect their quality of life and daily activities. Rehabilitation programs are used to improve patient function and overcome the impact of stroke. Family support plays a very important role in the recovery process and rehabilitation compliance of stroke patients. This study aims to determine the correlation of family support to rehabilitation compliance in stroke patients at Ir Soekarno Sukoharjo Hospital. The type of research used in this study is quantitative research. The study sample totalled 73 patients, obtained by using the purposive sampling technique and the Slovin formula. The inclusion criteria for this study were stroke patients undergoing physical rehabilitation at Ir. Soekarno Sukoharjo Hospital, patients without disorientation in time, space, or people, and patients who had undergone physical rehabilitation for 2-3 months and were willing to become respondents. The exclusion criteria for this study were patients who had mental disorders and patients who had congenital physical disabilities. The questionnaires used in this study were the family support questionnaire and the modified Morinsky Medication Adherence Scale (MMAS) questionnaire. Data analysis will be displayed in the form of distribution tables, frequencies, and percentages so that it is easily understood by the reader. The results of this study showed that the majority of respondents had high family support with high rehabilitation compliance as many as 30 people (41.1%), respondents had moderate family support with high rehabilitation compliance as many as 14 people (19.2%), respondents had moderate family support with moderate rehabilitation compliance as many as 12 people (16.4%), respondents had high family support with moderate rehabilitation compliance as many as 1 person (1.4%), and respondents with moderate family support with high rehabilitation compliance as many as 16 people (21.9%). The results of the Spearman Test between family support and physical rehabilitation compliance obtained a P-value of 0.001 with a correlation coefficient value indicate that there is a strong relationship between family support and physical rehabilitation compliance in stroke patients at Ir. Soekarno Sukoharjo Hospital.

Keywords: family support; physical rehabilitation compliance; stroke

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INTRODUCTION

According to the World Health Organisation (WHO) in 2021, there are an estimated 80 million people in the world living with a history of stroke, and the number of new stroke cases is estimated to reach 13.7 million each year. The prevalence of stroke in Indonesia in 2018 in the population aged ≥ 15 years was 10.9%, or an estimated 2,120,362 people (Kemenkes RI, 2018). The Ministry of Health of the Republic of Indonesia in 2017 reported that stroke patients died as many as 6.7 million (38.3%) and experienced a disability of 65% of all patients (Ministry of Health of the Republic of Indonesia, 2017). The number of stroke cases in Central Java reached 11.8%, or around 96,794 cases (Riskseddas, 2018). Stroke is an acute and focal neurological syndrome caused by vascular injury (infarction, haemorrhage) to the central nervous system. Stroke can be caused by various risk factors, disease processes, and mechanisms (Murphy & Werring, 2020). Previously suffered disease factors often trigger the emergence of stroke; people with a history of heart disease, high cholesterol levels, and high blood pressure have the potential to suffer from stroke (Cámara et al., 2020). Risk factors for

stroke can be divided into non-modifiable risk factors and modifiable risks factors. The non-modifiable risk factors include age, gender, and family history. Modifiable risk factors are divided into medical conditions and lifestyle factors. Medical factors include heart disease, hypertension, diabetes mellitus, and hyperlipidemia. Lifestyle factors include obesity, smoking, excessive alcohol consumption, and lack of physical activity (Alharbi et al., 2019). Stroke sufferers experience symptoms such as paralysis, weakness, numbness, difficulty walking, dizziness, speech impairment, headache, confusion, and dementia. As a result of suffering a stroke, sufferers experience disability, lose the ability to live independently, and affect their quality of life and daily activities (Darussalam et al., 2022).

Family support plays a very important role in the patient's healing process, so from the beginning the family is expected to be involved in the treatment of stroke patients. According to Friedman (2010), family support consists of 4 types of support, which contain information support, appreciation support, emotional support, and instrumental support. Low motivation and lack of family support may cause stress in stroke patients. Some of the roles of the family are to provide support and attention to the patient's recovery progress, as well as encourage patients to carry out routine controls and also remind them to take medication. Full help and support from family and family motivation will greatly help the recovery process and help patients carry out their daily activities (Saputro et al., 2019). To improve patient function and overcome the impact of stroke, patients can carry out a rehabilitation program (Atalan et al., 2020). Stroke rehabilitation is part of the therapy program set by the healthcare provider to help the patient recover. Compliance to long-term treatment, especially rehabilitation, is key to successful treatment of chronic diseases. In the rehabilitation process, patient compliance can improve physical function, increase independence, and improve quality of life (Pishkhani et al., 2020).

Based on Kurniawan's (2017) research on 47 people, the results showed that family support can affect the compliance of stroke patients in undergoing rehabilitation. Based on Niam's research (2020), the results showed that family support is one of the factors that encourage post-stroke patient rehabilitation compliance. In this study, research was carried out on 73 respondents at the Ir. Soekarno Regency Hospital in Sukoharjo to determine the relationship between family support and physical rehabilitation compliance in stroke patients. Seeing the large prevalence of stroke cases, researchers conducted research about the correlation of family support to physical rehabilitation compliance in stroke patients at Ir Soekarno Sukoharjo Hospital with the aim of knowing the correlation of family support to rehabilitation compliance in stroke patients.

METHOD

The type of research used in this study is quantitative research with a cross-sectional analytic approach. This study was conducted to determine the correlation of family support to physical rehabilitation compliance in stroke patients. This research was taking place at Soekarno Sukoharjo Hospital in August–September 2024. In the last 3 months, the study population was 196 patients. This study used the purposive sampling technique and the Slovin formula and obtained a research sample of 73 patients. The inclusion criteria of this study were stroke patients undergoing physical rehabilitation at Ir. Soekarno Sukoharjo Hospital, patients without disorientation of time, space, or people, and patients who had undergone physical rehabilitation for 2-3 months and were willing to become respondents. The exclusion criteria for this study were patients who had mental disorders and patients who had congenital physical disabilities.

Data collection was carried out directly by filling out family support questionnaires and rehabilitation compliance. The family support questionnaire uses a social response questionnaire adopted from the Nursalam questionnaire in 2005 and modified by Kurniawan (2017), which totals 20 questions. The test results show a Cronbach Alpha score of 0.963 obtained from 20 valid questions. The rehabilitation compliance questionnaire uses the Morinsky Medication Adherence Scale (MMAS) questionnaire which has been modified by Kurniawan (2017), which totals 8 questions. Testing shows an Alpha Cronbach score of 0.921, so the instrument is said to be reliable. The classification of family support will be divided into 3 categories, namely low (score 0-20), medium (score 21-40), and high (score 41-60). Rehabilitation adherence will be divided into 3 categories, namely high adherence (score 8), medium (score 6-< 8), and low (score < 6). This study used univariate and bivariate analysis. Univariate analysis was used to analyse data on family support, rehabilitation compliance, and demographic characteristics. Bivariate analysis was used to assess the correlation between family support and physical rehabilitation compliance of stroke patients. This study used Spearman Correlation Test analysis. Data analysis was displayed in the form of distribution tables, frequencies, and percentages so that it is easily understood by the reader. This study has received ethical approval from the Health Research Ethics Committee of the Faculty of Medicine, Universitas Muhammadiyah Surakarta with No. 5318/B.1/KEPK-FKUMS/IX/2024.

RESULT

Table 1.
Frequency Distribution by Demographic Data (n=73)

Characteristics	f	%
Gender		
Male	44	60,3
Female	29	39,7
Age (years)		
Middle age (45-59)	32	43,8
Elderly age (60-74)	38	52,1
Senile (75-90)	3	4,1
Marital status		
Married	53	72,6
Widowed (male)	13	17,8
Widowed (female)	7	9,6
Education		
Elementary School	18	24,7
Junior Highschool	23	31,5
Senior Highschool	19	26
Bachelor Degree	13	17,8
Length of rehabilitation (months)		
2	30	41,1
3	43	58,9
Stroke History		
Primary	57	78,1
Secondary	16	21,9
Total	73	100

In this study, it was found that out of 73 respondents based on gender, the majority of respondents were male, as many as 44 people (60.3%), and 29 people were female (39.7%). Based on age, the majority of respondents were in the age range of 60-74 years (elderly age), totalling 38 people (52.1%). Based on marital status, the majority of respondents were married, 53 people (72.6%). Based on education, the majority of respondents had a history of junior high school education as many as 23 people (31.5%). Respondents who had undergone physical rehabilitation for 2 months were 30 people (41.1%), and those who had undergone

physical rehabilitation for 3 months were 43 people (58.9%). The majority of respondents experienced primary stroke; as many as 57 people (78.1%) (Table 1).

Table 2.
Frequency Distribution by Family support (n=73)

Characteristics	f	%
Family support		
Medium	42	57,5
High	31	42,5
Rehabilitation compliance		
Low	14	19,2
Medium	13	17,8
High	46	63
Total	73	100

In this study, it was found that the majority of family support for stroke patients undergoing physical rehabilitation at Ir. Soekarno Sukoharjo Hospital was in the moderate category, with as many as 42 people (57.5%) and high family support as many as 31 people (42.5%). In this study, it was found that the majority of respondents had a high compliance category, as many as 46 people (63%) (Table 2)

Table 3.
Analysis of the correlation between family support and physical rehabilitation compliance (n=73)

Family support	Rehabilitation Compliance						Total	r	P-value	
	Low		Medium		High					
	f	%	f	%	f	%				
Medium	14	19,2	12	16,4	16	21,9	42	57,5	0.596	0,001
High	0	0	1	1,4	30	41,1	31	42,5		

In this study, it was found that the majority of respondents had high family support with high rehabilitation compliance with 30 people (41.1%). Based on the results of the Spearman Test between family support and physical rehabilitation compliance, the P-value is 0.001 and the coefficient value (r) is 0.596. These results indicate that there is a significant relationship between family support and physical rehabilitation compliance at Ir. Soekarno Sukoharjo Hospital with a strong degree of relationship level. The correlation coefficient indicates that the direction of the correlation between variables is positive, so the better the family support, the better the physical rehabilitation compliance (Table 3).

DISCUSSION

This study was conducted with the aim of knowing the correlation between family support and rehabilitation compliance in stroke patients. Based on the results of research obtained from 73 respondents, it was found that there was a significant relationship between family support and physical rehabilitation compliance at Ir. Soekarno Sukoharjo with a strong correlation degree. The direction of the relationship between variables is positive; the better the family support, the better the physical rehabilitation compliance will be. In line with Duvall's theory in Nurartianti (2020), family support has a major influence on the process of improving health, and one of the factors that influence stroke patient compliance is family support. Supported by the results of research by Niam (2020), rehabilitation is important for stroke patients, and there are various factors that encourage rehabilitation compliance, namely motivation and family support. The results showed that if the patient has good family support, the patient's rehabilitation compliance is good, and vice versa if the patient's family support is lacking, the patient's rehabilitation compliance is low. This is because family support can help improve patients' physical rehabilitation compliance.

In this study, it was found that the majority of stroke patients were male. The results of this study are in line with the results of Setyoadi's research (2017) that stroke patients with male gender are more than women. In line with Maskun's research (2017), generally men are more affected by stroke than women. In this study, it was found that the majority of stroke patients were elderly patients. It can be concluded that there is a significant relationship between age and the incidence of stroke. In line with Badrid's research (2019), the age group >55 years is more at risk of stroke. The reason is that natural ageing causes blood vessels to become stiff due to emboli or plaques that stick to blood vessels. In line with the results of Rahayu's research (2023), the increasing age of a person has a greater risk of stroke than at a young age. Based on the results of the study, most respondents are married. Liu's research (2018) revealed that there was a significant relationship between marital status and stroke. Patients who are not married have a higher proportion of stroke incidence than patients who are married. In line with Andi's research (2018), which explains that marital status is one of the social supports for patients, with a partner, the partner can provide support to patients to carry out positive, healthy behavior. From the data obtained, the majority of respondents have a history of junior high school education. In Mahendra's research (2021), it was found that higher education will affect the mindset and understanding of individuals towards the concept of disease and health. Based on the results of the study, the higher a person's level of education, the better his knowledge of the disease will be.

Most of the research respondents have been doing physical rehabilitation for 3 months. In line with Creamer's research (2018), the rehabilitation carried out by stroke patients will be adjusted to the development of the patient's health condition. This is supported by Kimura's research (2022), which states that increasing the duration of rehabilitation can help stroke patients improve functional recovery. This study found that the majority of respondents experienced a primary stroke attack in as many as 57 people. This is in line with Iskandar's theory in Amila (2018) that conceptually, about 1/3 of primary stroke patients who have recovered will experience a recurrent stroke within 5 years. In a study, Diener (2019) stated that primary and secondary stroke prevention is a high priority. Implementing primary strategies, by treating stroke patients effectively to minimise mortality and prevent recurrent stroke.

Based on the research data, it was found that the majority of family support for stroke patients undergoing physical rehabilitation at Ir. Soekarno Sukoharjo was in the moderate category. Stroke patients receive support from their spouses and families. Family support is the attitude, action, and acceptance of patients who are sick. The family also act as a support system for its members, and family members perceive that people who are supportive are always ready to provide help and assistance if needed (Syamson, et al 2018). The family motivates and encourages patients to be patient, strong, and persistent to achieve a better health status. Family members can help patients by providing information about treatment, providing time to share feelings, and preparing funds for disease treatment (Kamaryati, 2020). Family support plays a very important role in the recovery process. The role of family support is very necessary to help the recovery process. Family support is instrumental in the healing process as well as relieving stress in patients. Families can help patients face difficulties during treatment (Kristina & Indraswari, 2022). In line with Cahyanti's research (2021), it is stated that in minimising stroke attacks, families can provide family support, such as reminding them to take medication and regulating the patient's diet and sleep patterns. Reinforced by Yenni's theory in Nuraeni (2020) that the family plays an important role in the concept of illness of other family members, the family is a support provider who directly cares for sick families. Individuals with good family support will be better at maintaining health behaviour than individuals without family support.

The majority of stroke patients who underwent physical rehabilitation had high compliance, namely 46 people. Rehabilitation is a collaborative, goal-orientated process involving patients, carers, and healthcare providers over a period of time. Physical rehabilitation is an important form of treatment for stroke patients in order to minimise the impact of stroke as well as the disability that may occur in stroke patients (Jannah & Azam, 2018). Physical rehabilitation programs help to restore the physical function, physical strength, and daily activities of stroke patients (Lee et al., 2022). The main goal of post-stroke rehabilitation is to help stroke patients to return to their pre-stroke function or normal function before the stroke (Whitehead & Baalbergen, 2019). Compliance in healthcare is the extent to which a patient's behaviour is in accordance with healthcare provider recommendations, whether in the form of individual behaviour, medication intake, dietary adherence, or lifestyle changes. Compliance in undergoing rehabilitation has an effective role in patient treatment outcomes (Pishkhani et al., 2020). Physical therapy for stroke patients is a structured agenda that is expected to provide training that can maximise recovery to reduce disorders and disability due to stroke disease (Daneman, 2020). Research conducted by Guo (2023) found that regular rehabilitation can gradually restore the patient's muscle strength so that his health can improve again. The routine physical exercise program carried out by the patient resulted in increased limb strength in the patient. From the research that has been done, the researchers feel that with 73 respondents, this research still cannot describe the real situation with a wider scope. Therefore, the researcher hopes that future researchers can conduct research with a larger number of respondents who can describe the situation with a wider scope.

CONCLUSION

Based on the results of the study with 73 respondents, family support for stroke disease was in the moderate category. Compliance with physical rehabilitation in stroke patients is mostly in the high compliance category. The results of the Spearman Test between family support and physical rehabilitation compliance obtained a P-value of 0.001 with a correlation coefficient value indicating that there is a strong relationship between family support and physical rehabilitation compliance in stroke patients at Ir. Soekarno Sukoharjo Hospital.

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