Nurse Media Journal of Nursing
e-ISSN: 2406-8799, p-ISSN: 2087-7811
https://medianers.undip.ac.id
15(2):227-238, August 2025
https://doi.org/10.14710/nmjn.v15i2.72471

ORIGINAL RESEARCH

Predictors of Stroke Survivors' Quality of Life During Home Rehabilitation: A Cross-Sectional Study

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Article Info

Article History:
Received: 16 April 2025
Revised: 27 August 2025
Accepted: 30 August 2025
Online: 31 August 2025

Keywords:
Home rehabilitation; stroke survivors; quality of life

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Abstract

Background: Stroke survivors face the challenge of living in a body that functions differently than before, which impacts their quality of life. Stroke rehabilitation is essential, as the principle of neuroplasticity supports recovery from disability, and this process continues when survivors undergo home-based rehabilitation. However, the factors influencing their quality of life remain unclear.
Purpose: This study aimed to investigate the predictors of stroke survivors' quality of life during home rehabilitation.
Methods: A cross-sectional study was conducted among 142 stroke survivors recruited using purposive sampling. Data were collected using the Stroke Specific Quality of Life (SS-QoL) questionnaire and an additional questionnaire assessing knowledge, attitudes, and practices related to home rehabilitation. Logistic regression was employed to examine predictors of stroke survivors' quality of life.
Results: Most respondents (59.15%) were men, with a mean age of 59.25 years (SD=10.5). Many stroke survivors had a high quality of life (n=92; 64.79%), good knowledge (n=114; 80.28%), positive attitudes (n=83; 58.5%), and a high level of home rehabilitation practice (n=89; 62.68%). Significant correlations were found between knowledge (p<0.001), attitude (p=0.040), and practice (p=0.001) with stroke survivors' quality of life.
Conclusion: This study indicates significant correlations between knowledge, attitudes, and practices related to home rehabilitation and stroke survivors' quality of life. These findings provide valuable insights for nurses, emphasizing the importance of structured health education on home-based rehabilitation to enhance stroke survivors' quality of life.

How to cite: Sapang, F. A. E. R., Baua, M. E., & Sandi, S. (2025). Predictors of stroke survivors' quality of life during home rehabilitation: A cross-sectional study. *Nurse Media Journal of Nursing, 15*(2), 227–238. https://doi.org/10.14710/nmjn.v15i2.72471

1. Introduction

A stroke is a brain attack that occurs when a blood vessel in the brain ruptures or when the blood supply to part of the brain is blocked (Donkor, 2018). According to Gillen (2016), a stroke develops when the vessel carrying oxygen and nutrients to the brain becomes obstructed by a clot or ruptures, leading to a sudden loss of neurological function. When this happens, part of the brain cannot receive the blood and oxygen it needs, leading to the death of brain cells. In either case, parts of the brain become damaged or die, causing brain damage, long-term disability, or even death (Acerra et al., 2019).

Globally, strokes affect 15 million people annually, resulting in 5 million deaths and an additional 5 million individuals living with permanent disabilities. According to the World Health Organization (WHO) (WHO, 2022), one in four people will experience a stroke during their lifetime. The global incidence of stroke is reported to be 6,552,724 cases, with approximately 6.5 million deaths each year. Furthermore, stroke-related mortality and disability lead to the loss of over 143 million years of healthy life annually (WHO, 2022).

Stroke remains the leading cause of disability in both developed and developing countries (Surapichpong et al., 2020). In Indonesia, it is the primary cause of both disability and mortality, accounting for 11.2% of total disability and 18.5% of total deaths. Data from the National Health

Insurance (JKN) program in 2022 show that stroke remains the third most prevalent condition in the country, with 2,536,620 cases. Additionally, 27 reported deaths occurred among pregnant women due to stroke (Ministry of Health, Republic of Indonesia, 2022)

In South Sulawesi Province, Indonesia, stroke prevalence was recorded at 10.6% in 2018, affecting 23,069 individuals. Notably, 38.3% of those affected were unable to control their condition despite seeking healthcare services. This represents a 50% increase from 2013 data, which reported 7 cases per 1,000 individuals, compared to 10.9 cases per 1,000 in 2018 (Ministry of Health, Republic of Indonesia, 2019). In 2022, stroke prevalence in South Sulawesi was 7.9% with 21,459 cases out of a population of 638,178. Among stroke survivors, 49.2% underwent regular check-ups, 26.8% participated in rehabilitation, and 24.1% did not receive any form of rehabilitation (Ministry of Health, Republic of Indonesia, 2022).

Disability-adjusted life-years lost among stroke survivors indicates the overall impact of mortality, incidence, and disability, and reflect both the severity of the stroke and the need for rehabilitation (Gillen, 2016). Furthermore, stroke survivors who experience disability will undergo rehabilitation, which focuses on recovery through the principle of neuroplasticity (Kennedy, 2021; Li et al., 2024). Rehabilitation for stroke patients is a long-term process requiring regular follow-up to verify the deeper impact of multilevel rehabilitation care on patients' long-term quality of life (QoL) (Qian et al., 2022). Disability has a profound effect on QoL in stroke (Khalid et al., 2016).

Other research on rehabilitation nursing shows that stroke rehabilitation for three to six months can improve physical function and result in better QoL than standard healthcare regimens (Cumming et al., 2019). Rehabilitation has been shown to improve the QoL (Handayani et al., 2022). Prior to the concept of neuroplasticity, many believed that post-stroke disabilities were permanent and irreversible (Prigatano et al., 2021). Therefore, it is crucial for stroke survivors to receive health education regarding self-management in rehabilitation to enhance their QoL (Li et al., 2021). Health education and promotion efforts should be encouraged to ensure that people understand the benefits of rehabilitation (Li et al., 2024).

Since stroke survivors often lack knowledge about home-based rehabilitation, this can also affect their attitudes to engage in rehabilitation (Yoshida et al., 2021). The lack of knowledge and practice may lead to complications such as decubitus ulcers, muscle stiffness, and shortness of breath, worsening the patient's condition and decreasing their QoL (Lim et al., 2021). Other studies have indicated that higher education levels positively influence stroke survivors' QoL, as this enhances their understanding of rehabilitation knowledge and practices (Bártlová et al., 2022). Previous research has also shown that older age and prolonged hospitalizations among stroke survivors are correlated with a deterioration in QoL (Segerdahl et al., 2023).

Stroke survivors' QoL is vital for motivating engagement in rehabilitation, which can facilitate physical recovery (Rintala et al., 2023). Thus, healthcare professionals should consider the predictors of stroke survivors' QoL, such as low education level, increased rehabilitation need, stroke severity, and medical history, when designing their programs and interventions (Dianati et al., 2021). These challenges hinder the implementation of home rehabilitation, leading to poor improvement in physical abilities, which in turn affects the QoL of stroke survivors (Poomalai et al., 2023). Stroke survivors who never participate in rehabilitation have a higher risk of having a low QoL compared to those who regularly engage in home rehabilitation (Khademian et al., 2019).

Furthermore, previous research has indicated that adherence to rehabilitation among stroke survivors in healthcare settings remains low; only 50% of stroke survivors adhere to regular rehabilitation (Fadlilah et al., 2019). The cost of rehabilitation, long waiting times for appointments, economic burdens, and other factors delay home-based treatment after stroke (Adigwe et al., 2022; Scheffler & Mash, 2020). The knowledge, attitudes, and practices of stroke survivors during the home rehabilitation phase play an essential role in stroke recovery (Cook & Pompon, 2023), as they are directly involved in making decisions about their rehabilitation (Adigwe et al., 2022). Appropriate nursing interventions are, therefore, needed to improve stroke survivors' QoL (Handayani et al., 2022). It is essential to analyze the factors that affect stroke survivors' QoL throughout the rehabilitation phase (Lumbantobing et al., 2025). However, despite the growing evidence on stroke rehabilitation, limited research has specifically explored the factors influencing stroke survivors' QoL during home-based rehabilitation, particularly in

relation to their knowledge, attitudes, and practices. This study aimed to investigate the factors influencing the QoL of stroke survivors during home rehabilitation.

2. Methods

2.1. Research design

A descriptive correlation design with a cross-sectional approach was used in this study to determine the predictors and relationships among the variables. Cross-sectional studies are observational research designs that examine demographic data at a particular point in time. They are frequently employed to quantify the frequency of health outcomes, understand health factors, and describe population characteristics (Wang & Cheng, 2020). This design was used to examine relationships among variables and identify predictors of stroke survivors' QoL.

2.2. Setting and samples

In this study, 142 stroke survivors were recruited at home between July and September 2023. The sample size was calculated using G*Power 3.1 with an a priori power analysis for multiple regression. The parameters included a significance level (α) of 0.05, an effect size (f^2) of 0.15 (medium category), a power ($1-\beta$) of 0.80, and a two-tailed test. The minimum required sample size was 142.

Purposive sampling was used to select participants who met the following inclusion criteria: post-stroke patients (stroke survivors) within the last 6 months who had been hospitalized with a medical diagnosis of stroke and were currently in the home-based rehabilitation phase, and had a Mini-Mental Status Examination (MMSE) score ≥17. The researcher used post-stroke medical record data from patients treated within the last 6 months at several hospitals in Makassar, Indonesia.

2.3. Measurement and data collection

Data collection was conducted at participants' homes, based on hospital records of stroke patients treated over the previous 1–6 months at several hospitals in Makassar. The participants completed closed-ended questionnaires. If a participant was unable to hold a writing instrument due to hemiparesis or hemiplegia, the researcher assisted by reading the questions aloud and recording the participant's responses. Demographic data were also collected (e.g., age, gender, stroke duration, and stroke type).

The short version of the Stroke Specific Quality of Life-12 item (SS-QoL-12) (Post et al., 2011) was used to assess the QoL of stroke survivors, covering self-care, mobility, upper extremity, language, vision, work, thinking, family roles, social roles, personality, mood, and energy. The SSQOL-12 consists of 12 questions, with a total score ranging from 12 to 60; higher scores indicate better QoL. Stroke survivors responded using a 5-point rating scale: (1) total help – could not do it all – strongly agree, (2) a lot of help - a lot of trouble – moderately agree, (3) some help – some trouble - neither agree nor disagree, (4) a little help – a little trouble – moderately disagree, and (5) no help needed – no trouble at all – strongly disagree (Fong et al., 2023). A total score ≤ 48 indicates low QoL, while a score > 48 indicates good QoL.

The validity and reliability of the SS-QoL-12 were tested in previous research among stroke survivors six months after stroke onset, showing a Cronbach alpha of 0.97 (Alotaibi et al., 2021). In this study, the Indonesian version of the SSQOL questionnaire, which had been tested for validity and reliability by Hadiati (2014), was used to assess QoL among stroke survivors. The overall reliability was 0.92 (Cronbach's alpha) and the intra-class correlation was 0.984, indicating an exceptionally high level of stability across repeated assessments (Hadiati, 2014).

Furthermore, to assess the levels of knowledge, attitudes, and practices (KAP) related to home-based rehabilitation among stroke survivors, a questionnaire developed by the researchers was used. To ensure content validity, six experts were recruited, including nurse specialists in stroke rehabilitation and nurses from stroke units in neurology departments of hospitals. The experts evaluated the questionnaire for content validity using the Content Validity Index (CVI) method. Each item was rated as relevant or not relevant to the intended construct using a dichotomous scale: 2 = relevant, 1 = not relevant. The Item-level Content Validity Index (I-CVI) was calculated for each item. Items with I-CVI ≥ 0.80 were accepted without revision; I-CVI between 0.60–0.79 were revised based on expert feedback; and I-CVI < 0.60 were discarded. The

experts' feedback, comments, and suggestions were carefully considered in refining the questionnaire. This iterative process was used to improve the clarity, relevance, and overall validity of the instrument before it was finalized for use in the study (Yusoff, 2019). A pilot test with 30 stroke survivors confirmed the questionnaire's reliability in measuring the research variables. Cronbach's alpha values ≥ 0.6 were considered acceptable (Kusuma, 2011).

The knowledge of home rehabilitation consisted of 16 items, with individual item-content validity index (I-CVI) scores ranging from 0.80 to 1.00, and the average system-level content validity index (S-CVI) calculated to be 100%. The Cronbach alpha value for the questionnaire assessing knowledge of home rehabilitation was 0.888, indicating acceptable reliability across 16 questions. The questionnaire used a Guttman scale with responses of true (2 points) or false (1 point). The total knowledge score ranged from 16 to 32; scores ≤ 24 indicate poor knowledge, and scores> 24 indicate good knowledge.

The attitude toward home rehabilitation questionnaire consisted of 18 items, with I-CVI scores ranging from 0.80 to 1.00 and an average system-level content validity index (S-CVI) of 100%. The Cronbach's alpha value was 0.950, indicating excellent reliability across 18 questions. The questionnaire used a 5-point Likert scale with response options: strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly agree (5). The total score ranged from 18 to 90, with a score ≤ 54 indicating a negative attitude, and a score > 54 or more indicating a positive attitude.

The practices of the home rehabilitation questionnaire consisted of 15 items, with individual I-CVI scores ranging from 0.80 to 1.00, and an average S-CVI of 98.30%. The Cronbach's alpha was 0.875, indicating acceptable reliability across 15 questions. The questionnaire used a 4-point Likert Scale with responses: never (1), sometimes (2), often (3), and always (4). The total score ranged from 15 to 60, with a score ≤ 67 indicating low practice, and a score > 67 indicating high practice.

2.4. Data analysis

The study aimed to identify predictors of stroke survivors' QoL and associated factors. Descriptive statistics were used to provide an overview of the object. Statistical analyses were performed using SPSS version 23.00 for Windows. The characteristics associated with QoL were examined using the Chi-square test with a 95% confidence interval. Predictors of QoL were identified using multivariable logistic regression analysis.

2.5. Ethical considerations

This study obtained ethical clearance from the Research Ethics Committee of Universitas Respati Yogyakarta (No. 0113.3/FIKES/PL/VI/2023). The study was conducted in accordance with the approved protocol. Informed consent was obtained from all participants prior to data collection.

3. Results

3.1. Stroke survivors' characteristics and variable frequency

The demographic characteristics of the respondents are shown in Table 1. In this study, 142 stroke survivors were in the adult group (30-60 years old), accounting for 57.04%, with a mean age of 59.25 years (SD=10.505). Most of the stroke survivors were male (59.15%). The majority had experienced strokes within the past 3-6 months (52.11%), with an average duration of 3.68 months (SD=1.885). Almost all stroke survivors had a non-hemorrhagic stroke (84.5%). On average, stroke survivors had high QoL (64.79%). The majority had good knowledge of home rehabilitation (73.24%), most had a positive attitude toward home rehabilitation (80.28%), and the majority demonstrated high levels of home rehabilitation practices (62.68%).

3.2. Relationship between knowledge, attitude, and practices of home rehabilitation with QoL

As shown in Table 2, based on the Chi-square test, stroke survivors' knowledge (p=0.000), attitude (p=0.040), and home rehabilitation practices (p=0.001) were significantly associated with stroke survivors' QoL.

3.3. Predictors of stroke survivors' QoL

In this study, variables with $p<0.25$, such as knowledge of home rehabilitation (p=0.000), attitude toward home rehabilitation (p=0.040), and practices of home rehabilitation (p=0.001), were included in the multivariate analysis. Table 3 shows that variables with $p>0.05$ were excluded from the model as they were not associated with stroke survivors' QoL. These variables included age (p=0.728), gender (p=0.271), stroke duration (p=584), and stroke type (p=0.902).

Table 1. Sociodemographic characteristics and variables frequency (n=142)

Characteristics/Parameters	f(%)	Mean	SD	Min-Max
Age (years)		59.25	10.505	30 - 86
Adult 30 - 60 years	81 (57.04)			
Elderly > 60 years	61 (42.96)			
Gender				
Male	84 (59.15)			
Female	58 (40.84)			
Length of Stroke		3.68	1.885	1 - 6
1 - 3 months	68 (47.89)			
> 3 - 6 months	74 (52.11)			
Type of Stroke				
Non-Hemorrhagic Stroke	120 (84.5)			
Hemorrhagic Stroke	22 (15.5)			
Knowledge of Home Rehabilitation				
Good	104 (73.24)			
Poor	38 (26.8)			
Attitude toward Home Rehabilitation				
Positive	114 (80.28)			
Negative	28 (19.72)			
Practice of Home Rehabilitation				
High	89 (62.68)			
Low	53 (37.32)			
QoL		35.80	8.910	18-56
High	92 (64.79)			
Low	50 (35.21)			

Table 2. Relationship between characteristics and variables with stroke survivors' QoL (n=142)

Characteristics/Parameters	Stroke Survivors' QoL		*P**
	Low	High	
	f(%)	f (%)	
Age			
Adult 30 - 60 years	30 (37.04)	51 (62.96)	0.728
Elderly > 60 years	20 (32.79)	41 (67.21)	
Gender			
Male	26 (30.95)	58 (69.05)	0.271
Female	24 (41.40)	34 (58.60)	
Length of Stroke			
≤ 3 months	26 (38.24)	42 (61.76)	0.584
> 3 - 6 months	24 (32.43)	50 (67.57)	
Type of Stroke			
Non-Hemorrhagic Stroke	42 (35.00)	78 (65.00)	0.902
Hemorrhagic Stroke	8 (36.36)	14 (63.64)	
Knowledge of Home Rehabilitation			
Poor	24 (63.16)	14 (36.84)	0.000
Good	26 (25.00)	78 (75.00)	
Attitude toward Home Rehabilitation			
Positive	35 (30.70)	79 (69.30)	0.040
Negative	15 (53.57)	13 (46.43)	
Practices of Home Rehabilitation			
High	22 (24.72)	67 (75.28)	0.001
Low	28 (52.83)	25 (47.17)	

Notes. *Chi-square test

A multivariate binary logistic analysis (Table 3) determined that knowledge of home rehabilitation (p=0.006) was the only significant predictor of stroke survivors' QoL. This study revealed that good knowledge of home rehabilitation was associated with a 3.807-fold higher likelihood of having a high QoL among stroke survivors (p<0.05). The analysis results in Table 3 indicate that the independent variables collectively explain 18.7% of the variance in stroke survivors' QoL.

Table 3. Multivariate binary logistic analysis results on the stroke survivors' QoL (n=142)

	Variables	Coefficient (B)	*p*	OR/HR (95%)CI	R^2
Step 1	Knowledge	1.337	0.006	3.807 (1.1464- 9.902)	
	Attitude	-0.033	0.951	0.968 (0.338 – 2.775)	0.187
	Practices	0.772	0.062	2.163 (0.963 – 4.857)	
	Constant	-2.836	0.003	0.059	

Notes. OR=Odds ratio, HR=Hazard ratio

4. Discussion

This study aimed to identify the factors influencing the quality of life (QoL) of stroke survivors undergoing home rehabilitation in Makassar, Indonesia. The findings indicate that a high level of knowledge is a significant predictor of higher QoL among stroke survivors.

Interestingly, age was not found to be significantly associated with stroke survivors' QoL, with the average age of participants being 59.25 years. This finding aligns with previous research suggesting that stroke survivors in this age group, as they transition from adulthood to old age, remain capable of fulfilling social and daily responsibilities (Choi et al., 2022). As such, experiencing a stroke at this age may not significantly disrupt their daily lives or their integration within the community, as reflected by their high QoL scores (Ramos-Lima et al., 2018). Similarly, gender was not related to stroke survivors' QoL in this study (Adigwe et al., 2024). This finding is supported by a previous study that found no significant differences in QoL between male and female stroke survivors (Bártlová et al., 2022).

The time since the stroke was also not found to be related to QoL in this study. This result echoes the findings of Oliveira-Kumakura et al. (2023), who highlighted that the lack of access to or delays in follow-up rehabilitation care for post-stroke survivors, particularly within the first six months post-stroke, can create barriers to their return to daily activities and participation in society. These barriers can, in turn, lead to a lower QoL. Additionally, stroke type was not significantly associated with QoL. This finding is consistent with research by Ellepola et al. (2022), which suggests that, while mortality and disability rates may vary by stroke type, they are influenced by the availability of various modern treatment options (Tsalta-Mladenov et al., 2020). It is similar to the other study, which found higher QoL only in the domains of mood and productivity (Alotaibi et al., 2021).

This study found a significant relationship between stroke survivors' knowledge of home rehabilitation and their QoL. This finding is consistent with previous research, which has shown that a lower level of knowledge is significantly associated with reduced QoL among stroke survivors (Martini et al., 2022). Specifically, a better understanding of home rehabilitation practices appears to positively impact the QoL of stroke survivors (Adigwe et al., 2022). Having adequate knowledge of stroke management improves QoL and reduces the lack of understanding of home rehabilitation (Tiwari et al., 2021). This is particularly important in the early stages following a stroke, as survivors with a strong grasp of home rehabilitation practices can enhance their physical, social, and emotional well-being. Understanding the benefits of post-stroke care fosters hope for the recovery of lost body functions, especially within the critical first 3-6 months after the stroke (Carey et al., 2019). These findings align with previous research by Kosasih et al. (2020), which demonstrated that stroke survivors who are aware of specific, structured exercises to perform at home show significant improvements in their QoL. Other studies found that stroke survivors experience challenges in physical, social, and emotional well-being that impact their QoL (Garrett-Jones et al., 2019; Martini et al., 2022).

This study found a significant relationship between stroke survivors' attitudes and their QoL. The positive attitude of stroke survivors toward physical therapy and rehabilitation is crucial for

improving their QoL. Survivors who actively engage in physical therapy, either at home or in a healthcare facility, are more likely to experience better functional recovery and overall well-being (Sandlund et al., 2024), which, in turn, improves their QoL. These findings are consistent with the work of Purnamawati et al. (2020), who demonstrated that stroke survivors with a proactive attitude toward rehabilitation and a desire to return to their pre-stroke level of functioning tend to report higher QoL. However, when stroke survivors lack motivation and experience feelings of depression or helplessness due to physical limitations, their willingness to engage in rehabilitation exercises may diminish, leading to lower QoL (Cheong et al., 2021). Thus, the role of attitude in rehabilitation is central not only to the physical recovery process but also to psychological well-being. This study also aligns with Waewwab et al. (2022), who found that a positive attitude significantly impacts QoL by improving mood and subjective norms. In this context, a positive attitude increases the likelihood that individuals will engage in behaviors that promote recovery. When stroke survivors maintain an optimistic outlook and remain committed to their rehabilitation efforts, their psychological resilience is strengthened, thereby contributing to a higher QoL. Tsiakiri et al. (2023) similarly emphasized that a constructive attitude fosters adaptive coping mechanisms, helping individuals better accept their condition and strive for improvement.

This study also revealed a significant relationship between stroke survivors' practices of home rehabilitation and their QoL. These findings align with previous research by Bártlová et al. (2022), which found that stroke survivors who engage in regular home rehabilitation exercises, such as physical activity, experience improved QoL (Wong et al., 2021). Active participation in structured rehabilitation programs not only helps survivors restore functional abilities but also plays a key role in preventing recurrent strokes, ultimately improving QoL (Muhith & Magfirah, 2024). Regular, routine exercise as part of home rehabilitation has been shown to improve body function and enhance overall QoL (Studnicki et al., 2024). Further supporting these findings, Mameletzi et al. (2021) demonstrated that high-intensity aerobic exercise during home rehabilitation optimally enhances physical performance and QoL, provided there is high adherence to the prescribed exercise regimen. This suggests that tailored rehabilitation programs that meet the individual needs of each stroke survivor can be pivotal in improving their QoL. Such programs have also been shown to reduce post-stroke depression, especially within three months after stroke onset (Handayani et al., 2021).

The predictor of stroke survivors' QoL is knowledge of home rehabilitation. This study emphasizes that stroke survivors who are informed about the benefits of home rehabilitation tend to engage more actively in their rehabilitation programs. This knowledge enables them to practice rehabilitation exercises effectively, which, in turn, helps restore functional abilities such as preparing their own meals, reducing their dependency on others, and resuming prior activities (Rhestifujiayani et al., 2015). Moreover, research by Klockar et al. (2023) underscores that within 3-6 months post-stroke, stroke survivors who are knowledgeable about rehabilitation show significant improvement in physical function.

The importance of knowledge in stroke survivors' QoL is also evident in studies by Marín-Medina et al. (2024), who found that consistent and structured practice of rehabilitation exercises, informed by a strong understanding of their benefits, directly improves QoL. The findings of this study align with those of Rosa et al. (2023), who found that inadequate knowledge of how to implement rehabilitation practices significantly hampers recovery, prolonging the rehabilitation process and reducing functional recovery. In addition, the research by Chau et al. (2022) further supports the notion that limited knowledge regarding physical exercises during the rehabilitation phase can severely impact QoL. When stroke survivors lack this knowledge, they are less likely to engage in the necessary exercises, which becomes a major predictor of low QoL in this population. The evidence strongly suggests that improving stroke survivors' knowledge of home rehabilitation and fostering their active participation in structured exercises are critical for enhancing their QoL. Therefore, providing comprehensive information and guidance about rehabilitation practices should be a central focus in post-stroke care, particularly during the critical early months of recovery.

5. Implications and limitations

The findings of this study indicated that some factors identified as predictors of stroke survivors' QoL include knowledge and practices related to home rehabilitation. Hence, the role of nurses in providing education and training for at-home stroke care is indispensable, from hospitalization onward and into the community. Post-stroke home rehabilitation aims to enhance the physical well-being of stroke survivors and prevent further strokes and their complications. The rehabilitation phase, particularly the first 3–6 months after stroke, is crucial for performing exercises designed to prevent another stroke, lessen disability, and ultimately improve the QoL of stroke survivors.

The limitation of this study was that it was conducted by visiting a small proportion of stroke survivors in the rehabilitation phase at their homes, which could introduce bias and limit the generalizability of the findings to other populations or regions outside Makassar, South Sulawesi, Indonesia. Future studies should include larger and more diverse samples across multiple regions or healthcare settings to improve representativeness and generalizability. They might also use random sampling or multicenter designs to minimize bias.

6. Conclusion

Most adult stroke survivors had high QoL. Some factors, known as predictors of QoL, included knowledge and practices related to home rehabilitation. Nurses need to make efforts to increase stroke survivors' knowledge about home rehabilitation by providing health information about exercise in the rehabilitation phase in a structured manner while patients are still hospitalized. Moreover, community nurses play an important role in following up on stroke survivors' conditions, especially those who have obstacles to attending hospital-based rehabilitation. Exercise programs in the rehabilitation phase are critical, especially in the first 3-6 months after the first stroke attack, which is the golden period for rehabilitation to trigger neuroplasticity and achieve recovery with reduced disability.

Acknowledgments

The authors would like to thank Sekolah Tinggi Ilmu Kesehatan Stella Maris Makassar for funding this study.

Author contribution

Each author made a significant contribution to the study. FARES wrote the first draft of the manuscript after gathering, organizing, analyzing, and interpreting data. MEB examined and revised the final text of the manuscript. SS was responsible for review, editing, and methodology. Each author was responsible for the manuscript's content and similarity index.

Conflict of interest

No conflict of interest was declared by any of the authors.

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