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IMPROVING SELF-MANAGEMENT FOR POST STROKE PATIENTS THROUGH STROKE EMPOWERMENT EDUCATION AS PREVENTION OF RECURRENT STROKE

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ABSTRACT

Introduction Stroke can result in a wide range of outcomes, including recovery with disabilities, death or survival with the risk of reccurent strokes. Post-stoke patients require special attention to improve self-management behaviors. Stroke empowerment education is an educational approach given to stroke patients with an empowerment focus that centers on the patient. **Objective**: This study aimed to determine the impact of stroke empowerment education on the self-management of post-stroke patients as a strategy to prevent recurrent strokes. **Methods**: The research design used was a Quasi-Experiment with a pre-post-test design with a control group. The sampling method used was accidental sampling technique, resulting in 98 respondents. Self-management data were gathered through the The Southampton stroke self-management questionnaire (SSSMQ). The analysis using the Wilcoxon Signed Rank Test. **Results**: There was significant impact of stroke empowerment education on self-management of post-stroke patients to precent recurrent stroke with a p-value of 0.000. **Conclusion**: Stroke empowerment education had a positive impact on enhancing self-management in post-stroke patients as a preventive measure against recurrent strokes. It is recommended that the findings of this research can be applied as an intervention to enhance post-stroke patient services, focusing on improving self-management to help prevent recurrent strokes.

Keywords : Post-stroke, Self-management, Stroke Empowerment Education

INTRODUCTION

Stroke is a critical and life-threatening medical condition that arises when blood flow to the brain is interrupted, leading to damage to brain cells (Lip et al., 2022). In Indonesia, stroke remains the leading cause of death and disability, with its incidence steadily rising each year (Badan Penelitian dan Pengembangan Kesehatan (LBP), 2020). Following a stroke, individuals encounter significant challenges in performing daily activities, affecting mental, social and physical aspects (Sylvester Silas et al., 2021). These difficulties not only influence the quality of life of post-stroke patients but also elevate the risk of experiencing a recurrent stroke (Bártlová et al., 2022; Pădureanu et al., 2023).

According to global data, approximately 15 million people experience a stroke each year (Sedova et al., 2021). Of these, about 5 million individuals suffer permanent disabilities, while another 5 million lose their lives (Venketasubramanian et al., 2022). According to the Riset Kesehatan Dasar, the incidence of stroke in Indonesia is 10.9 per 1000 population. Research indicates that approximately 25% of post-stroke patients experience a recurrent stroke within the first five years following the initial event (Verburgt et al., 2024). Medical record data from the RSUD Gambiran Kediri City, shows that in 2021 there were 5.217 stroke

cases (Medical Records RSUD Gambiran Kediri City, 2021). Stroke can lead to a range of outcomes, including recovery with disability, death to survival with the risk of recurrent stroke (Kernan et al., 2021; Uzuner & Uzuner, 2023)

Many post-stroke patients may develop physical impairments, such as paralysis or speech difficulties, necessitating prolonged care and rehabilitation programs to help restore bodily functions (Flach et al., 2020; Verburgt et al., 2024). Conversely, post-stroke patients can achive optimal recovery and lower the risk of recurrent stroke by adopting lifestyle modifications and following a proper medication regimen (Fugazzaro et al., 2021). However, the risk of recurrent stroke remains for post-stroke patients, and it is crucial for them to take preventive actions to minimize this risk. Additionally, some post-stroke patients require specific interventions to address risk factors for recurrent strokes due to their heightened vulnerability (Lip et al., 2022).

Post-stroke patients face an increased risk of having a recurrent stroke, with the likelihood being particularly high during the first six months following the initial stroke (Berghout et al., 2023; Sihotang et al., 2024). To prevent a recurrent stroke, it is essential to address risk factors by implementing appropriate measures, such as making lifestyle changes, following proper therapy and undergoing tests to gather accurate information about an individual's stroke or recurrent stroke risk (Setyowati et al., 2021; Taweephol et al., 2024).

Self-management is one of the rehabilitative methods for chonic disease such as stroke. Self-management is defined as an individual's ability to manage symptoms, undergo therapy, adapt to physical and psychological conditions, and make lifestyle changes related to the presence of chronic illness (Fugazzaro et al., 2021a). According to Wu et al (2023), good self-management can assist patients in taking necessary actions to reduce the risk of recurrent strokes and strengthen their ability to cope with the condition.

Post-stroke patients require adequate support and guidance to enhance self-management behaviors through preventive strategies, enabling them to manage their health conditions more effectively (Sahely et al., 2023). These strategies for stroke patients include providing education and information about health to both patients and their families, as well as fostering skill development and offering support in planning and executing independent care (Fugazzaro et al., 2021b). According to (Sahely et al., 2023), promotive strategies enable post-stroke patients to identify early symptoms of recurrent stroke, manage complications that may arise after a stroke and improve their ability to perform daily activities more independently. Promotive strategies can also help patients motivate themselves to stay active, participate in rehabilitation programs and take better care of themselves. Despite the availability of rehabilitation programs, post-stroke patients often face difficulties with self-management, which can lead to recurrent strokes. This study evaluates the effect of stroke empowerment education on self-management behavior at RSUD Gambiran Kediri City

METHODS

This study were used a Quasi-Experimental research design with a pre-post-test with a control group, conducted June – August 2024. The accidental sampling technique along with inclusion and exclusion criteria was used to select the sample. Inclusions criteria required patients to have good communication abilities and no severe cognitive impairment. The exclusion criteria was that patients who were unwilling to participate were excluded. The sample included stroke patients from the Neurology Polyclinic at RSUD Gambiran Kediri City. A total of 196 respondents were included, divided into 2 groups, 98 in the intervention group and 98 respondents in the control group. Pre-test and post-test were conducted using the Southampton stroke self-management questionnaire (SSSMQ), which contained 28 questions rated on a 6 point Likert scale, ranging from strongly agree (6) to strongly disagree (1). Data were analyzed using SPSS version 23. Descriptive analysis was employed to identify the demographic characteristics and

the prevalence of self-management among respondents. To assess the differences in self-management behavior before and after the stroke empowerment education intervention, the Wilcoxon Signed Rank Test was used, with a p-value >0.05 indicating a significant difference.

RESULTS

Table 1 Characteristics of Respondents

Variabel	Intervention Group		Control Group	
	F	%	F	%
Age				
36 - 45	19	19,3%	17	17,3%
46 - 55	30	30,6%	28	28,6%
56 – 65	38	38,7%	37	37,7%
> 65	11	11,4%	16	16,4%
Total	98	100%	98	100%
Gender				
Male	45	45,9%	39	39,7%
Female	53	54,1%	59	60,3%
Total	98	100%	98	100%
Job Status				
Doesn't work	48	48,9%	54	55,1%
Work	50	51,1%	44	44,9%
Total	98	100%	98	100%
Education				
Elementary	36	36,7%	33	33,6%
School	27	27,5%	36	36,7%
Junior High	21	21,4%	18	18,3%
School	14	14,4%		11,4%
Senior High School			11	
College				
Total	98	100%	98	100%
History of other disease				
Hypertension	41	41,9%	39	39,7%
Cardiovascular disease	21	21,4%	20	20,6%
Diabetes Mellitus	36	36,7%	39	39,7%
Total	98	100%	98	100%
Suffering from stroke	46	46,9%	43	43,8%
> 1 years	52	53,1%	55	56,2%
< 1 years				
Total	98	100%	98	100%

From Table 1, it can be observed that the characteristics of respondents based on age show that the majority of respondents are in the age range of 56–65 years, both in the intervention group (38.7%) and the control group (37.7%). Most respondents are female in both the intervention group (54.1%) and the control group (60.3%). Based on employment status, the majority of respondents in the intervention group are employed (51.1%), while the majority in the control group are unemployed (55.1%). In terms of education level, the majority of respondents in the intervention group have primary school education (36.7%), while in the control group, the majority have junior high school education (36.7%). The most common comorbidity among respondents in the intervention group is hypertension (41.9%), whereas in the control group, it is hypertension and diabetes mellitus (39.7%). Regarding the duration of stroke, the majority of respondents in both the intervention and control groups have had a stroke for less than 1 year.

Table 2 Distribution of Self-Management before Stroke Empowerment Education

Variabel	Intervention Group		Control Group	
	F	%	F	%
Good self-management	23	23,5	28	28,5
Adequate self-management	27	27,5	23	23,5
Poor self-management	48	49	47	48
Total	98	100%	98	100%

According to Table 2, prior to the stroke empowerment education intervention, the majority of the intervention group exhibited poor self-management with 48 respondents (49%). Similarly, in the control group, most respondents also had poor self-management with 47 respondents (48%).

Table 3 Distribution of Self-Management after Stroke Empowerment Education

Variabel	Intervention Group		Control Group	
	F	%	F	%
Good self-management	51	52	31	31,6
Adequate self-management	30	30,6	23	23,5
Poor self-management	17	17,4	44	44,9
Total	98	100%	98	100%

After receiving the stroke empowerment education intervention as showed at table 3, the

intervention group demonstrated a significant improvement in self-management scores, with 52% of respondents achieving good self-management. In contrast, there was no change in self-management among the control group. Data analysis using the Wilcoxon test revealed a value of $p = 0.000$ ($p < 0.05$), indicating a significant effect of stroke empowerment education on enhancing self-management among post-stroke patients as a preventive measure against recurrent strokes at the RSUD Gambiran Kediri.

DISCUSSION

According to the research findings, prior to receiving the stroke empowerment education intervention, only 23 respondents (23,5%) in the intervention group demonstrated good self-management, 27 respondents (27,5%) exhibited adequate self-management, and 48 respondents (49%) had poor self-management. Stroke patients often experience muscle weakness, reduced range of motion, sensory impairments, and difficulties with walking patterns. These issues can significantly reduce their ability to perform self-management activities (Atalan et al., 2021; Rössler et al., 2020).

A reduced ability to perform self-management can elevate the risk of recurrent strokes. Generally, recurrent strokes are more common in individuals with poor self-regulation and low levels of awareness (Magi et al., 2024). Moreover, experiencing a recurrent stroke often signifies more extensive brain damage, which may result in more severe outcomes (Kolmos et al., 2021). Recurrent stroke prevention can be achieved by managing risk factors through effective self-management, including monitoring diabetes mellitus, obesity, cholesterol levels, hypertension and other contributing factors (Flach et al., 2020; Setyowati et al., 2021).

Based on the research findings, following the stroke empowerment education intervention, self-management improved among the 98 respondents in the intervention group. Specifically, 51 respondents (52%) demonstrated good self-management, 30 respondents (30,6%) had adequate self-management and 17 respondents (17,4%) exhibited poor self-management. Statistical test results indicated that stroke empowerment education significantly influenced the improvement of self-management in post-stroke patients as a preventive measure against recurrent strokes at RSUD Gambiran Kediri.

Self-management is an individual's ability to reduce the risk of recurrence and improve quality of life by managing symptoms, medications, as well as physical and psychological changes (problem-solving). The goal of self-management is to modify habits in addressing their condition and adapting to enchance their quality of life (Magi et al., 2024). Self-management is designed to change habits and enhance an individual's ability to cope with their condition and adapt. It involves programs developed to train individuals in the skills needed to manage their condition, maintain their health and address social issues effectively (Iswanti et al., 2024). Patients and their families collaborate in making decisions to enhance health and sustain life. Practicing self-management among stroke patients can improve their ability to carry out daily activities, lower the risk of premature death, decrease dependency and minimize the lifestyle impacts caused by the disease (Supu & Muhith, 2024).

In stroke survivors, self-management interventions focus on empowering patients to manage their medical conditions, modify behaviors and address emotional challenges resulting from their recovery (Wu et al., 2023). Self-management can lead to behavioral changes that boost motivation for improving health. Support for self-management in stroke rehabilitation can result in positive changes in daily activities, enhance quality of life and reduce the risk of recurrence (Magi et al., 2024). To enhance self-management in post-stroke patients, a holistic and long-term approach must be implemented. Promotional strategies, including educational components, can assist patients in more effectively managing their conditions (Fugazzaro et al., 2021)

Evidence shows that effective health promotion interventions foster the development of self-management by increasing individuals

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awareness and their ability to monitor their condition, while also encouraging lifestyle choices that support a high quality of life (Taft et al., 2021). Stroke empowerment education is an promotional strategies that the interventions aimed at enhancing problem-solving skills, self-efficacy and resource utilization yield more favorable outcomes (Rasyid et al., 2023).

Stroke empowerment education is a patient-focused educational approach designed for stroke survivors, emphasizing empowerment through collaboration. Empowerment education for stroke patients focuses on equipping individuals with the knowledge, skills, and confidence to actively participate in their recovery and healthcare decisions (Indah Iswanti et al., 2023). This patient-centered approach emphasizes collaboration between patients and healthcare providers, fostering shared decision-making and promoting a sense of control and self-management in managing their condition (Kwame & Petrucka, 2021).

Stroke empowerment education aims to enhance stroke patients capacity to independently manage their condition and minimize the risk of complications, thereby promoting improved self-management (Alghamdi et al., 2022; Alijanpour et al., 2020). According to (Sahely et al., 2023), promotive strategies for post-stroke patients focus on empowering patients to adopt healthier lifestyle, recognize early warning signs and adhere to medical recommendations.

It is recommended that the finding of this study be applied as an intervention in hospital to enhance post-stroke patients services, focusing on improving self-management to help prevent recurrent strokes. The findings of the study on stroke empowerment education also provide opportunities for further development in exploring the effectiveness of this approach using more diverse methods, such as application-based technology, community-based training programs or its impact on patient in preventing recurrent strokes. This study limited by the use of accidental sampling, which may restrict the generalizability of the findings. Moreover, the brief intervention period may not adequately reflect long-term behavioral changes.

CONCLUSION

There is a significant impact of stroke empowerment education on improving self-management among post-stroke patients, aiding in the prevention of recurrent strokes. Healthcare providers are advised to incorporate stroke empowerment education into discharge planning to promote long-term self-management and reduce the risk of stroke recurrence.

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