Original Article

Quality of Life of Post-Stroke Patients in Aceh, Indonesia

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Abstract

Introduction: The quality of life of stroke survivors is a major concern for healthcare providers due to the physical, psychological, and social issues caused by stroke. This study aims to identify the quality of life of post-stroke patients undergoing outpatient treatment at the neurology clinic of the General Hospital of South Aceh Regency, Indonesia.

Methods: This research uses a cross-sectional study design with a sample of 120 respondents. All post-stroke patients undergoing treatment at the clinic were included in the study. Data were collected through face-to-face interviews at the specialized stroke clinic from January to March 2024. The research instrument used was the Indonesian version of the Stroke-Specific Quality of Life (SS-QoL) questionnaire, which has been validated. The reliability test of the SS-QoL resulted in a Cronbach's Alpha value of 0.920. Data analysis was conducted using a descriptive approach, including frequency distribution, percentage, standard deviation, and SS-QoL scale score distribution.

Results: The study found that the majority of stroke patients' quality of life was in the good category, amounting to 77.5%. The quality of life domain indicated that personality was the worst dimension (mean=3.13, SD=0.762), while family role, social role, mood, and energy were the best domains (mean=4.13, SD=0.766).

Conclusion: The quality of life of stroke patients undergoing outpatient treatment at the Neurology Clinic of South Aceh General Hospital is predominantly in the good category. Interventions focusing on personality aspects need to be enhanced to further improve patients' quality of life.

Keywords: Quality of Life, Stroke Patients, Stroke-Specific Quality of Life.

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Introduction

Stroke is a leading cause of disability and death worldwide.[1] It is one of the primary reasons for acute medical hospitalizations and a major contributor to mortality and poor health outcomes.[2] The impact of stroke on individuals' lives poses a significant challenge to society. The sudden occurrence of a stroke affects both individuals and their families, who are generally unprepared for the rehabilitation process or disabilities resulting from the condition. Consequently, many individuals are unable to work and require financial assistance following a stroke.[3]

Stroke can affect patients' lives in various aspects (physical, emotional, psychological, cognitive, and social). The level of physical and mental disability in post-stroke patients can influence their quality of life. Stroke is also a leading cause of functional impairment, with 20% of survivors still requiring institutional care after three months, and 15-30% of them experiencing permanent disabilities. In Indonesia, 55-60% of people with stroke symptoms suffer from moderate to severe disabilities, 25% die, and 10-15% survive. The functional impairments lead to a loss of productivity and substantial costs for rehabilitation care.[4]

According to the American Heart Association, in 2019, stroke accounted for about 1 in every 19 deaths in the United States. On average, in 2019, someone in the United States died of a stroke every 3 minutes and 30 seconds. Separate from other cardiovascular diseases, stroke ranked fifth among all causes of death in the United States, causing 150,005 deaths in 2019. In 2019, the age-adjusted US stroke mortality rate was 37.0 per 100,000, a 66% decrease from 2009, while the actual number of stroke deaths increased by 164% during the same period. In 2020, there were 7.08 million deaths from cerebrovascular diseases worldwide (3.48 million from ischemic stroke, 3.25 million from intracerebral hemorrhage, and 0.35 million from subarachnoid hemorrhage).[5]

The Worldwide, 12.2 million new strokes occur annually, equating to one stroke every 3 seconds, with 101 million people living with stroke—a figure that has nearly doubled over the last 30 years. One in four people will experience a stroke, a 50% increase over the past 17 years. In 2019, 63% of strokes occurred in people under the age of 70. Stroke is no longer a disease only affecting the elderly.[6]

Stroke cannot be completely cured. However, good management can alleviate the burden on patients, minimize disabilities, and reduce dependence on others. One way to manage stroke patients is by improving their self-management. Self-management includes several critical components such as the availability of information, treatment, problem-solving, and support[7].

Quality of life is the individual's perception of their position in life, in the context of the culture and value systems where they live, and in relation to their goals, expectations, standards, and concerns. It encompasses several aspects including physical, psychological, social, and environmental conditions in daily life. Issues encompassing quality of life are broad and complex, including physical health problems, psychological status, level of independence, social relationships, and the environment.[8]

Health-related quality of life for stroke survivors is low in the first six months, slightly improving at 12 months post-stroke.[1] Additionally, more severe stroke diagnoses and impaired body functions are associated with poorer quality of life.[3] Lower education levels are significantly linked to poorer health perceptions, one of the QoL domains, and this is the most influential QoL factor for post-stroke patients.[9] There is a correlation between respondents' age and evaluations of communication, ADL, mobility, manual skills, and social contact domains on quality of life.[10]

Quality of life also influences recovery rates. Poor quality of life affects the healing process, as quality of life is intrinsic to the individual. Conversely, better quality of life can expedite recovery and minimize the risk of recurrent strokes. Quality of life can be understood from the perspective of the individual's perceived position within the cultural or value system context and its relationship to their environment, cultural context, or value system. Personal goals, expectations, and other issues such as mobility, pain, psychology, distress, and anxiety significantly impact quality of life. These aspects can be measured and described as healthy conditions.[11]

Clinical manifestations can emerge from physical,

psychological, and social aspects, necessitating prompt and appropriate management during the rehabilitation phase, which impacts quality of life. Stroke patients with physical, cognitive, and social limitations may experience decreased quality of life. Assessing quality of life in post-stroke patients is crucial in clinical practice, research, clinical health policy, and program evaluation.[12]

Based on the literature review, this study aims to determine the quality of life among post-stroke patients at the Aceh Selatan Regional General Hospital, Indonesia.

Methods and Materials

This study is a descriptive research project. The sample size includes all post-stroke patients receiving outpatient care at the Neurology Clinic of RSUD dr. H. Yuliddin Away, Tapaktuan, South Aceh Regency, Indonesia, totaling 120 respondents. The quality of life measurement tool for stroke patients used in this study is the Indonesian version of the Stroke-Specific Quality of Life (SS-QoL-49 item) questionnaire. The SS-QoL questionnaire includes 12 domains: self-care (5 questions), mobility (6 questions), upper limb function (5 questions), language (5 questions), vision (3 questions), work/productivity (3 questions), thinking (3 questions), family role (3 questions), social role (5 questions), personality (3 questions), mood (5 questions), and energy (3 questions). The first six domains measure physical aspects, while the next six domains measure psychosocial aspects, with SS-QoL scores ranging from 49 to 245. A quality of life score is considered good if >156.87 (>63%) and poor if ≤156.87 (≤63%). The questionnaire's validity was tested using Spearman correlation, and the reliability test of the SS-QoL resulted in a Cronbach's Alpha value of 0.920.

Data collection was conducted using face-to-face interview methods at the specialized stroke clinic from January 30 to March 8, 2024. Respondents were interviewed personally using Indonesian and Acehnese languages. If respondents did not understand the questions, the researcher only clarified the questions without providing any information about the answers to each question. The entire research procedure adhered to applicable ethical research principles and received ethical clearance from the Universitas Syiah Kuala Research Ethics Committee with Number: 112004121223 before the research began. All respondents provided written informed consent.

Statistical analysis in this study was performed using a descriptive approach, analyzing frequency distribution values, percentages, and standard deviation of SS-QoL scale scores.

Results

The results of the study are presented in the following tables, highlighting the demographic characteristics of the respondents, the overall quality of life of stroke patients, and the dimensions of quality of life based on the SS-QoL questionnaire.

Table 1- Frequency Distribution of Respondent Characteristics (n=120)

Characteristic	Frequency	Percentage
Age		
Adult (18-45 years)	2	1,7
Pre-elderly (46-59 years)	65	54,2
Elderly (>60 years)	53	44,2
Gender		
Male	78	65,0
Female	42	35,0
Education		
Elementary School	51	42,5
Middle School	44	36,7
Higher Education	25	20,8
Occupation		
Civil Servant	6	5,0
Self-Employed	58	48,3
Fisherman	3	2,5
Farmer	10	8,3
Housewife	37	30,8
Unemployed	6	5,0

Based on the data in Table 1, it can be observed that among 120 respondents, the majority are pre-elderly (54.2%), with most respondents being male

(65.0%). The highest education level for the majority of respondents is elementary school (42.5%), and most respondents are Self-Employed(48.3%).

Table 2-Frequency Distribution of Stroke Patients' Quality of Life (n=120)

Quality of Life	Frequency	Percentage
Good Quality of Life	93	77,5
Poor Quality of Life	27	22,5

As shown in Table 2, the majority of the 120 respondents have a good quality of life (77.5%), while 22.5% have a poor quality of life.

Table 3: Descriptive Items of the SS-QOL Questionnaire

No	Quality of Life	Mean	SD	Min	Max
1	Self-care	4,01	0,680	3	5
2	Mobility	3,99	0,704	3	5
3	Upper Extremity Function	4,01	,692	3	5
4	Language	3,88	0,712	3	5
5	Vision	3,83	0,752	3	5
6	Work	3,99	0,704	3	5
7	Thinking	4,06	0,725	3	5
8	Family Role	4,13	0,766	3	5
9	Social Role	4,13	0,766	4	5
10	Personality	3,13	0,762	2	4
11	Mood	4,13	0,766	3	5
12	Energy	4,13	0,766	4	5
Total Score		47,42	8,795	37	59

Table 3 indicates that the personality domain is the worst dimension of quality of life (mean = 3.13, SD = 0.762), while family role, social role, mood, and energy are the best domains (mean = 4.13, SD = 0.766).

Discussion

Stroke is a cerebrovascular disorder that can cause loss of function in limbs, affecting patients' lives.[13] Quality of life encompasses physical health, psychology, freedom levels, social relationships, and environmental factors.[8]

Based on the results of the study, 77.5% of respondents have a good quality of life, with the dimensions of family roles, social roles, mood, and energy being the best experienced, with an average score of 4.13.

The findings in the dimensions of family roles, social roles, mood, and energy show better scores. This is due to strong family support, which provides patients with a sense of security and self-worth. Effective and continuous rehabilitation programs help patients develop new skills and enhance their physical and mental capabilities, contributing to better mood and energy levels. Adherence to medication and therapy plays an important role in managing symptoms and post-stroke complications, improving patients mood and energy levels.

Meanwhile, 22.5% of respondents have a poorer quality of life. According to the SS-QOL domain, the personality dimension is the worst experienced dimension of quality of life for stroke patients, with an average score of 3.13.

This can be explained by the fact that the impact of a poor personality can lead to individual changes affecting mood, anxiety, depression, and other emotional disturbances. Additionally, dependence

on others for daily activities post-stroke can result in feelings of helplessness and low self-esteem, further deteriorating the quality of personality. Social stigma and lack of support from family and friends also exacerbate the psychological condition of patients, leading to a decline in quality of life in the personality dimension.

The quality of life of people who have experienced a stroke significantly impacts various dimensions of their lives, including physical, psychological, social, role, and spiritual aspects. After experiencing a stroke, many patients face challenges in mobility and the ability to perform daily activities, which lowers their physical quality of life.[14] The quality of life of stroke patients can be measured using the 12 domains of the Stroke-Specific Quality of Life Scale (SS-QOL).[15]

Based on these findings, it can be seen that the quality of life of post-stroke patients is generally good. This suggests that patients with stroke issues can achieve a good quality of life as long as they live positively and have a strong belief in their efforts to improve their health. Thus, quality of life is an individual's perception of their position in life in the context of the culture and value systems in which they live and how it relates to their life goals, expectations, standards, and concerns. This includes several aspects such as physical, psychological, social, and environmental conditions in daily life. In this context, it can be stated that each individual has a different quality of life, depending on how they perceive it, whether positively or negatively.

A study conducted by West et al. in 2018 showed that patients with high trust or confidence in healthcare professionals, such as doctors and nurses, can increase their adherence to treatment, while low trust in healthcare professionals leads to non-compliance with treatment, thereby affecting their quality of life.[16] Individuals with good quality of life demonstrate a sense of confidence that their health depends on themselves. When they fall ill, they tend to blame themselves and strive to recover. Such individuals usually lead a healthy lifestyle and have high adherence to the treatment process, making health an important and responsible matter. Patients with high trust or confidence in healthcare professionals, such as doctors and nurses, can improve their adherence to treatment, while low trust in healthcare professionals leads to non-compliance with treatment, thus affecting their quality of life. High quality of life in each domain correlates with better daily physical activity levels. However, physical health and general health quality of life domains are significantly influenced by daily physical activity.[5]

Nurses play a critical role in the recovery process of stroke patients, particularly in the subacute phase, which spans from two weeks to six months post-stroke. During this phase, patients experience neurological and functional recovery. Nurses primary intervention goals include providing education and physical rehabilitation interventions to enhance independence, prevent complications, reduce stroke recurrence, and improve quality of life. Additionally, nurses offer education to patients and families, focusing on the importance of physical, psychological, emotional, cognitive, spiritual, and social care.

This study has several limitations that need to be considered. First, the study was conducted in only one hospital, limiting the generalizability of the findings to the population of stroke patients who may have different characteristics elsewhere. Second, the sample respondents included post-stroke patients from various age groups, genders, education levels, occupations, sociodemographic statuses, and diverse health conditions, making it difficult to achieve homogeneity in data analysis. Third, data collection was done through self-report methods, which may introduce subjectivity in the questionnaire responses from the respondents.

Conclusion

This study found that the majority of respondents have a good quality of life (77.5%), while 22.5% have a poor quality of life. Among the 12 domains of SS-QOL, personality is the worst dimension (mean = 3.13, SD = 0.762), whereas family role, social role, mood, and energy are the best (mean = 4.13, SD = 0.766).

Recommendations: This study recommends that stroke rehabilitation programs include emotional support such as counseling and support groups to improve physical and mental health. Future

research should explore the most effective types of family support. Additionally, it is important to involve respondents from various hospitals for more generalizable results.

Ethical Clearance: The research approval was given by the etchic committee of Nursing research (KEPK) Faculty of Nursing, Universitas Syiah Kuala with Number 112004121223.

Conflict of interest: The authors declare no conflicts of interest in this study

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