



The Influence of Fast Method Health Education on Nurses' Knowledge in Early Detection of Stroke Disease at Labuang Baji Regional Hospital, Makassar City

Rizki Andita Noviar^{1*}, Siska Putri Belangi², Saka Suminar³, Andi Kamal M. Sallo⁴, Osie Listina⁵, Arifina Fahamsya⁶

¹ Program Studies Nursing, STIKES Husada Jombang, Indonesia

² Public Health Study Programs, Universitas Nurul Hasanah Kutacane, Indonesia

³ Nursing Study Programs, STIKes Tujuh Belas Karanganyar, Indonesia

⁴ Nursing Study Programs, St. Fatimah Mamuju Health and Business Institute, Indonesia

^{5,6} Pharmacy Study Programs, Universitas Bhamada Slawi, Indonesia

ABSTRACT

Stroke is a medical emergency because it is time-related and requires fast, precise and careful treatment. Optimal management can prevent death and permanent disability. One strategy to increase awareness of stroke attacks can be done through education in the form of audiovisual methods which contain information about early detection of stroke. The aim of this research is to find out the influence of FAST method education on nurses' knowledge in early detection of stroke. This research is quantitative research using pre-experimental design. The type of test used is the Wilcoxon test with the research results being the pre test. The conclusion of this research is. There is an influence of FAST method counseling on nurses' knowledge in early detection of stroke with a value of $P = 0.000$. The results of this research can add information and input for health workers to improve the quality of health services in preventing strokes.

Keywords : Influence, Health Education, FAST Method, Nurse Knowledge, Early Detection of Stroke Disease, Hospital

*Correspondent : Rizki Andita Noviar

*E-mail : noviarra@gmail.com

1. Introduction

Risk factors for stroke are similar to risk factors for coronary heart disease and other blood vessel diseases. Stroke risk factors consist of modifiable risk factors and non-





modifiable risk factors (Edith Kayode-Iysere, 2018). Stroke is a preventable neurological disease. Effective prevention strategies include targeting control of modifiable risk factors such as hypertension, elevated lipids, diabetes, and heart disease. Risks due to lifestyle factors can also be controlled, such as smoking, low physical activity, unhealthy eating patterns and obesity. This combination of preventive strategies and routine treatment has proven effective in reducing stroke deaths even in some low-income countries. Stroke has symptoms that serve as an early warning of an attack, but most patients at high risk of stroke do not recognize these warning signs (Obembedkk, 2014).

Stroke is a brain attack and is a medical emergency because it is time-related and requires fast, precise and careful treatment. This is greatly influenced by appropriate early detection in pre-hospital settings (Duque and Batalha, 2015). Stroke awareness with early detection of signs and symptoms of stroke is very necessary, because the majority (95%) of first complaints of stroke occur at home or outside the hospital. Optimal management is during the golden period. The golden period for stroke patients to get optimal help is 3-6 hours after the first stroke symptoms are discovered. Medical treatment given more than 12 hours after a stroke occurs carries a greater risk of causing permanent disability. So the term time is brain has become the main concept of stroke treatment, which means that pre-hospital treatment of stroke patients is important and should not be too late through identifying complaints and symptoms of stroke in patients and those closest to them (Jauch et al., 2013) & (Powers et al., 2019).

Stroke is a major health problem in society because of the causes, disabilities and causes of decreased quality of life which is characterized by neurological signs and symptoms that develop rapidly, with symptoms lasting more than 24 hours or causing death (Tanto, Liwang & Hanifati 2014).

World Health Organization (WHO) 2013, there are around 15 million people suffering from stroke every year, of which the number of deaths is 5 million people and those who experience permanent disability are estimated to be 795,000 stroke sufferers with 600,000 suffering from a first attack and 185,000 being recurrent attacks with a death rate of 150,000 (AHA, 2014).





The Indonesian Stroke Foundation (Yastroki) stated that the number of stroke sufferers in Indonesia is estimated at 2,137,941 (12.1%) people. The largest stroke incidence in Indonesia is in South Sulawesi Province, namely around (17.9%) while the lowest is in West Papua Province. (5.3%). Understanding the symptoms of stroke and emergency care is very important for the general public and professional health workers. Medical personnel or doctors involved in the emergency unit or in pre-hospital facilities must understand the symptoms of acute stroke and quick and correct first treatment. Continuous education needs to be provided to the community regarding the recognition or detection of stroke. At every opportunity, knowledge about stroke complaints, especially in high risk groups (hypertension, atrial fibrillation, other vascular events and diabetes) needs to be disseminated. To find out and detect the occurrence of a stroke, we can use the FAST method (facial movement, arm movement, speech, and time to call) (Yueniwati, 2014).

In research conducted by Novida Rizky Wardhani and Santi Martini in 2014 with the title Factors related to knowledge about stroke in workers at higher education institutions. This type of research is analytical research using a cross sectional research design. Questionnaires were given to 142 respondents. The results of the study showed that the level of knowledge of stroke risk factors of 78.9% of respondents was in the "good" level of knowledge regarding stroke risk factors, the level of recognition of early stroke symptoms using the FAST method from respondents was mostly in the "not good" category, and 63.4% of respondents had know how to handle it properly. The results of the analysis that showed significance were the relationship between gender and the level of knowledge of stroke risk factors.

The success of stroke treatment is early detection and rapid transportation, diagnosis and adequate emergency treatment in the hospital so that the time for thrombolytic therapy is achieved. The public must be aware that stroke is an emergency condition. One strategy to increase awareness of stroke attacks can be done through education containing Health Information: information about early detection of stroke. Education is defined as a process of changing the attitudes and behavior of a person or





group in an effort to mature humans through teaching, training, action processes and educational methods. Education is very much needed and very valuable (Rahayu, Zulherman and Yatri, 2021).

The method of delivering information can be in the form of health education in the form of lectures, leaflets or audiovisuals containing information about early detection of stroke in individuals and families at high risk of stroke. Education through audiovisual media has been widely researched and is known to increase the knowledge of individuals and society because of its attractive appearance so that respondents can concentrate on the material and can stimulate individual emotions and attitudes, making it easier to understand the information or message content contained in the video (Mindiono and Sessiono Mindiharto, 2014).

2. Research Methods

The research design used in this research is PreExperimental Design with a One-Group Pretest-Posttest Design approach, namely a type of research where there is a pretest before treatment is given. Population is a generalized area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn (Sugiyono, 2015).

a. Data collection

The research instrument is a written research guide used by researchers in the form of interview guidelines, observations, and a list of questions prepared by researchers to obtain information from respondents (Nursalam, 2011). Namely, the instrument used in this research is a questionnaire sheet in the form of multiple choices and leaflets which is a way of collecting data and making direct observations of research respondents to look for changes or things that will be researched.

b. Data processing

1) Editing

Editing is the stage of checking the validity of incoming data, such as checking the completeness of filling out the questionnaire, clarity of answers, relevance of answers and uniformity of measurements.





2) Coding

Coding is the activity stage of classifying data and answers according to their respective categories so that it makes things easier

c. Data grouping

a) Processing

Processing is the stage of activities to process data so that it can be analyzed. Data processing is carried out by entering data from filling out the questionnaire into the master table.

b) Cleaning

Cleaning is the stage of checking the data that has been entered again and making corrections if there are errors. (Nursalam, 2016)

c) Data analysis

1. Univariate Analysis

Used to describe research variables in order to obtain an overview or characteristics before carrying out bivariate analysis. The results of the research are displayed in the form of a frequency distribution.

2. Bivariate Analysis

Bivariate Analysis, Bivariate Tests are carried out to find the relationship or influence between the independent variable and the dependent variable with the test used is the Wilcoxon test if it meets the requirement $\alpha = 0.05$ and looks at the relative risk value (RR).

3. Results and Discussion

a. Results

1. Analysis Bivariate

Table 1.

Distribution of the Number of Respondents Based on the level of nurse's knowledge about early detection of stroke before and after counseling about the *FAST method*

	Treatment Compliance	
	Pretest	Posttest





Knowledge	F	%	F	%
Not enough	29	70.7	15	36.6
Enough	9	22.0	17	41.5
Good	3	7.3	9	22.0
Amount	41	100.0	41	100.0

Based on table 2, it is known that the 41 respondents who were assessed at the pretest level of knowledge. There were more respondents with less knowledge, namely 29 people (70.7%), with sufficient knowledge 9 people (22.0%) while with good knowledge 3 people (7.3%). In contrast to the posttest level of knowledge, there were more respondents with a sufficient level of knowledge, namely 17 respondents (41.5%), with less knowledge, there were 15 people. (36.6%), while with good knowledge there were 9 people (22.0%)

Table 2.
 Effect of Nurses' Knowledge Regarding Early Detection of
 Stroke before and after *FAST Method Education*

	n	Median (minimum- maximum)	Average	<i>P</i>
Knowledge before counseling	41	10 (5- 16)	9.90± 2.91	0,000
Knowledge After counseling	41	12 (8- 17)	12.6± 2.63	

Based on table 2, it is known that the level of knowledge before counseling from a total of 41 respondents obtained a median (maximum-minimum) value of 10 (5-16) with a mean of 9.90 ± 2.91 . while the level of knowledge after counseling from a total of 41 respondents obtained a median (maximum-minimum) value of 12 (8-17) with a mean of 12.6 ± 2.63 .

After analysis was carried out using the Chi Square test, a pvalue of $0.000 < \alpha$ 0.05 was obtained, thus in this study it was accepted, and it can be stated that there is





an influence of knowledge of FAST method counseling on nurses' knowledge in early detection of stroke.

b. Discussion

In the results of this study, the level of knowledge of respondents before being given counseling (pre-test) out of 41 respondents, the most respondents in the level of knowledge of nurses in the low category were 29 respondents (70.7%). Meanwhile, the level of knowledge of nurses was at least in the Good category with 3 respondents (7.3 %).

The results of this research are also in line with research conducted by Haryono (2013). The level of knowledge of respondents before being given health education (pre test) showed that the majority of respondents in the treatment group had sufficient knowledge, namely 28 respondents (70%), knowledge, while 2 respondents (5%) had poor knowledge. Soekanto (2002) (quoted in Lestari, 2015) explains that the level of knowledge is a person's ability about something. Based on the definition above, it can be concluded that knowledge is a process of remembering and reacquainting with objects that have been studied through the five senses in a particular field properly.

Meanwhile, the results of research on the level of knowledge of respondents after being given counseling (post test) out of 41 respondents, the largest number of respondents in the level of knowledge of nurses in the sufficient category was 17 respondents (41.5%). Meanwhile, the level of knowledge of nurses was at least in the Good category with 9 respondents (22.0 %).

Based on the results of the analysis using the Wilcoxon test, a significance value of 0.000 was obtained compared to a p value <0.05, it can be concluded that "there is an influence of the FAST method of counseling on nurses' knowledge in early detection of stroke.

The results of this research are in line with research conducted by Aris (2013), based on the results of the analysis, it was found that there were differences in knowledge between groups that were given training and those that were not given





training, knowledge in the group that was given training was higher than in the group that was not given training. Apart from that, there is also a statistically significant mean difference between the knowledge groups who were given training and those who were not given training.

The results of the research are also in line with research conducted by Murtiningsih (2016). There is a difference in the level of knowledge of early detection of stroke in the treatment group before and after receiving health education with a value of ($p = 0.003$). The p value <0.05 can be concluded that there is an influence of health education FAST on knowledge about early detection of stroke in Sambirejo Village, Plupuh District, Sragen.

4. Conclusion

1. The level of knowledge of nurses regarding early detection before health education was mostly in the poor category of nurses' knowledge level, while the level of knowledge of nurses regarding early detection after health education was mostly in the sufficient category of nurses' knowledge level.
2. From the results of the analysis using the Wilcoxon test, there was an influence of the FAST method education on nurses' knowledge in early detection of stroke.

5. Compliance with ethical standards

Acknowledgments

The researcher would like to thank the Director of the General Hospital and his staff, as well as all parties who have helped carry out this research. Therefore, the researcher hopes that this research can be useful for the wider community to prevent stroke.

Disclosure of conflict of interest

This research collaboration is a positive thing for all researchers so that conflicts, problems and others are absolutely no problem for all writers.

Statement of informed consent

Every action we take as authors is a mutual agreement or consent.

References





1. American Health Association (AHA), 2014, Results of Research on the FAST Health Promotion Theory Approach. The Indonesian Journal Of Health Science, Vol.5 No.2 July 2018.
2. Ambarika, Rahmania Et. Al., (2015). Research Results Analysis of Factors Associated with Stroke Alert Behavior in High Risk Groups in the Working Area of the Poncokusumo Health Center, Malang (Nolla J Pender Model Health Promotion Theory Approach). The Indonesian Journal Of Health Science, Vol.5, No. 2, June.
3. Aris Arifal. (2016). The Influence of Health Education on Nurses' Knowledge and Performance in Nursing Care Documentation at the Regional General Hospital (RSUD) Dr. Soegiri La mongan. Surya 2 Vol.01, No.XIV.
4. April Arianto, D. (2016). Test of the Act Fast Method (Face, Arm, Speech, Time) on the Knowledge Level of Elderly Families About Signs and Symptoms of Stroke. Muhammadiyah Nursing Journal, 1 (1): 93-100.
5. Assist Anggriani, Et.Al. 2015. The Relationship between Nurses' Knowledge and the Implementation of Correct Patient Identification at the Ratatotok Buyat General Hospital, Southeast Minahasa Regency. Faculty of Medicine Nursing Study Program.
6. Haryono Rachmad. (2015). Publication Manuscript of the Effect of Health Education on Changes in Knowledge and Behavior in Using Masks among Furniture Workers in Disukoharjo. Faculty of Health Sciences, Muhammadiyah University.
7. Lestari, T. (2015). Collection of Theories for Health Research Literature Review, Nuha Medika: Sorowajan Baru, Yogyakarta.
8. Kusumawaty, I., Yunike, Y., & Astuti, RD (2023). Increasing Community Mental Health Achievement through the Development of Health Cadres in Talang Buluh Village. Social Friends: Journal of Community Service, 2(1), 28–39. <https://doi.org/10.59585/sosisabdimas.v2i1.212>
9. Mardial & Usman Sumantri Frizz. (2014). 45 Nervous Diseases and Disorders. Andi Offset: Yogyakarta.
10. Nursalam, (2016). Nursing Science Research Methodology Practical Approach. Salemba Medika: Jakarta.
11. Nursinah, A., Marzuki, M., Andi Latif, S., Malaha, N., Qasim, M., & Pannyiwi, R. (2022). Knowledge and Family Support for Elderly Activities. Barongko: Journal of Health Sciences, 1(2), 82–84. <https://doi.org/10.59585/bajik.v1i2.24>
12. Riskesdes (2017) Basic Health Research.
13. Ramli, R., Mainassy, MC, Leli, L., Saad, R., Jariyah, A., Putra, ES, & Hasibuan, ER (2024). 4 Pillars of Balanced Nutrition with Nutritional Status in the Use of Simple Food Ingredients. Social Friends: Journal of Community Service, 2(2), 212–220. <https://doi.org/10.59585/sosisabdimas.v2i2.313>
14. Sumbogo, Adhiguno et.al. (2015). Research Results Describe the Psychological Responses of Stroke Sufferers. Kendal STIKES Scientific Journal Volume 3 No 2, Pages 36 - 44, October.
15. Sugiyono. (2015). Quantitative, qualitative and R&D research methods. Alfabeta: Bandung Sulansi. (2015). Stroke Research Results According to Patient Perceptions at Ende Hospital. Ende Poltekes Nursing Journal Vol. 07, No. 03, December.





16. Srianingsih, S., Wijaya, A., Pannyiwi, R., Anto, S., Muhajrin, M., & Rauf, NI (2022). Family Nursing Care with Environmental Health Problems. Barongko: Journal of Health Sciences, 1(1), 53–56. <https://doi.org/10.59585/bajik.v1i1.41>
17. Susanti, R., Imran, A., Briannita, A., Akbar, A., Yermi, Y., B, M., Pannyiwi, R., & Rasyid, D. (2023). Counseling on clean and healthy living behavior in Minasatene District, Pangkajene Islands Regency. Social Friends: Journal of Community Service, 1(3), 92–98. <https://doi.org/10.59585/sosisabdimas.v1i3.70>
18. Surakarta Lestari, T. (2015). Collection of Theories for Health Research Literature Review, Nuha Medika: Sorowajan Baru, Yogyakarta.
19. Wardhani, Novida Rizky & Martini Santi. (2014). Results of research on factors related to knowledge about stroke in workers at higher education institutions. Periodical Journal of Epidemiology, Volume 2 Number 1, January, p. 13-23.
20. Wahidin, W., Martini, T., & Ajeng, A. (2019). Analysis Community Knowledge And Midwives In Bpm Development Of Integrated Complementary Midwifery Services In Tangerang District, Banten Province. In Proceedings International Conference On Social Science-Icoss (Vol. 1, No. 1).
21. Wiknjastro, 2018. Midwifery Science Ed III. Jakarta : Bina Pustaka Sarwono Prawirohardjo foundation Wulandari, S., Jamila, S., Rabiah, R., Mardini, RS, Magelo, WG, & Pratiwi, A. (2023). Educational Outreach on the Dangers of Smoking at SMP Negeri 11 Sigi. Social Friends: Journal of Community Service, 1(4), 152–159. <https://doi.org/10.59585/sosisabdimas.v1i4.127>
22. Tanto, Chris. et. Al, (2014). Capita selecta Medicine, 4th Edition. Jakarta : Media Aesculapius.
23. Yueniwati, Yuyun. (2014). Early detection of ischemic stroke with vascular ultrasound examination and genetic variations. Malang: UB-Press.
24. Yuliana, D. (2022). Treatment of Perineal Wounds After Childbirth Using Binahong (Anredera Cordifolia (Tenore) Steen) Leaves. Nem Publishers.

Book Source:

- Ali Imran; Dr. A. Nursinah; Verawati; Rusnita Textbook of HEALTH COMMUNICATION (Key to Success in Hospital Administration). ISBN: 978-623-10-0088-0. <https://agdosi.com/2024/04/04/buku-ajar-komunikasi-kesehatan-kunci-sukses-administrasi-rumah-sakit/>
- Donny Aditia; Fransina Tubalawony; Son; Mochamad Robby Fajar Cahya; Nur Febrianti; Risca Hamdanesti; Goddess Kokmesa; Israeli ; Kurniati Nawangwulan; Yusnita Yusufik. Wound Care And Treatment For Health. No. ISBN: 978-623-09-8231-6. <https://agdosi.com/2024/01/10/wound-care-and-treatment-for-health/>
- Tri Ayu; Devin Mahendika; Nurul Aini Suria Saputri; Dr. M. Risal Tawil; Suratno Kaluku; Cut Mutia Tatisina; Egy Sunanda Putra; Lili Amaliah; Dr. Dwi Moerjoedianto; Dr. Djusmadi Rasyid; Lina Yunita. Sociocultural Dynamics Of Health. No. ISBN: 978-623-09-8156-2. <https://agdosi.com/2024/01/30/sociocultural-dynamics-of-health/>

