

ORIGINAL RESEARCH

**RELATIONSHIP BETWEEN FAMILY SUPPORT AND FUNCTIONAL INDEPENDENCE IN POST-STROKE ELDERLY PATIENTS**

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Article Info	Abstract
<p>Article History: Received: 15 Desember 2025 Revised: 05 Feb 2026 Accepted: 09 Februari 2026 Online: 09 Februari 2026</p> <p>Keywords: Family support, activities of daily living, elderly, post-stroke</p> <p>Cooresponding Author: Nurjannah Email: nurjannahje@gmail.com</p>	<p><b>Background:</b> Stroke is one of the leading causes of disability among the elderly and frequently results in limitations in performing activities of daily living (ADL). In post-stroke management, the condition of caregivers, particularly the burden they experience, may be associated with the functional ability of elderly patients. This issue is especially relevant in tertiary hospital settings in Indonesia, where long-term care and rehabilitation often rely heavily on family caregivers.</p> <p><b>Purpose:</b> This study aimed to examine the association between caregiver burden and the ability to perform activities of daily living among elderly post-stroke patients treated at a tertiary hospital in Indonesia in 2025.</p> <p><b>Methods:</b> A quantitative correlational analytic study with a cross-sectional design was conducted. The study population consisted of 85 elderly post-stroke patients receiving physiotherapy services, from which 33 respondents were selected based on inclusion and exclusion criteria. Caregiver burden was measured using the Caregiver Reaction Assessment (CRA), while ADL ability was assessed using the Barthel Index. Due to the presence of expected cell counts below the acceptable threshold, an alternative association test was applied instead of the Chi-Square test. Data analysis was performed using SPSS version 26.</p> <p><b>Results:</b> The findings indicated that 75.7% of respondents experienced high caregiver burden, while 24.3% reported moderate burden. Most elderly post-stroke patients showed moderate dependency in ADL performance (45.5%). Statistical analysis revealed a significant association between caregiver burden and ADL ability (<math>p = 0.002</math>; <math>p &lt; 0.05</math>).</p> <p><b>Conclusion:</b> Caregiver burden was significantly associated with the ability to perform activities of daily living among elderly post-stroke patients. However, causal relationships cannot be inferred due to the cross-sectional nature of the study.</p>

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**1. Pendahuluan / Introduction**

According to the World Health Organization (WHO, 2022), older adults are individuals aged 60 years and above. The elderly stage is the final phase of the human life cycle, characterized by a decline in physical capacity due to reduced physiological reserves, where a previously healthy adult becomes more vulnerable. With increasing

age, older adults undergo degenerative processes that include physical, psychological, cognitive, and social changes, all of which influence their spiritual needs. Such deterioration not only affects spiritual fulfillment but also impacts the quality of life of the elderly (Rachmawati, 2023).

Aging is an inevitable process experienced by every individual. It represents a developmental stage in which a person enters the age of 60 years or more (Putri, 2021). During this stage, metabolic changes in the body contribute to decreased ability to perform daily activities. According to Yasmina et al. (2021), aging is associated with changes such as physical decline, psychological shifts, cognitive impairment, and functional deterioration. These changes may lead to reduced social interaction, lowered self-esteem, and an increased risk of health problems.

One of the most common diseases among the elderly is stroke, a neurological disorder caused by impaired cerebral blood flow. It can occur suddenly (within seconds) or rapidly (within hours), resulting in neurological symptoms corresponding to the affected brain region. Hemorrhagic stroke occurs when a blood vessel ruptures in the brain, while ischemic stroke is primarily caused by thrombosis or embolic occlusion (Shani & Ali, 2022).

The World Health Organization (WHO) reported that in 2018, approximately 7.75 million people died annually due to stroke. Currently, there are around 101 million stroke patients worldwide, and this number is projected to rise each year. In Southeast Asia, 4.4 million individuals are affected by stroke. According to the 2023 Indonesian Health Survey, the prevalence of stroke in Indonesia is 8.3 per 1,000 population. Stroke is also classified as one of the leading catastrophic diseases with the third-highest healthcare expenditure after cardiovascular disease and cancer, costing approximately IDR 5.2 trillion (Ministry of Health RI, 2024).

In South Sumatra, an estimated 800 new stroke cases occur annually. RSMH Palembang reported that between 2017 and 2021, 2,100 stroke patients sought treatment, with about 60% belonging to the productive age group of 45–65 years (RSMH, 2023). Stroke is associated with various modifiable risk factors such as hypertension, diabetes mellitus, cardiovascular disease, hypercholesterolemia, smoking, and alcohol consumption, as well as non-modifiable factors including age, sex, and ethnicity (Utama & Nainggolan, 2022).

Recovery from stroke is often prolonged, with outcomes ranging from full recovery to mild, moderate, or severe disability (Mulyani & Darussalam, 2023). These consequences often result in dependence on others for performing activities of daily living (ADLs) (Purwati et al., 2022). The recovery process for stroke patients begins within the family environment, where encouragement and emotional support are crucial to prevent patients from losing hope (Darma & Husada, 2021).

Family support plays a vital role in providing both physical and psychological comfort to family members during illness (Mihen et al., 2022). The quality of family support directly influences the ability of stroke patients to carry out ADLs. Family support can be expressed through emotional, appraisal, instrumental, and informational assistance (Fiscarina et al., 2023). Emotional support may involve reminding patients to manage anger; appraisal support includes offering positive reinforcement and motivation; instrumental support encompasses financial assistance and accompanying patients to medical check-ups; while informational support includes reminders to attend routine care and sharing relevant health information (Nuriyah et al., 2023).

Activities of Daily Living (ADLs) refer to the essential abilities required for self-care. ADLs are categorized into basic and instrumental ADLs. Basic ADLs involve fundamental physical needs such as personal hygiene, dressing, toileting, mobility, and eating, while instrumental ADLs are more complex activities necessary for independent living in the community, such as managing finances and medications, preparing meals, housekeeping, and laundry. Limitations in ADLs may result from musculoskeletal, neurological, circulatory, or sensory impairments, which reduce physical function, as well as cognitive decline, leading to compromised independence and reduced quality of life (Edemekong et al., 2023).

RSUD Siti Fatimah, a regional referral hospital in South Sumatra, reports a high incidence of stroke cases. Based on hospital medical records, 85 stroke patients underwent physiotherapy in the last three months. A field survey conducted on April 8, 2025, through interviews with eight stroke patients in the physiotherapy unit revealed that five patients reported significant difficulty in performing daily activities and often required assistance. Their families expressed challenges in providing consistent care due to work obligations. Meanwhile, three other patients indicated that they were able to perform daily tasks such as eating and walking with assistive devices, adhered to treatment regimens, and expressed hope for recovery. Their families consistently provided emotional encouragement, financial support, caregiving, and assistance in daily activities.

## **2. Metode / Methods**

### **2.1. Research design**

This study employed a quantitative research design with a correlational analytic approach using a cross-sectional method. Correlational research aims to identify and describe the relationship between variables, referring to the tendency that variations in one variable are accompanied by variations in another. The cross-sectional approach emphasizes the measurement or observation of both independent and dependent variables at a single point in time.

### **2.2. Setting and samples**

This study was conducted in the physiotherapy unit of Siti Fatimah General Hospital, Palembang, in May 2025. The study population consisted of all elderly post-stroke patients who attended physiotherapy in the hospital during the last three months, totaling 85 individuals. From this population, a sample of 33 elderly post-stroke patients was selected for the study.

The sample was determined based on inclusion and exclusion criteria. The inclusion criteria were defined as the characteristics required of each member of the population to be included in the sample (Notoatmodjo, 2022). The inclusion criteria of this study were: having mobility or transfer limitations, willingness to participate as respondents, ability to communicate verbally, willingness to provide informed consent, aged 45–74 years, screening results of ADL showing moderate dependency (scores 12–19), mild post-stroke condition, living with family, and muscle strength graded between 3 and 5.

The exclusion criteria were defined as characteristics that disqualified members of the population from being included in the sample (Notoatmodjo, 2022). The exclusion criteria of this study were: post-stroke patients who suddenly became ill or withdrew during the study, patients who were not cared for by family or were fully

independent in daily activities, patients living alone without family support, and patients cared for by nurses or non-family caregivers.

### 2.3. *Measurement and data collection*

The research instrument used in this study was a questionnaire. A questionnaire is a formal data collection tool in which subjects provide written responses to questions (Nursalam, 2020). Two instruments were employed in this study, namely the Barthel Index questionnaire and the Caregiver Reaction Assessment (CRA) questionnaire, which had previously been used in research conducted by Siti Mulyani and Miftau Darussalam (2023). Data collection began with demographic information of the respondents, including identification codes, age, education level, occupation, and duration of caregiving for post-stroke patients.

The Barthel Index questionnaire, originally developed by Mahoney and Barthel (1965) and later modified by Collin et al., was used to measure the level of dependence in Activities of Daily Living (ADLs). The Barthel Index is highly reliable, practical, and sensitive, with a reported validity of  $r > 0.4438$  and reliability coefficient of 0.884. It consists of 10 items with the following interpretation: a score of 0–4 indicates total dependence; 5–8 indicates severe dependence; 9–10 indicates moderate dependence; 12–19 indicates mild dependence; and a score of 20 indicates independence. Higher scores reflect lower dependency in post-stroke patients (Mahoney, 1965).

The Caregiver Reaction Assessment (CRA) questionnaire, formulated by Kelly A. O'Malley et al. (2017), was used to assess the level of caregiver burden. The CRA has been tested with a validity of  $r > 0.182$  and a Cronbach's Alpha reliability coefficient of 0.761. The questionnaire consists of 50 items with the following interpretation: scores of 61–88 indicate severe burden; 41–60 indicate moderate burden; 21–40 indicate mild burden; and scores below 21 indicate minimal burden. Higher scores indicate greater caregiver burden (O'Malley & Qualls, 2017).

The data collection procedure was conducted from May 14, 2025, to May 28, 2025. The research process began with the preparation of the undergraduate thesis proposal, which was subsequently presented at the proposal seminar of the Bachelor of Nursing Program at Mitra Adiguna Palembang. Following this, the researcher obtained ethical clearance and submitted a request to the study program for a recommendation letter. The recommendation letter was forwarded to the Head of the National Unity and Political Agency of Palembang City, the Palembang City Health Office, and finally to Siti Fatimah General Hospital.

On May 10, 2025, the researcher visited the physiotherapy unit of Siti Fatimah General Hospital to obtain permission from the head of the unit to conduct the study. On May 14, 2025, prior to data collection, the researcher provided an explanation to the respondents regarding the purpose of the study and its potential implications. The researcher then re-screened the 33 participants to ensure they met the inclusion and exclusion criteria. All respondents fulfilled the criteria, and therefore none were excluded from the study.

The researcher also explained the informed consent process, emphasizing that participation was voluntary and without coercion. Respondents who agreed signed the informed consent form, while those unwilling were not required to sign. All 33 respondents voluntarily consented to participate. Data collection was carried out by distributing the questionnaires between May 14 and May 18, 2025. At the end of the

process, the researcher provided compensation as an appreciation for the respondents' willingness to participate.

#### 2.4 *Data analysis*

Univariate analysis was performed to describe and explain each variable under study. The data were processed and analyzed to present the distribution of research variables in frequency tables along with percentages. Each variable was presented in tabular form and interpreted based on the findings. The categorical data, such as family support, were analyzed in relation to demographic characteristics of post-stroke patients including age, gender, education level, and occupation. Univariate analysis also allowed the researcher to examine the explanatory strength of individual study variables by calculating the mean and standard deviation. The results were transformed into frequency tables and analyzed using table-based statistical analysis with the Statistical Package for the Social Sciences (SPSS) version 26.

Bivariate analysis was carried out to assess the relationship between the independent and dependent variables. This analysis employed the Chi-square Crosstab 2x3 statistical test with a significance level of  $\alpha = 0.05$ . The analysis was conducted using SPSS version 26, comparing the alpha value with the p-value obtained from the statistical output to determine the significance of the relationship.

#### 2.5 *Ethical considerations*

Ethical issues in nursing research are highly important, as this field directly involves human participants; therefore, ethical principles must be carefully observed. According to Hidayat (2019), several key ethical aspects should be addressed in this study. First, informed consent was obtained by providing respondents with a clear explanation of the study's objectives and procedures prior to distributing the questionnaires. Participation was entirely voluntary, and respondents who agreed to take part signed a consent form as proof of willingness, without any coercion. Second, anonymity was ensured by not including participants' names on data collection sheets, instead assigning codes to maintain their identity. Third, confidentiality was guaranteed by keeping all information provided by participants secure and private. Fourth, privacy was respected by ensuring that the research did not intrude beyond necessary limits, allowing participants to maintain personal boundaries throughout the study. Fifth, the principle of beneficence was upheld by respecting the dignity of respondents and making every effort to maintain their well-being, while providing comfort and minimizing potential harm. Sixth, the principle of non-maleficence was observed by avoiding any actions that might worsen participants' conditions and by ensuring that the least risky approach was chosen for those undergoing care. Lastly, justice was applied by treating all respondents equally and fairly, regardless of differences in socioeconomic status, political views, religion, nationality, or social position, to ensure their comfort and well-being.

### 3. **Hasil / Results**

This study examines the relationship between family support and the ability to perform daily activities among post-stroke elderly patients at Siti Fatimah General Hospital Palembang in 2025. Primary data were collected directly from respondents using structured questionnaires, based on predetermined inclusion and exclusion criteria. A univariate analysis was conducted to describe the characteristics of the

respondents in detail. The univariate results present the distribution of respondents' characteristics in terms of age, gender, educational level, and occupation, which are displayed in frequency and percentage tables. The presentation of this data aims to provide a general overview of the respondents' profiles, serving as a foundation for further analysis of the relationship between family support and the ability to perform daily activities among post-stroke elderly patients.

### 3.1. Demographic characteristics of the respondents

Table 1 shows that out of 33 respondents, the majority were male, with 20 respondents (60.6%), while 13 respondents (39.3%) were female. The largest age group was 56–65 years, with 18 respondents (54.5%), while the smallest age group was 35–45 years, with 5 respondents (15.1%). In terms of employment status, 11 respondents (33.3%) were employed, while 22 respondents (66.6%) were unemployed. Regarding education level, the majority of respondents had completed senior high school, with 20 respondents (60.6%), while the smallest proportion had attained higher education, with 6 respondents (18.1%).

**Table 1.** Frequency Distribution by Gender, Age, Occupation, and Education of Post-Stroke Patients at Siti Fatimah General Hospital Palembang (n=33).

Characteristics	Frequency (n)	Percentage (%)
Gender		
Female	13	39.3
Male	20	60.6
Age (years)		
45–55	5	15.1
56–65	18	54.5
>65	10	30.3
Occupation		
Employed	11	33.3
Unemployed	22	66.6
Education		
Elementary School	2	6.0
Junior High School	5	15.1
Senior High School	20	60.6
Higher Education	6	18.1

Source: Primary Data, 2025

### 3.2. Family Support among Post-Stroke Elderly Patients

Table 2 shows that out of 33 respondents, the majority reported a high level of family support, with 25 respondents (75.7%), while 8 respondents (24.2%) reported a moderate level of family support.

**Table 2.** Frequency Distribution of Family Support among Post-Stroke Patients at Siti Fatimah General Hospital Palembang

Family Support	Frequency (n)	Percentage (%)
High	25	75.7
Moderate	8	24.2
Total	33	100

Source: Primary Data, 2025

### 3.3. Activities of Daily Living (ADL) among Post-Stroke Patients

Table 3 shows that out of 33 respondents, 15 respondents (45.5%) had a moderate level of dependence in performing activities of daily living. Meanwhile, only 1 respondent (3.0%) was classified as having total dependence.

**Table 3.** Distribution of Respondents Based on Activities of Daily Living (ADL) Among Stroke Patients at Siti Fatimah Hospital Palembang (n=33)

ADL Fulfillment	Frequency (n)	Percentage (%)
Independent	2	6.0
Mild Dependence	10	30.3
Moderate Dependence	15	45.5
Severe Dependence	5	15.1
Total Dependence	1	3.0
Total	33	100

Source: Primary Data, 2025

### 3.4. Bivariate Analysis Results

Bivariate analysis was conducted to examine the relationship between family support and the level of ability to perform activities of daily living (ADL) among post-stroke elderly patients at Siti Fatimah Hospital Palembang. The statistical test used was the Chi-Square test with a significance level of  $\alpha = 0.05$ . The analysis compared the distribution of family support categories (high and moderate) with the levels of ADL dependence (independent, mild dependence, moderate dependence, severe dependence, and total dependence). The results of this bivariate analysis are presented in the following table.

**Table 4.** The Relationship Between Family Support and the Ability to Perform Activities of Daily Living (ADL) Among Post-Stroke Elderly Patients at Siti Fatimah Hospital Palembang in 2025 (n=33)

Family Support	Independent–Mild Dependence		Moderate–Total Dependence		Total	p-value
	n	%	n	%		
High	12	48	13	52	25	0,002
Moderate	0	0	8	100	8	
Total	12	36.4	21	63.6	33	

Based on Table 4, among the 25 respondents with high family support, the majority were at the moderate dependence level (52.0%) and mild dependence level (40.0%), while only 8.0% were independent, and none experienced severe or total dependence. Conversely, among the 8 respondents with moderate family support, most were at the severe dependence level (62.5%), followed by moderate dependence (25.0%) and total dependence (12.5%). The Chi-Square test results showed a p-value = 0.002 ( $p < 0.05$ ), indicating a significant relationship between family support and the ability to perform activities of daily living (ADL) among post-stroke elderly patients at Siti Fatimah Hospital Palembang in 2025.

## 4. Pembahasan / Discussion

Based on the results of the study, it was found that the majority of respondents were male, totaling 20 individuals (60.6%), compared to 13 females (39.3%). This finding is consistent with the Epidemiological Theory of Stroke, which often highlights variations in incidence between genders. Several studies have reported that men have a higher risk of stroke, particularly at younger ages, although this trend may reverse in

older populations. These results are also in line with the study by Dewi and Lestari (2020) published in the Jurnal Kesehatan Komunitas, which reported a predominance of male stroke patients in certain healthcare facilities. The researchers assume that the higher proportion of male respondents at Siti Fatimah Hospital Palembang in 2025 may reflect differences in stroke risk factors, healthcare-seeking behavior, or even levels of awareness regarding stroke symptoms between men and women in the Palembang region.

The findings showed that the largest age group was between 56–65 years, consisting of 18 respondents (54.5%). This group was followed by those aged >65 years with 10 respondents (30.3%), and the lowest proportion was in the 45–55 years age group, with 5 respondents (15.1%). These results are consistent with the Biological Theories of Aging (AFAR, 2011), which state that the risk of chronic diseases such as stroke increases with age due to cellular degeneration, decreased vascular elasticity, and the accumulation of risk factors. The 56–65 age range represents a critical period in which the clinical manifestations of aging processes and stroke risk factors become more apparent. This finding is also in agreement with Wulandari and Puspita (2019) in the Jurnal Sains Kesehatan, which consistently demonstrated that the elderly age group, particularly between 50–70 years, had the highest incidence of stroke. The researchers assume that although elderly individuals aged 56–65 years may experience stroke, they still possess better rehabilitation potential compared to much older groups, thus making family support in improving ADL particularly important for this group.

The study found that most respondents were unemployed, with 22 individuals (66.6%), while 11 respondents (33.3%) were employed. This finding can be related to Social Role Theory, which posits that individuals fulfill various roles in society, and the inability to carry out work roles due to stroke can result in psychological and social consequences. Although occupation is not directly associated with the pathophysiology of stroke, it may influence lifestyle, stress levels, and access to healthcare services, thereby indirectly contributing to stroke risk or recovery. This finding is also consistent with the study by Pratama and Indrawati (2021) in the Jurnal Gizi dan Kesehatan, which, although not specifically focusing on occupation as a stroke risk factor, often identifies occupation as an important demographic characteristic in understanding patients' socioeconomic backgrounds. The researchers assume that previous occupations, especially those involving non-physical or high-stress activities, may affect vulnerability to stroke. Furthermore, occupational status (e.g., retired or housewife) may also influence the availability of family time and resources to provide necessary support during post-stroke recovery.

The findings revealed that most respondents had a senior high school education (SMA), with 20 respondents (60.6%), while the lowest was respondents with a university education, totaling 6 (18.1%). These findings align with Human Capital Theory, which emphasizes that education level contributes to individual "capital," including health literacy and the ability to understand complex information (Nafukho, Hairston, & Brooks, 2004). Individuals with higher education levels are generally better able to comprehend health conditions, adhere to treatment regimens, and access relevant healthcare resources (Ancok, 2008). This is consistent with the findings of Saputra and Cahyani (2018) in the Jurnal Keperawatan Klinis dan Komunitas, which demonstrated that higher education is often positively correlated with better knowledge about diseases and their management. The researchers assume that the predominance of respondents with a senior high school education suggests that most participants

possessed adequate understanding to complete the questionnaire, and that this educational background may influence how they comprehend rehabilitation instructions and the importance of family support.

These findings strongly align with Family Systems Theory, developed by Murray Bowen, which emphasizes that the family is an interconnected emotional unit, in which a health crisis in one member (such as post-stroke elderly patients) automatically activates responses and support from other family members to maintain balance and system functioning (Nichols, 2017). This is also supported by the study of Astuti and Lestari (2022), which found that most stroke patients reported receiving high family support, indicating that families serve as an essential resource for patients. The researchers assume that the high level of family support reflects the cultural values of Palembang society, which continues to uphold strong kinship and caregiving traditions, leading to proactive family involvement in the care and recovery of post-stroke elderly patients.

The results are consistent with the Self-Care Deficit Theory developed by Dorothea Orem (2001), which explains that self-care deficits occur when an individual's capacity to perform self-care activities is inadequate to meet personal needs, thus requiring assistance. Among post-stroke elderly patients, brain damage may cause functional deficits that necessitate varying levels of support in performing ADLs. This finding is also supported by Setiawan and Nurjanah (2021), who reported that most post-stroke patients experienced mild to moderate dependency in ADLs, suggesting that although recovery occurs, many still require assistance. The researchers assume that the predominance of moderate dependence levels indicates that post-stroke elderly patients in this sample are in a recovery phase requiring partial assistance, underscoring the importance of caregiving and continued rehabilitation to achieve greater independence.

The bivariate analysis in this study examined the relationship between family support and the ability to perform activities of daily living (ADL) among elderly post-stroke patients at Siti Fatimah Hospital Palembang. Based on the results of the Chi-Square test, the study showed a p-value = 0.002 ( $p < 0.05$ ). This statistically demonstrates that there is a significant relationship between family support and the level of ability to carry out ADLs among elderly post-stroke patients at Siti Fatimah Hospital Palembang in 2025.

This finding is strongly aligned with Social Support Theory, which explains that social support received by individuals from their social network (particularly family) serves as a buffer against stress and helps individuals cope with health challenges. In the post-stroke context, strong family support provides essential resources—emotional (motivation, reducing anxiety), instrumental (physical assistance with ADLs, transportation), and informational (knowledge regarding care and rehabilitation) (Sarafino & Smith, 2011).

The availability of such support directly facilitates the rehabilitation process, enhances treatment adherence, and ultimately promotes improvement in functional ability and independence in ADLs. Conversely, individuals with inadequate family support tend to face greater barriers in recovery, which can exacerbate their level of dependency.

This result is also consistent with the findings of Wijaya and Permata (2023) published in the Jurnal Kesehatan Masyarakat, which reported a strong positive relationship between family support and increased ADL independence among stroke

patients. Similarly, Sari and Putra (2020) in the Jurnal Medika Nusantara also consistently identified family support as one of the main predictors of functional independence in stroke patients.

The researchers assume that at Siti Fatimah Hospital Palembang, family support is not merely a passive presence but an active factor that directly influences the ability of post-stroke patients to practice and regain mastery of their daily activities. Families act as caregivers, motivators, and facilitators throughout the recovery process. High levels of family support minimize the risk of patients becoming highly dependent, whereas insufficient support may accelerate functional decline and result in more severe dependency. Therefore, involving families in every aspect of care and rehabilitation is crucial to optimize functional recovery in elderly post-stroke patients.

## 5. Conclusion

This study demonstrated a significant relationship between family support and the ability to perform activities of daily living (ADL) among elderly post-stroke patients at Siti Fatimah Hospital Palembang in 2025. The results revealed that respondents with higher family support tended to achieve greater independence in ADLs, while those with lower family support were more likely to experience higher levels of dependency. These findings highlight the crucial role of family support as an essential factor in the rehabilitation and recovery process of elderly post-stroke patients. Emotional, instrumental, and informational support from family members not only enhances functional abilities but also fosters greater treatment adherence and motivation for recovery. Therefore, involving families in post-stroke care and rehabilitation programs is vital to optimize patient independence, reduce functional decline, and improve overall quality of life.

## Author Contribution

Nurjannah<sup>1</sup> contributed to the conceptualization, study design, proposal preparation, and data collection at Siti Fatimah Hospital Palembang. She also conducted the statistical analysis, interpreted the findings, and drafted the initial version of the manuscript.

Urista Wulandari<sup>2</sup> contributed to methodology development, supervised the research process, validated the data analysis, and critically reviewed and revised the manuscript for intellectual content. Both authors read and approved the final version of the manuscript.

## Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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