

Health Education for Increasing Knowledge and Skills of Caring Family in Post Stroke at Poncokusumo Community Health Center, Malang

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ABSTRACT

Background: The lack of knowledge and skills among family members in caring for post-stroke patients can make prolong recovery time and increase the risk of complications. Health education is essential to enhance understanding and optimize caregiver skills.

Purpose: This study aims to examine the effect of health education on family knowledge and skills in post stroke care at Poncokusumo Community health center in Malang regency.

Methods: This research employs pre experimental with one group pre-post test design with a total population of 35 family with the post stroke patients in Poncokusumo Community Health Center, from which 32 participants were selected using purposive sampling. The research instrument consists of a questionnaire, and data were analyzed using the Wilcoxon test.

Results: The results show that before the health education intervention, half of the participants had a moderate level of knowledge (16 people, 50.0%). After the intervention, nearly all participants demonstrated good knowledge (28 people, 87.5%). In terms of skills, before the intervention, the majority of participants had poor caregiving skills (19 people, 59.4%). After the intervention, most participants improved to a moderate skill level (19 people, 59.4%). There was a significant effect of health education on family knowledge regarding post-stroke care at Poncokusumo Community Health Center, with a p-value of 0.000 (<0.05).

Conclusion: Health education is effective in improving family knowledge and skills in caring for post-stroke patients. With structured education, families understand how to care for patients, from mobilization, prevention of complications, to psychosocial support. Direct training and educational media help them apply skills with more confidence. This increased understanding contributes to better quality of care, accelerates patient recovery, and reduces the risk of complications.

Keywords: family, health education, knowledge, post-stroke care, skills

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BACKGROUND

Stroke is a condition that causes a person to experience paralysis or death due to bleeding disorders in the brain that cause brain tissue death (Batticaca, B. F. 2008). Stroke is a clinical syndrome characterized by acute loss of brain function and can cause death (Health Policy Development Agency, 2023). Stroke occurs when blood vessels that carry oxygen and blood to the brain become blocked and rupture, lack of oxygen causes the brain-controlled body movement control function to not function (Huang, W., Wang, Y., & Liu, X., 2023). Stroke is the number one cause of disability and the second leading cause of death in the world after heart disease, but around 90% of stroke cases can actually be prevented by controlling risk factors such as hypertension, smoking, unbalanced diet, lack of physical activity, diabetes, and atrial fibrillation

Data from the 2023 Indonesian Health Survey (SKI) shows that the prevalence of stroke in Indonesia reached 8.3 per mil or per 1,000 people aged over 15 years last year. Based on province, Yogyakarta ranks first with a prevalence of 11.4 per 1,000 people, exceeding the national average. The second highest prevalence is in North Sulawesi with a prevalence of 11.3. Third, DKI Jakarta with a prevalence of 10.7. Next are West Java and East Kalimantan with the same prevalence (Lela N, 2024). Meanwhile, the results of initial data collection at Poncokusumo Community Health Center in 2023 showed 36 new cases (0.56%), while from January to July 2024 there were 41 new cases (0.95%). Based on a preliminary study at Poncokusumo central health center through interviews with 10 family members of post-stroke patients, it was found that 8 family members did not receive enough information regarding how to care for post-stroke patients. While the other 2 members showed an attitude of not wanting to know about stroke patient care.

Post-stroke patients are very dependent on the people around them, especially on their family who are the closest people. Family is an important component in the recovery process of a patient because the family knows the patient's health condition best and is an important part of the recovery process or control of stroke disease so that stroke does not recur (Lestari, Y. R, 2017).. Stroke does not only affect the sufferer but will also affect the life of his family. One of the family members becomes helpless, loses his role in the family and will become a burden for the family. When the patient is hospitalized, the family who looks after the patient rarely receives counseling from nurses regarding how to care for stroke patients at home. This causes most family members who accompany patients during hospitalization to only get a little information about how to help their families and as a result they are not sufficiently trained and lack information. This situation will be very difficult if there is only one family member who is able to care, so the role of nurses as educators is needed in providing Health Education about stroke patient care to the patient's family during the inpatient process at the Hospital (Huang, W., Wang, Y., & Liu, X., 2023).

In general, someone who suffers from stroke will experience physical weakness that causes the patient to be unable to carry out their activities normally, therefore the role of the family as the closest person to the patient is needed to help the patient meet their needs. However, many families do not know how to care for stroke patients, therefore health education is needed on how to meet the patient's ADL (activity daily living) needs, for example how to bathe, how to wear clothes, how to eat, how to stand and walk, so that the family is able to care for the patient at home so that the patient can be independent and prevent recurrent strokes. Health Education is a process of planned behavioral change in individuals, groups or communities to be more independent in achieving a healthy life. In providing Health Education, nurses must choose the right Health Education Technique so that families are able to get the right information, therefore the Health Education carried out in

this study uses the counseling method, where the counseling method is specifically for individuals to be more effective. Counselors can provide the right media such as leaflets so that they can help the target to understand more easily. Based on research, health education provided directly to families can increase family knowledge in caring for stroke patients at home, thereby improving the quality of life and reducing the burden on families (Medeiros, G. C., Roy, D., Kontos, N., & Beach, S. R, 2020).

This study aims to know The Influence of Health Education on Family Knowledge and Skills in Post-Stroke Patient Care. The results of this study are expected to provide useful recommendations in supporting pasien with post stroke can be faster back to quality of live with support their family.

METHODS

This study uses the Pre-Experimental research method. The type of design used one group pre post test design. In this study, the population were 35 family with stroke patient, and the sample were 32 family with post stroke pasien were willing to be respondents to take part in the research until completion. The sampling technique in this study was carried out using purposive sampling. This study given intervention health education with the purpose for increasing the knowledge and skill the of the family. The instrument in this study was used questionnaire for knowledge and skill. Ethical clearance was approved by Health Research Ethics Committee in Universitas Strada Indonesia with registration number 001875/EC/KEPK/I/3/2024 on Agustus 3, 2024.

RESULTS

Respondent Characteristics

Table 1. Respondent Characteristics

Age	Frequency	Percent (%)
17 - 25 years	3	9.4
26 – 35 years	7	21.9
36 – 45 years	7	21.9
>45 years	15	46.9
Education		
Elementary school	1	3,1
Junior high school	6	18.8
Senior high school	19	59.4
Bachelor	6	18.8
Job		
None	3	9.4
Housewife	15	46.9
Farmer	4	12.5
Enterpreuner	7	21.9
Retired	3	9.4

Based on table 1 above, it is known that most of the respondents were > 45 years old as much as 15 (46.9 %), it is known that most of the respondents were senior high school as much as 19 (59.4 %), Based on table 1 above, it is known that most of the respondents were housewife as much as 15 (46.9 %).

Table 2. Characteristics of respondents' knowledge level based on before and after health education conducted at Poncokusumo Community Health Center

Knowledge	Before		After	
	Frequency (F)	Percent (%)	Frequency (F)	Percent (%)
Less	4	12.5	0	0.00
Moderate	16	50.0	4	12.5
Good	12	37.5	28	87.5
Total	32	100	32	100

Based on table 2, it is known that almost all respondents before being given health education moderate knowledge level as much as 16 (50%) than after being given health education had a good level of knowledge as much as 28 (87.5%).

Table 3. Characteristics of respondents' Skill level based on before and after health education conducted at Poncokusumo Community Health Center

Skill	Before		After	
	Frequency (F)	Percent (%)	Frequency (F)	Percent (%)
Less	19	59.4	0	0.00
Moderate	12	37.5	19	59.4
Good	1	3.1	13	40.6
Total	32	100	32	100

Based on table 3, it is known that almost all respondents before being given health education less skill levels as much as 19 (59.4%) than after have a moderate skill level as much as 19 (59.4%).

Table 4. Analysis of knowledge and skill at Poncokusumo Community Health Center

Variable	Knowledge & skill Category			Total	N	P Value
	Less	Simply	Both			
knowledge before health education	4	16	23	100 %	33	0.000
knowledge after health education	0	4	28			
skills before health education	19	12	1			
skills after being given health education	0	19	13		2	

Based on table 4 it is known that there are changes in the knowledge and skills at Poncokusumo Community Health Center before and after being given health education. The results of the above study using the Wilcoxon Sign Rank Test with a p-value of 0.00 (a <0.05) so that H0 is rejected, meaning that there is a difference in knowledge and skills before and after being given health education.

DISCUSSION**Effect of Knowledge Level Before and After Health Education Post Stroke Care at Poncokusumo Community Health Center**

Based on the results of this study, it shows that family knowledge after being given health education has increased. Before the intervention, as many as 16 people (50.0%) of families had a sufficient level of knowledge. After being given health education, almost all families, namely 28 people (87.5%), had a good level of knowledge. Before the intervention, most respondents had sufficient (50%) and good (37.5%) knowledge, while 12.5% still had insufficient knowledge. However, after being given health education, there were no more families with insufficient knowledge, and the proportion of respondents with good knowledge increased sharply to 87.5%, while those with sufficient knowledge decreased to 12.5%. This shows that health education is effective in improving family understanding of post-stroke patient care, which can contribute to more optimal care and improve the patient's quality of life. Post-stroke patients face a variety of significant physical, emotional, and social impacts. Physically, they often experience limited mobility, muscle weakness, or speech disorders. Emotionally, anxiety, depression, and loss of self-confidence are common challenges. In addition, the need for long-term care is important to support their recovery (Notoatmodjo, S., 2012). Adequate knowledge of post-stroke care is key to successful rehabilitation, including the role of the family in supporting the recovery process. Families not only need to understand the patient's condition but also need to be trained to provide basic care, such as preventing complications and supporting the patient's daily activities (Putri, A., Santoso, T., & Nugroho, R, 2023). Emotional support from the family also plays a very important role in improving the quality of life of post-stroke patients and accelerating recovery (Rahman, M., Khan, A., & Malik, S, 2023). Therefore, educational and training programs for families of post-stroke patients are essential as part of a holistic approach to their care. Researchers argue that health education plays an important role in increasing the knowledge of post-stroke patient families, which includes cognitive, affective, and psychomotor aspects. From a cognitive perspective, families become more aware of stroke conditions, risk factors, and how to properly care for patients. Affectively, there is a more positive change in attitude, where families show greater concern and empathy for patients. Meanwhile, from a psychomotor aspect, families are able to apply the skills needed, such as helping patients with daily care, physical exercise, and monitoring health conditions in a more focused manner. Improvements in these three aspects indicate that health education not only enriches insight, but also forms attitudes and skills that support optimal patient recovery.

Effect of Skill Level Before and After Health Education Post Stroke Care at Poncokusumo Community Health Center

Based on the results of this study, it shows that there is a change in family skills after being given health education. Before the intervention, most families, namely 19 people (59.4%), had insufficient skills in supporting family health. However, after being given health education, the same proportion, namely 19 people (59.4%), increased to a sufficient level of skills. This shows that health education is effective in improving family skills in supporting daily health practices. Before the intervention, the majority of families had inadequate skills (59.4%), while 37.5% had adequate skills, and only 3.1% had good skills. However, after health education, there were no more families with inadequate skills. As many as 59.4% of families increased to adequate skills, and 40.6% achieved good skills. This change shows that health education plays an important role in improving families' ability to care for post-stroke patients, which can ultimately support the patient's recovery process more optimally.

According to Bandura skills are the result of learning that involves cognitive, affective, and motor processes. Health education, especially those based on direct practice or training, can improve skills because they provide opportunities for individuals to learn through observation, practice, and feedback (Sapeni, M. A.-A. R., Aisyah, L. A., Lastriyanti, L., & Paat, T. C. C., 2024). In addition, Notoatmodjo also stated that skills-based health education and training are more effective in changing behavior because they involve direct practice that is relevant to the needs of intervention recipients (Sri, W., Arina Fathiyyah, A., Mochammad Erwin, R., Sri, J., & Aswan, A. N., 2024)

Research by Rahmawati found that practice-based training significantly improved family skills in caring for family members who need special care. The study showed that participants' skills improved after they were given training using demonstration and hands-on methods. This result is relevant to the finding that health education can provide real results in improving family skills.

Researchers argue that health education contributes to improving family skills in caring for post-stroke patients. Before being educated, many families had difficulty in helping patients to sit and stand properly, overcome barriers to speech and communication, and deal with swallowing disorders. In addition, challenges in managing urination and defecation problems and maintaining patient personal hygiene were also major concerns. However, after receiving health education, families better understood the right techniques to support patient mobility, used more effective communication methods, and assisted in eating and swallowing safely. In addition, they also became more skilled in handling elimination and maintaining optimal patient hygiene. This increase in skills shows that health education plays an important role in equipping families with better knowledge and practices in supporting the recovery of post-stroke patients.

Analysis of the Effect of Knowledge Levels and Skills Before and After Health Education Post Stroke Care at Poncokusumo Community Health Center

Based on the results of this study, it shows that there is a significant influence of health education on increasing family knowledge in carrying out post-stroke care. The results of statistical analysis show a p-value of 0.000 (<0.05), which indicates that health education interventions have a real impact on family knowledge. This increase is important to support the quality of post-stroke patient care, considering the role of the family is very crucial in the process of patient rehabilitation and recovery.

Research by Lestari found that family-based health education can improve knowledge and skills in caring for post-stroke patients. The study showed a 75% increase in knowledge after educational intervention using modules and simulations (Tater, P., & Pandey, S., 2021). These results are relevant to the finding that providing structured and needs-based information can improve the family's ability to support the recovery process of post-stroke patients. The researchers argue that health education has a significant influence on increasing family knowledge in caring for post-stroke patients at Dian Harapan Hospital Jayapura. This confirms that proper education can equip families with a better understanding of the patient's condition, the care needed, and how to overcome various challenges that may arise during the recovery process. With increased knowledge, families can provide more optimal care, support patient independence, and prevent complications that can worsen health conditions. These findings emphasize the importance of health education as an integral part of post-stroke patient management, so it needs to be continuously improved so that families are better prepared to provide ongoing support. Based on the results of this study, it shows that health education has a significant effect on improving family skills in providing post-stroke care. Statistical analysis produced a p-value of 0.000 (<0.05), which indicates that health education

interventions are effective in improving family skills. This finding emphasizes the importance of health education as an intervention step to improve the quality of post-stroke patient care, especially in supporting daily care needs.

Research by Putri found that family skills training in post-stroke care through demonstrations and intensive assistance increased family skills by 80%. This study also showed that families who were given direct practice-based education were more confident and able to carry out care actions such as passive movement exercises and nutritional management. The results of this study support the finding that practice-based health education is effective in improving family skill (World Health Organization, Regional Office for the Eastern Mediterranean, 2025).

The education provided not only increases the family's understanding of the patient's condition, but also equips them with practical skills in assisting the patient's mobility, communication, nutritional intake, elimination, and personal hygiene. With these increased skills, families can be more confident in providing appropriate care, reducing the risk of complications, and supporting optimal patient recovery. These findings emphasize that health education should be an important part of post-stroke patient support, so that families can play an active role in improving the patient's quality of life.

CONCLUSION

Based on the results of research that has been conducted at Poncokusumo Community Health Center with a total of 32 respondents about the effect health education on increasing knowledge and skills family can be concluded, namely : The results of the study before education almost all respondents moderate knowledge. While after being given health education has increased most of the respondents level of knowledge is good. The results of the study before education almost all respondents less skill levels. Meanwhile, after being given health education, most respondents experienced an increase in the level of moderate skills and Based on the analysis of the results of the Wilcoxon test, it was found that there was an effect of health education on increasing knowledge and skills family at Poncokusumo Community Health Center.

REFERENCES

- Agus Setyo, N., & Ni Luh, W. (2024). Effectiveness of stroke bundle care in emergency unit on acute stroke patient's outcome: Literature review. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, 7(7), 1756–1763.
- American Stroke Association. (2025). *Stroke*. American Heart Association. <https://www.stroke.org/en/>
- Amir, H., Yusuf, M., Syam, Y., Irwan, A. M., Cahyani, D. D., Djalid, N. K., Idrus, H. H., & Rosita. (2023). Comparison between traditional and disposable bed baths in intensive care unit. *European Journal of Clinical and Experimental Medicine*, 21(1), 108–113.
- Bandura, A. (2022). *Social learning theory in practice: Enhancing skills through observational learning*. Academic Press.
- Batticaca, B. F. (2008). *Nursing care for clients with nervous system disorders*. Salemba Medika.
- Fiscarina, W., Utomo, W., & Wahyuni, S. (2023). Hubungan dukungan keluarga dengan kualitas hidup pasien pasca stroke: Literature review. *An Idea Nursing Journal*, 2(1), 30–40.
- Health Policy Development Agency. (2023). *Results of the 2023 Indonesian Health Survey (SKI)*. Ministry of Health of the Republic of Indonesia. <https://www.badankebijakan.kemkes.go.id/hasil-ski-2023/>

- Huang, W., Wang, Y., & Liu, X. (2023). Long-term care needs in stroke patients: Challenges and strategies. *Journal of Stroke Rehabilitation*, 30(1), 45–56.
- Lela, N., Susanto, Hardianti, Satria Eureka, N., Nur Syamsi Norma, L., & Saputra, M. K. F. (2024). Effectiveness of simulating magnetotransfer therapy in reducing the severity of depression in post-stroke patients. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, 7(7), 1967–1972.
- Lestari, Y. R. (2017). *Program studi S1 keperawatan dan profesi ners*. STIK Stella Maris.
- Medeiros, G. C., Roy, D., Kontos, N., & Beach, S. R. (2020). Post-stroke depression: A 2020 updated review. *General Hospital Psychiatry*, 66, 70–80.
- Notoatmodjo, S. (2012). *Health promotion and health behavior*. PT Rineka Cipta.
- Putri, A., Santoso, T., & Nugroho, R. (2023). The impact of practice-based health education on family skills in post-stroke care. *Indonesian Journal of Public Health Sciences*, 15(1), 67–74.
- Rahman, M., Khan, A., & Malik, S. (2023). The impact of family support on recovery outcomes in stroke patients. *Journal of the Neurological Sciences*, 410, Article 120815.
- Rahmawati, D., Suryani, T., & Anwar, H. (2023). The impact of practice-based training on improving family skills in health care. *Indonesian Journal of Education and Health*, 9(2), 112–119.
- Sapeni, M. A.-A. R., Aisyah, L. A., Lastriyanti, L., & Paat, T. C. C. (2024). Relationship between diet and stroke severity in adult patients. *An Idea Health Journal*, 4(1), 13–17.
- Sri, W., Arina Fathiyah, A., Mochammad Erwin, R., Sri, J., & Aswan, A. N. (2024). Characteristics of lipid profile levels in ischemic stroke patients at Ibnu Sina Hospital 2023. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, 7(12), 2918–2926.
- Tater, P., & Pandey, S. (2021). Post-stroke movement disorders: Clinical spectrum, pathogenesis, and management. *Neurology India*, 69(2), 272–283.
- World Health Organization, Regional Office for the Eastern Mediterranean. (2025). *Stroke (cerebrovascular accident)*. <https://www.emro.who.int/health-topics/stroke-cerebrovascular-accident/index.html>
- Zhou, Q., Chen, Y., & Lin, Z. (2023). Family roles in post-stroke care: An integrative review. *International Journal of Stroke*, 18(3), 239–248.