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The Relationship between Family Support and Emotional Regulation in Post-Stroke Disabled Patients in the Gesang Lumajang Community Health Center Work Area

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ABSTRACT: Healing a patient after a stroke will have an impact on their emotional status. This study aims to analyze the relationship between family support and emotional regulation in disabled patients after stroke. This research uses a cross-sectional design. The population in this study was 45 patients with disabilities after stroke. The sample size in this study was calculated using the Slovin formula, so based on the population size, we obtained a sample size of 40 patients. Respondents were selected using random sampling techniques. The variables studied were family support as independent and emotional regulation as dependent. Data were collected using the Perceived Social Support Family Scale questionnaire and the Emotional Regulation Questionnaire. The results showed that family support for disabled patients after stroke was mostly good (45%), and emotional regulation for disabled patients after stroke was mostly good (57.5%). The close relationship between family support and emotional regulation is proven by the value r = 0.768; p = 0.01. The conclusion of this study is that there is a strong relationship between family support and emotional regulation in post-stroke-disabled patients. Family support is important for managing emotions. Good emotional regulation will increase the patient's adaptive response to the disease. The implication of this research is that the patient's adaptive response will make it easier for patients to improve their recovery in health services.

Keywords: Family Support, Emotion Regulation, Post-Stroke Disability

INTRODUCTION

The main factor causing morbidity and disability in the world is stroke (Setyopranoto et al., 2022). Strokes can be experienced by productive age groups and the elderly, which will then have an impact on socio-economic outcomes. It is impossible for a stroke sufferer to return to their activities as they were before the stroke. Long-term care for sufferers is a serious challenge for the community and families of patients with stroke (Hutagalung, 2019). The patient's healing process

will have an impact on their psychological or mental status. Patients will tend to fluctuate in terms of mood, cognition, satisfaction, and self-perception (Amila et al., 2021).

Global study results in 2019 showed that there were 12.2 million cases of stroke, 101 million cases of stroke prevalence, 143 million cases of disability due to stroke, and 6.55 million deaths due to stroke. From 1990 to 2019, the number of disabilities due to stroke increased by 32% (Feigin et al., 2021). In 2017, there were 1.12 million stroke incidents in the European Union. The prevalence of disability due to stroke is 7.06 million (Wafa et al., 2020). The 2018 RISKESDAS results prove that 10.9% of the Indonesian population experienced a stroke, which means 713,782 people in Indonesia were diagnosed with a stroke. East Java is ranked in the top 10 for the prevalence of stroke cases based on doctors's diagnoses (Kemenkes, 2018). Lumajang District Health Service (2022) stated that the number of hypertension sufferers in the Gesang Community Health Center working area was 7,411. Data shows that 45 people experienced strokes as a result of hypertension.

Blood vessels that clot in the brain will disrupt blood flow, block blood vessels, and burst, causing bleeding, which is a neurological disorder. This condition causes brain cells to lack oxygen due to damage to the blood vessels leading to the brain, causing sudden death (Kuriakose & Xiao, 2020). Other disorders caused by stroke include paralysis of the side of the face or limbs, slurred speech, changes in consciousness, visual disturbances, etc (Kemenkes, 2018).

The International Classification of Functioning (ICF) concludes that a disability is an individual who experiences body dysfunction, activity limitation, and environmental participation. Some people understand disability as disability (Pattaray, 2021). Physical disability is characterized by impaired movement function related to stroke (Iskandar, 2020). People with disabilities are continually faced with various obstacles that worsen the quality of life, such as the quality of physical, mental, social, and spiritual functioning (Keramat et al., 2022). Disability due to a stroke will provide an experience that can change the patient's emotions in the form of extreme emotional stress for both the patient and the family who care for him. Chronic emotional stress will have an impact on patient interactions with other people, hindering treatment and increasing mortality (McCurley et al., 2019).
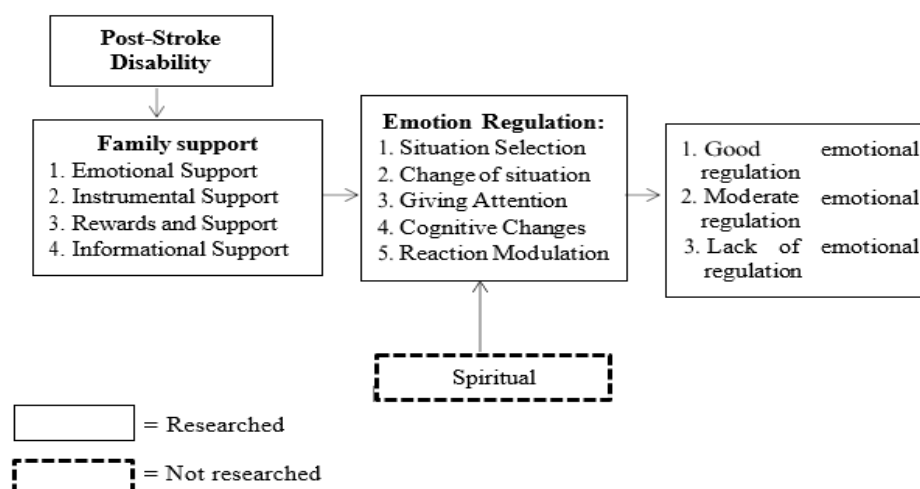
Friedman (2013), in Ayuni (2020), said that family support is a process that occurs in life due to the different nature and types of support at various stages of the life cycle. Family support can provide benefits for stroke patients, including increasing social motivation, quality of life, knowledge, and mental health (Hutagalung, 2019). Poor mental health will have an impact on maladaptive emotional regulation (Cardi et al., 2021). Emotion regulation is the process of managing emotions carried out by oneself or others and influencing physiological activities, subjective experiences, expression behavior, and so on. Emotion regulation includes the process of latent changes in emotions, psychological experiences, the time when emotions occur, the duration of emotions, and physiological reactions (Harwijayanti, 2022).

Mild disability after stroke has significant consequences in life (Vecchia et al., 2019). Family support can reduce the burden of post-stroke stress. According to the results of research conducted by Raposo & Francisco (2022), low family support will influence the level of difficulty

in emotional regulation, and vice versa, good family support will make emotional regulation easier. The description above shows the need for further studies regarding the relationship between family support and emotional regulation in patients who experience disability due to stroke in the Gesang Lumajang Health Center working area.

H1 : There is a relationship between family support and the patient's emotional regulation and post-stroke disability in the Gesang Community Health Center work area in Lumajang.

METHOD

The research design used was cross-sectional. The population in this study were post-stroke disabled patients. The population in this study was 45 post-stroke patients at the Gesang Lumajang Community Health Center. The sample size in this study was calculated using the Slovin formula, so based on the population size, we obtained a sample size of 40 patients. The Slovin formula calculation is explained as follows:

n : Sample size
N: Number of Population
e2: Error tolerance, in health research the error rate is 5% or 0.05.

$$n= \frac{N}{1+N(e)^2}$$
$$n = \frac{45}{1+45(0,05)^2}$$
$$n = \frac{45}{1+45(0,0025)}$$
$$n = \frac{45}{1+0,1125}$$
$$n = \frac{45}{1,1125}$$
$$n = 40$$

The sampling technique was carried out using random samples, so that each patient had the same opportunity as a respondent. The research instrument used was the Perceived Social Support

Family Scale and the Emotional Regulation Questionnaire. Data analysis in this study used descriptive analysis to describe the characteristics of respondents and bivariate sperman rank analysis to explain the relationship between family support variables and emotional regulation.

RESULT AND DISCUSSION

Table 1. Characteristics of Respondents from Post-Stroke Disabled Patients in the Gesang Lumajang Health Center Work Area in 2023 (n = 40).

Variable	Frequency	Percent (%)
Aged		
<55	9	22,5
≥55	31	77,5
Gander		
Male	22	55
Female	18	45
Marital Status		
Marry	25	62,5
Life/death divorce	15	37,5
Not married	0	0
Education		
Elementary school	9	22,5
Junior High School	14	35
Senior High School	15	37,5
College	2	5

Table 1 explains that the age of the patients in this study was mostly ≥55, with a total of 31 (77.5%). Patients aged <55 were 9 (22.5%).The education level of stroke patients in related research was mostly intermediate (Sukatemin, 2022). The marital status of post-stroke patients is that most are married, and most say they are widows or widowers (Puri & Setyawan, 2020) (Wardani, 2022). The age of most stroke patients is in the range of 40–70 years, namely 61 years (Tynterova et al., 2022). Other research also says the same thing: the average age of patients who experience a stroke is 64 years, and most stroke patients are male (Lee & Won, 2022). The gender that dominates research on stroke patients is male (Soto-Vidal et al., 2021). Based on these data, sociodemographic factors cannot be absolutely indifferent and are associated with the incidence of stroke. The results of each study are different, so it can be concluded that there are other factors besides sociodemographic age, education level, marital status, and gender that trigger stroke.

Table 2. Frequency Distribution of Family Support and Emotional Regulation of Post-Stroke Disabled Patients in the Gesang Lumajang Health Center Work Area in 2023 (n = 40)

Variable	Frequency	Percent (%)

Family support		
Good	18	45
Mediate	12	30
Bad	10	25
Emotion Regulation		
Good	23	57,5
Mediate	12	30
Bad	5	12,5

Table 2 shows that more than half of post-stroke disabled patients received good family support, namely 18 (45%), and had good emotional regulation, namely 23 (57.5%).Family support is both emotional and practical.

Encouragement and reassurance from family members helps build confidence to return to activities, from eating meals with the family to more organized activities such as attending social events (Harrison et al., 2022). Stroke survivors say families are supportive of setting meaningful social and leisure goals (Masterson-Algar et al., 2020). Post-stroke patients often feel useless, a burden on their families, and think that their disease will never be cured. Most patients with moderate or severe disabilities admitted that they did not do any activities at home apart from sleeping and sitting on the terrace or living room. If patients receive support from the environment, including support from family, then they will be motivated to think positively when dealing with the impact of stroke (Astuti et al., 2020).

Family members complain of experiencing stress when caring for other family members with post-stroke disabilities, even though each family member is guaranteed to contribute to the care of post-stroke disabled patients. Nuclear families who have post-stroke patients experience additional obligations; they say there is a burden on working hours and increased financial needs when they have a family member who experiences post-stroke disabilities (Tiwari et al., 2021).

Based on the data above, patients with disabilities after stroke need family support, starting with emotional support, appreciation from the family, and information support, as well as instrumental support. Post-stroke disabled patients and the families being treated will experience various changes, ranging from emotional changes to changes in financial needs, and so on. Patients will feel that they receive good family support if the family can fulfill everything the disability sufferer needs after a stroke. When the family provides instrumental support, namely practical and concrete sources of help such as financial needs, food, drink, and rest, but does not provide emotional support in the form of affection, trust, attention, listening and hearing, empathy, encouragement, personal warmth, love, and emotional assistance, then the patient will feel that he is receiving sufficient family support. This is because there is one aspect of family support that is still not fulfilled by patients with disabilities after stroke.

Stroke patients generally have a high incidence of disability after the onset of the disease (Pedersen et al., 2021). Stroke sufferers describe stroke as a life event that impacts all aspects of life; they feel weak and hopeless (Masterson-Algar et al., 2020). In the chronic phase of stroke, individuals experience difficulty controlling their emotions, and this affects their daily lives. Individuals feel unfair, angry about the occurrence of a stroke, and sad because of the decline in the quality of

activities (Vecchia et al., 2019). Individuals also feel feelings of sadness, depression, and apathy because they feel unable to carry out activities (Harrison et al., 2022). Adverse psycho-emotional status, in particular depression and anxiety, is a predictor of early manifestations of cognitive dysfunction and, on the other hand, is a secondary cause of cognitive deficits in stroke patients (Tynterova et al., 2022). Stroke sufferers also experience emotional deficits, personality changes, or inadequate behavior (Lo Buono et al., 2022). Only a few stroke sufferers know that their emotions are caused by stroke (McAleese et al., 2021).

There are efforts to process self-management and emotional change, one of which is called emotional regulation (Harwijayanti, 2022). Emotion regulation consists of a series of cognitive, emotional, and physiological strategies that can enable individuals faced with internal or external stimuli to manage emotional responses, adapt to the environment, and achieve goals (Moreta-Herrera et al., 2022). Factors that can influence individuals to regulate their emotions are health problems, home atmosphere, relationships with family, parenting patterns, and spirituality (Supena, 2022).

Based on the data above, functional changes in disabled patients after stroke will make the patient feel like they have lost a role, reduce the quality of activities, and have an impact on emotional responses. The emotional response faced by each individual is different, in the form of a negative or positive response. This is related to how individuals use coping mechanisms. If an individual can carry out coping mechanisms for their illness, then the individual will have a good emotional response. This is called emotional regulation.

Table 3. Bivariate Sperm Rank Analysis of Family Support and Emotion Regulation of Post-Stroke Disabled Patients in the Gesang Lumajang Health Center Work Area in 2023 (n = 40)

Independent Variable	Dependent Variable	p-value	r
Family Support	Emotion Regulation	0,01	0,768

Table 3 shows the results of the Spearman rank test and obtained significance with a p-value of 0.01; < α 0.05; r = 0.768. The correlation value proves that there is a strong relationship between family support and emotional regulation experienced by post-stroke disabled patients in the Gesang Lumajang Health Center working area. The direction of correlation in the results of this study is positive (+).This means that the higher the family support for disabled patients after stroke, the higher their emotional regulation will be. The results of this study can be concluded that H1 is accepted, which means there is a relationship between family support and emotional regulation of post-stroke disabled patients in the Gesang Lumajang Health Center Work Area.

Illness can be experienced as a threat, associated with individuals developing cognitive beliefs about the disease and emotional responses that will ultimately determine their decisions about how best to deal with existing symptoms (Vecchia et al., 2019). Post-stroke patients will experience emotional changes. Negative emotional changes cause a decrease in patient motivation, thus having a negative impact on the rehabilitation process and the level of disability experienced. Families have the ability to provide emotional and psychological support to stroke patients, helping them organize routine activities and assisting them in the recovery process (Astuti et al., 2020).

The depression score in the group given family support was found to be 1.24 points lower than in the group not given family support. Continuous attention from close people or family regarding clinical rehabilitation for psychological health helps improve the physical and mental well-being of stroke patients and improves the rehabilitation effect and their quality of life (Lin et al., 2019).

Family support is predictive of encouraging functional recovery by reducing negative emotional responses such as stress so that individuals can adapt to post-stroke life changes (Pedersen et al., 2021). Family support, by considering comprehensive information regarding general individual factors, health status, and environmental factors by health professionals, can increase compliance with rehabilitation. Family support in the chronic stage can make participants feel supported so they can implement effective coping strategies and good health behaviors (Oyake et al., 2020).

During the rehabilitation phase, individuals experiencing post-stroke disability and their caregivers report that they have more control over their recovery and realize that throughout the recovery phase they must reinvent themselves and be more successful in re-engaging in the recovery process (Masterson-Algar et al., 2020). Stroke survivors who have high perceived behavioral control and motivation to comply are more involved in leisure activities and more exposed to family support. The adaptation model for stroke sufferers is that they want to change their lives, have no stress, and will divert whatever is causing them stress (Masterson-Algar et al., 2020). One of the adaptations of post-stroke patients is the ability to manage negative emotions, which can be called emotional regulation. Factors that can influence individuals to regulate their emotions include previous parenting patterns and family support (Supena, 2022). Adaptation can be formed through the process of coping mechanisms. How do post-stroke patients receive and manage information regarding the diagnosis and prognosis of stroke, how they perceive the disability and activity disorders they experience, how they assess themselves in general regarding their disability, and how they control and manage their emotions regarding various post-stroke conditions. The family can provide support for this. Adaptive responses show that individuals can maintain integrity to achieve desired goals. Maladaptive responses indicate an inadequate adaptation process, so that individuals cannot adapt well (Dharma, 2018). Based on the data above, post-stroke-disabled patients will experience various changes, one of which is emotional. Emotional changes can be both negative and positive. This can be influenced by how individuals can carry out coping mechanisms. Coping mechanisms are formed due to individual experiences or perceptions, for example, parenting patterns or family support. Family support takes the form of informational support, attention, and so on. If a post-stroke- disabled patient receives good support from the family, the individual will carry out coping mechanisms against the stimulus. These coping mechanisms can help patients manage emotions, or what is called emotional regulation. Managing emotions will ultimately help individuals adapt to the stimuli they experience.

CONCLUSION

Post-stroke-disabled patients in the Gesang Lumajang Community Health Center work area mostly have good family support and good emotional regulation. There is a relationship between family support and emotional regulation. Limitations in this research include that the researcher did not analyze the factors causing insufficient family support, sufficient family support, or good family support. Researchers did not provide interventions to improve family support relationships or how to carry out good emotional regulation. This research uses a questionnaire, so sometimes the answers given by the sample do not show the actual situation.

The implication of this research for health services is that family support can help patients better understand and regulate their emotions. Families can provide comfort and emotional support and help patients develop effective coping strategies. Post-stroke-disabled patients will feel calmer, safer, and more loved. This can improve psychological well-being and help patients deal with stress and anxiety associated with their illness; in other words, patients can adapt to their illness. A prosperous psychological condition and effective emotional management will help patients be more compliant with treatment. A treatment process that goes well will improve recovery.

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