# Health Education Concerning Stroke Patients Treatment on Family's Readiness to Go Home for Non-Hemorragic Stroke Patients

**Sri Handayani[*], Muhammad Hafidudin, Astrie Wulandari**
ITS PKU Muhammadiyah Surakarta, Indonesia
Email: handa@itspku.ac.id

## ABSTRACT

**KEYWORDS**
health education about care, family readiness to go home, non-hemorrhagic stroke patients

Stroke has physical and mental impacts so that stroke clients depend on their families and need long-term care and recovery. Therefore, family readiness is needed in caring for stroke patients. Through health education using leaflets, we try to help patient family members be ready to care for stroke patients while at home. The research aims to determine the effect of health education on the readiness to return home to families of non-hemorrhagic stroke patients in the Inpatient Room at RSU PKU Muhammadiyah Delanggu. The research used a pre-experimental design method type one group pretest-posttest. The sample was taken by purposive sampling and obtained 32 respondents using the Slovin formula. The instrument uses leaflets and questionnaires. The data analysis technique uses a paired t test. It was found that the majority of families of stroke patients were female (65,6%), aged 46-55 years (37.5%), had a high school education (53.1%), did not work or were housewives (53,1% ), and the family caring for the child (62.5%), before being given health education using leaflets related to the care of non-hemorrhagic post-stroke patients, the majority of family members were less prepared (62.5%) and after being given health education, the majority of family members feel ready (87,5%). There is an influence of health education regarding the care of stroke patients on the readiness to return home to the families of non-hemorrhagic stroke patients in the Inpatient Room at RSU PKU Muhammadiyah Delanggu (p value 0.000 < 0,05).

## INTRODUCTION

Stroke is a worldwide NCD (Non-communicable Disease) problem. According to the World Stroke Organization, globally 1 in 4 adults over the age of 25 will have a stroke in their lifetime. 12.2 million people worldwide will have their first stroke this year and 6.5 million will die as a result. $\geq 110$ million people in the world have had a stroke. The incidence of stroke increases significantly with age, but more than 60% of strokes occur in people under the age of 70 years and 16% occur in those under 50 years of age (Haningsih, 2023).

The prevalence of stroke sufferers in Indonesia has increased from 8.3 per 1,000 population in 2013 to 12.1 per 1000 population in 2018 (Ministry of Health RI, 2018). The results of Riskesdas RI (2018) are known that in Indonesia as many as 713,783 suffered strokes. The highest incidence of stroke occurred in the East Java region as much as 12.4%, namely 113,045, in West Java as much as 11.4%, namely 131,846 and stroke cases in Central Java as much as 11.8%, namely 96,794 (Riskesdas RI, 2018). The report of the Central Java Health Office stated that the prevalence of non-hemorrhagic stroke in Central Java in 2018 was 18,284 cases, which increased by 0.05% higher than in 2017 (Dinas Kesehatan Kabupaten Klaten, 2016). In Klaten Regency in 2015 there were 1,239 cases of non-hemorrhagic stroke and 241 cases of hemorrhagic stroke (Dinas Kesehatan Kabupaten Klaten, 2016).

Related to the above based on medical record data of RSU PKU Muhammadiyah Delanggu where for the last three months the number of non-hemorrhagic stroke patients

hospitalized at RSU PKU Muhammadiyah Delanggu is the same on average. In May 2023 there are 45 people, in June 2023 there are 42 people and in July 2023 there are 40 people.

Stroke is a functional brain disorder that occurs suddenly with focal or global clinical signs lasting more than 24 hours (unless there is surgery or death) without signs of non-vascular causes including intracerebral hemorrhage, subarachnoid hemorrhage, infrac or cerebral istemic hemorrhage (Mutiarasari, 2019).

Health education about readiness skills in caring for stroke patients after returning home is very necessary for families. This is because through this health education, family knowledge can further improve stroke knowledge, treatment and therapy, as well as information about stroke prevention so that it does not occur repeatedly in stroke patients and can help improve the quality of life of stroke patients. The education about stroke can increase the role of family caregivers in modifying the lifestyle of stroke patients in recognizing patient health problems (Parappilly et al., 2020), making the right decisions (Kavga et al., 2021), treating the condition (Ayaz et al., 2022), and modifying a healthy environment and utilizing health facilities (Sheha et al., 2020).

If the health education is not carried out, the family will lack understanding and information related to stroke and also the lack of family involvement during patient care has an impact on family unpreparedness in the patient care process at the hospital and in preparation for patient care at home (Dewi, 2021). This can have an impact on the decreasing quality of life of stroke patients because it can result in repeated strokes and can even result in worse complications until death.

Families who receive health education about stroke can take good care of stroke patients. This health education must continue to be sustainable which not only focuses on delivering knowledge but also motivates and encourages clients to participate in dealing with problems related to disease, lifestyle changes so that they are able to be skilled in caring for stroke patients while at home while motivating stroke patients by changing to a healthy lifestyle, preparing the home environment to be healthy and safe for stroke patients, healthy diet, always pay attention to personal hygiene of stroke patients, motivate to regularly and routinely every day do physical exercise on limbs affected by stroke so as to increase daily living activities of stroke patients (Aditya et al., 2022). Families as family caregivers must be able to pay attention, prepare all needs during home care including nutritional intake and motivate stroke patients to be more enthusiastic about living daily life, especially in carrying out daily activities. This is done to help improve the quality of life of stroke patients and prevent recurrent strokes (Wahab & Sijid, 2021).

Based on the description in the background above, the research aims to determine the effect of health education on the readiness to return home to families of non-hemorrhagic stroke patients in the Inpatient Room at RSU PKU Muhammadiyah Delanggu. The researchers hope to bring up more information regarding the topic discussed and that the research becomes a reference for future relevant research.

## RESEARCH METHOD

This study was conducted at RSU PKU Muhammadiyah Delanggu from November 2023 to January 2024, focusing on 32 non-hemorrhagic stroke inpatients. The variables included health education about stroke patient care and family readiness to care for stroke patients. Primary data was collected directly from the sample, while secondary data was obtained indirectly from the sample's demographics. Data analysis was performed using SPSS for widows versi 25.0, using Univariate analysis to describe each variable and bivariate analysis to examine the influence of health education on family readiness. The research received

permission from the ITS health research ethics committee and informed consent from each sample.

## RESULTS AND DISCUSSION
### Characteristics of Research Samples
*Gender*

The frequency distribution of respondents' characteristics by sex is presented in table 1. as follows:

**Tabel 1.** Gender Frequency Distribution

| Gender | n | % |
|--------|-----|------|
| Male | 11 | 34,4 |
| Female | 21 | 65,6 |
| Total | 32 | 100 |

*Source: Primary data processed, 2024*

Based on table 1. The above is known based on gender, the majority of families of non-hemorrhagic stroke patients who care for post-stroke patients are female (65.6%) and the rest are male (34.4).

*Age*

The frequency distribution of respondents' characteristics by age is presented in table 2. as follows:

**Tabel 2.** Age Frequency Distribution

| Age | n | % |
|-------|----|------|
| 36-45 | 4 | 12.5 |
| 46-55 | 12 | 37.5 |
| 56-65 | 7 | 21.9 |
| >65 | 9 | 28.1 |
| Total | 32 | 100% |

*Source: Primary data processed, 2024*

Based on table 2. above, it is known that based on age, the majority of family members of *non-hemorrhagic* stroke patients who treat post-stroke patients are aged 46-55 years as many as 12 people (37.5%) and at least aged 36-45 years as many as 4 people (12.5%).

*Education Level*

The frequency distribution of respondents' characteristics according to the last level of education is presented in table 3. as follows:

**Tabel 3.** Education Level Frequency Distribution

| Education Level | N | % |
|---|---|---|
| SD | 4 | 12.5 |
| SMP | 10 | 31.3 |
| SMA | 17 | 53.1 |
| D3 | 1 | 3.1 |
| Total | 32 | 100 |

*Source: Primary data processed, 2024*

Based on table 3. The above is known according to the education level of respondents, the majority of respondents have a high school education of 17 people (53.1%) and at least D3 education as many as 1 person (3.1%).

***Work***

The frequency distribution of respondents' characteristics according to the mother's occupation is presented in table 4. as follows:

**Tabel 4.** Job Frequency Distribution

| Job | n | % |
|---|---|---|
| Housewife/Not working | 17 | 53.1 |
| Labor | 5 | 15.6 |
| Entrepreneur | 3 | 9.4 |
| Employee | 7 | 21.9 |
| Total | 32 | 100% |

*Source: Primary data processed, 2024*

Based on table 4.4 above, it is known that according to work, the majority are as housewives/non-working as many as 17 people (53.1%) and at least work as entrepreneurs as many as 3 people (9.4%).

***Relationship with Patients***

The frequency distribution characteristic of respondents' relationship with clients is presented in table 5. as follows:

**Tabel 5.** Customer Relation Frequency Distribution

| Customer Relation | n | % |
|---|---|---|
| Husband/Wife | 10 | 31.3 |
| Child | 20 | 62.5 |
| Nephew/Niece | 1 | 3.1 |
| Elder Sibling | 1 | 3.1 |
| Total | 32 | 100 |

*Source: Primary data processed, 2024*

Table 5. Known based on relationships with clients, it is known that the most are children of non-hemorrhagic stroke patients who are willing to treat post-stroke patients as many as 20 people (62.5%) and at least are nephews and brothers of stroke patients as many as 1 person each (3.1%).

**Univariate Test**
*Readiness of Family Members to Care for Non-Hemorrhagic Post-Stroke Patients Before Being Provided with Health Education with Media Leaflet on Post-Stroke Patient Care*
The results of univariate analysis of the readiness of family members to care for non-hemorrhagic post-stroke patients before being given health education with leaflet media on post-stroke patient care, the results are presented in table 6. as follows:

**Tabel 6.** Frequency Distribution of Family Members' Readiness to Care for Non-Hemorrhagic Post-Stroke Patients Before Being Provided with Health Education with Media Leaflet on Post-Stroke Patient Care

| Readiness of Family Members to Care for Stroke Patients | N | % |
|---|---|---|
| Less Prepared | 20 | 62.5 |
| Ready | 12 | 37.5 |
| **Total** | 32 | 100 |

*Source: Primary data processed, 2024*

Based on table 6. Above it is known that before health education was given about post-stroke patient care, the majority of family members of stroke patients were not ready for post-stroke patient care, as many as 20 people (62.5%) and the remaining 12 people (37.5%) felt ready when doing post-stroke patient care.

**Readiness of Family Members to Care for Non-Hemorrhagic Post-Stroke Patients After Being Provided with Health Education with Media Leaflet on Post-Stroke Patient Care**
The results of the univariate analysis of the readiness of family members to care for non-hemorrhagic post-stroke patients after being given health education with leaflet media about post-stroke patient care, the results are presented in table 7. as follows:

**Tabel 7.** Frequency Distribution of Family Members' Readiness to Care for Non-Hemorrhagic Post-Stroke Patients After Health Education with Media Leaflet on Post-Stroke Patient Care

| Readiness of Family Members to Care for Stroke Patients | N | % |
|---|---|---|
| Less Prepared | 4 | 12,5 |
| Ready | 28 | 87,5 |
| Total | 32 | 100 |

*Source: Primary data processed, 2024*

Based on table 7. Above it is known that after being given health education about post-stroke patient care, the majority of family members of stroke patients are ready for post-stroke patient care as many as 28 people (87.5%) and the remaining 4 people (12.5%) are not ready to do post-stroke patient care.

**Bivariate Test**
The results of the parametric paired t-test analysis test at the level of 95%. The results are presented in table 9. as follows:

**Tabel 9.** Analysis of the Effect of Health Education on Stroke Patient Care on Family Readiness of Non-Hemorrhagic Stroke Patients in the Inpatient Room of RSU PKU Muhammadiyah Delanggu

| Variable | T | p value | Conclusion |
|---|---|---|---|
| Pre-post | 16,491 | 0, 000 | Ha accepted |

*Source: Primary data processed, 2024*

Based on table 4.9. Above it is known that the calculated t value of 16.491 > t table (2.039) obtained a significance value (p value) of 0.000 < 0.05. So Ha was accepted and Ho was rejected, meaning that there is an influence of health education about stroke patient care on the readiness to go home of non-hemorrhagic stroke patients' families in the Inpatient Room of PKU Muhammadiyah Hospital Delanggu.

**Characteristics of Research Samples**
*Gender*
Based on the results of frequency distribution, it is known that the majority of family members who will care for post-stroke patients are women (65.6%). The results of this study support the research of Halim et al. (2023) where family members who care for post-stroke patients are female (77.59%) more than men (22.41%). This condition has become a habit for the community, especially in Indonesia where those who care for sick family members are generally women being a factor of the dominance of women in family research of poststroke patients.

Likewise, it supports the results of the study of Bunyamin et al. (2023) where most family caregivers are female as many as 33 respondents (67.3%). Women are considered to have a softer and caring nature in terms of caring for sick family members and, most of the respondents have jobs as housewives.

*Age*
Based on the results of the frequency distribution of respondents' characteristics according to age, it is known that the majority of respondents are aged 46-55 years (37.5%). The results of this study support the findings of Wardaniyah et al. (2023) where the majority of respondents' ages are adults to early elderly. In general, the age of < 45 years is included in adulthood which is considered mature enough in life experience and mental maturity, wiser in making decisions, able to think rationally, able to control emotions and more tolerant of others. Moreover, respondents will treat post-stroke patients who require considerable energy and high patience, because stroke patients will be very dependent and need the help of other family members when they carry out daily activities.

Similar results were also found by Halim et al. (2023) where the majority of family members who treat stroke patients are aged 26-45 years (43.10%), so in this case the age of respondents is mostly in the adult category. This is because in general poststroke patients are elderly and those who care for patients are generally wives, husbands, and children of patients.

*Education Level*
Based on the results of the frequency distribution of respondents' characteristics according to education, it is known that the majority of family members who will care for post-stroke patients are high school educated (53.1%). The results of this study support the research of Halim et al. (2023) where the majority of respondents also have a high school education (48.28%). Education can indirectly affect the incidence of stroke because with education, a person can expand his knowledge and experience. The higher the level of education, the easier

it will be for someone to receive and capture the information provided and vice versa if the level of education is low, the more difficult it will be for someone to receive new information (Nursalam, 2020). The level of education has a significant relationship with the prevention of re-stroke, this proves that the higher the level of education from the family caregiver the care provided will be better and able to prevent the occurrence of re-stroke Bunyamin et al. (2023).

### Work

Based on the results of the frequency distribution of respondents' characteristics based on occupation, it is known that the majority of respondents are housewives or do not work by 53.1%. This is supported by research by Halim et al. (2023) where the majority of family caregivers are not working (51.72%). This is because the majority of respondents are children and wives of poststroke patients who act as housewives. Similar results are also supported by the results of research by Bunyamin et al (2023) where the majority of family members' work as family caregivers for stroke patients is as IRT (61.2%). This is because housewives spend most of their time at home so they are considered better able to allocate their time in caring for stroke patients at home, because family caregivers must have free time and can adapt to achieve the function of the family holistically.

### Relationship with Patients

The results of the description analysis found that family caregivers in this study dominated having relationship status with stroke patients were children (62.5%) and followed by the second largest were the life partners of stroke patients, both husband and wife of stroke patients (31.3%). The results of this study support the results of research by Bunyamin et al. (2023) where the majority of family caregivers of stroke patients are wives / husbands and children of stroke patients (73.5%). Family caregivers for stroke patients are people who have family relationships with patients and / or the closest people (one house) with patients such as husbands, wives, children, parents, and relatives. The role of the family is to provide motivation to the patient to carry out his own daily activities. Helplessness felt by people who are sick, especially in stroke where the limbs cannot function optimally, really need help from others to meet the needs of daily life. Inability in self-care, due to weakness and extremities due to decreased mobility function that can inhibit ADL (Maria et al., 2022).

## Univariate Analysis
### Readiness of Family Members to Care for Non-Hemorrhagic Post-Stroke Patients Before Being Provided with Health Education with Media Leaflet on Post-Stroke Patient Care

The results of the analysis found that before health education was carried out with leaflet media about post-stroke patient care, the majority of family members who treated post-stroke patients felt unprepared (62.5%). Similar results were also found by Kusdiyanto (2023) in his research where before being given health education related to stroke patient care, the majority of families were poorly prepared (82.4%). Family care for stroke patients who are not prepared is because the family has no experience in caring for stroke patients and lacks information related to how to care for stroke patients. Therefore, information related to the care of stroke patients is needed, namely through health education so that families can get information about stroke patient care and changes in behavior in families in providing care for stroke patients.

### Readiness of Family Members to Care for Non-Hemorrhagic Post-Stroke Patients After Being Provided with Health Education with Media Leaflet on Post-Stroke Patient Care

The results of the analysis found that after *family caregivers* were given health education with leaflet media about post-stroke patient care, the majority of family members who cared

for post-stroke patients felt ready (87.5%). The results of this study are supported by research found by Arista et al. (2020) in their research where after the family is given health education, it is able to improve its ability to care for stroke patients so that they have higher readiness in caring for post-stroke patients. Health education provided must be continuous, which not only focuses on delivering knowledge but also motivates and encourages clients to participate in facing problems related to disease, including changing a healthy lifestyle and in obtaining final results as expected.

**Bivariate Analysis**

The results of the descriptive analysis found that before health education was given, the average value of the total family readiness score when stroke patients returned from the hospital was 38.47, while after being given health education, the average total family readiness score when stroke patients returned home from the hospital was 52.69. This is also statistically supported using bivariate paired t-test analysis obtained a significance value of $0.000 < 0.05$. So Ha was accepted and Ho was rejected, meaning that there was an influence of health education about stroke patient care on the readiness to go home of non-hemorrhagic stroke patients' families in the Inpatient Room of PKU Muhammadiyah Hospital Delanggu. These findings support the results of research from Putri and Nurhayati's (2023) research where there is a significant relationship between the implementation of discharge planning and the readiness to return home of stroke patients' families. After being given health education with discharge planning, physically and emotionally the family of stroke patients is ready to care for patients when they return home, they also say they are ready in terms of knowledge about health problems that are still and must be considered after discharge, about when and who to contact when patients have health problems after discharge, take care of the patient's personal and medical needs after returning home. The readiness of the patient's family to go home is said to be ready when facing the patient if the family already knows the needs of medicines and the needs of the patient.

These results also support the findings of Arista et al. (2020) where there is an influence of the implementation of family empowerment programs on family readiness to care for stroke clients (p value $0.004 < 0.05$). Family empowerment programs in preparation for return plans have a positive impact on family readiness to care for stroke clients. Assessment of patient readiness during discharge planning and quality teaching when preparing to go home are closely related to perceptions of readiness when discharged from the hospital. So the implementation of family empowerment programs has a positive effect on the level of family readiness in caring for stroke clients but does not significantly affect the functional status of stroke clients.

## CONCLUSION

The study reveals that the majority of family caregivers of non-hemorrhagic stroke patients are female, aged 46-55 years, with high school education. Most do not work or are housewives, and have children as children. However, their readiness before receiving Health Education with leaflet media is mostly not ready. After receiving Health Education with most leaflet media, the readiness of family caregivers is mostly ready. The study suggests that health education influences the care of stroke patients and their readiness to go home.

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