



**Knowledge About High Risk Stroke Relationship With Lifestyle In Post-Stroke Patients In
The Working Area Of Tanggul Health Central in Jember****MURTAQIB**

Lecturer in the Department of Nursing Medical Surgery Faculty of Nursing

University of Jember

Email : murtaqib999@yahoo.co.id

Article details:**Received:** 6 November, 2019**Revision:** 15 November, 2019**Accepted:** 19 November, 2019**Published:** 25 January , 2020



Indonesia, stroke patients have increased every year. Stroke is a disease characterized by brain tissue death. This disease can occur due to reduced blood flow and oxygen to the brain due to blockage, narrowing, or rupture of blood vessels and have an impact on decreased bodily functions and disability. This study aims to determine the relationship between knowledge of high risk of stroke and

lifestyle in post stroke patients in the working area of the health center Tanggul in Jember. Analytic correlation with cross sectional is the research design and the sample technique uses total sampling with a sample of 28 people, then the data collection using questionnaires and analyzed using Spearman Rank. The results showed that respondents had a low level of knowledge of 26 people (89%) and a bad lifestyle of 16 people (58%). Statistical test results show that the p value of 0.030 and the value of R 0.04 which indicates a moderate and positive (+) relationship the higher the knowledge, the better the lifestyle and the lower the knowledge, the worse the lifestyle. Health workers must emphasize the provision of health education to the community to provide knowledge about the risk of stroke and implement a healthy lifestyle

Key words : level of knowledge, high risk of stroke, lifestyle, post stroke**To cite this article :**

Murtaqib. (2020). Knowledge About High Risk Stroke Relationship With Lifestyle In Post-Stroke Patients In The Working Area Of Tanggul Health Central in Jember. *International Journal of Health, Education and Social (IJHES)*, 3(1), 24–35.



Introduction

Stroke is a disease characterized by brain tissue death. This disease can occur due to reduced blood flow and oxygen to the brain due to blockages, narrowing, or rupture of blood vessels and now this stroke does not only affect the 55-64 years age group. Even relatively young people are vulnerable to stroke. This disease attacks people aged 18 years with a percentage of 1.7 people from 1,000 people, then hypertension, diabetes, cancer, and chronic obstructive pulmonary disease. In 2020 it is estimated that around 8.7 million people will experience death from stroke and 15% of cases occur at a young and productive age. (Ministry of Health 2014).

WHO data (World Health Organization) says there are 17 million cases of stroke that are issued every week and in the world there are 7 million deaths caused by stroke. In Indonesia, the number of stroke sufferers is increasing every year.

Basic Health Research in 2013 showed an increase in the number of stroke sufferers to 12.1 per 1,000 population and 21.1 percent of the causes of death in Indonesia caused by stroke. Indonesia's population in 2014 reached 252 million people and 3,049,200 in those suffering from stroke (WHO, 2014). Jember Regency is one of the regencies in East Java province. Jember Regency has 49 Community Health centers . The prevalence of stroke in Jember Regency offers a 9th rank out of 38 districts in East Java with a prevalence of 10%. Data from the Jember District Health Office reached 1002 cases (Jember District Office, 2016).

Based on the results of a preliminary study of medical record data at the Tanggul health center obtained by stroke patients as many as 28 patients in 2016. Stroke has a negative impact on the nation's economy and economy, because stroke treatment requires a long time and a large cost (Ministry of Health 2014), one of the ways to Avoid a stroke is a society that must have knowledge about the high risk of stroke and a healthy lifestyle, so as to avoid the results of a stroke.



1. Method

This research uses correlational analytic research and cross sectional approach. The sample in this study was 28 stroke patients in the working area of Tanggul health center, jember. The sampling technique was total sampling with the inclusion criteria of mild stroke patients, able to speak and hear.

The samples in this study were 28 people. Data collection techniques for the level of knowledge about the high risk of stroke and lifestyle using questionnaire responses provided by respondents. The statistical test used in this study used the Spearman Rank correlation test.

2. Result

The results of the data displayed are classified into two groups of analysis namely univariate analysis and bivariate analysis.

3.1 Univariate Analysis Results

Univariate analysis includes the age of the respondent, the characteristics of the respondent, descriptive data of the variable level of knowledge about the high risk of stroke, lifestyle and the relationship of the level of knowledge with lifestyle.

a. Age of Research Respondents

Table 1 : Distribution of respondents based on age of stroke sufferers in the working area of Tanggul Health Center in Jember Regency in December 2016 (n = 28)

Variable	Mean	Median	Modus	SD	Min-Maks	95% CI
Age (year)	45,48	46	46	1,184	45-49	45,03 - 45,93

Source: Primary Data, December, 2016

The results of the distribution analysis are based on table 1. ie the average age is 45.48 years. Most respondents aged between 45.03 to 45.93 years. The respondent's youngest age is 45 years and the respondent's oldest age is 49 years.

b. Characteristics of research respondents

Characteristics of research respondents are the respondent's identity which includes education, work, perceived complaints. Complete data in table 2.



Table 2 Distribution of respondents based on education, gender, occupation, income, perceived complaints, in the working area of the Tanggul Health Center in Jember Regency in December 2016 (n = 28)

No	Respondents Characteristics	frequency	Percentage (%)
1	Level of education		
	a. Elementary school	21	75
	b. Junior high school	7	25
	c. Senior High School	0	0
	d. College	0	0
	Total	28	100
2	Gender		
	a. Male	16	57,1
	b. women	12	42,9
	Total	28	100
No	Characteristics of Respondents	frequency	Percentage (%)
3	Job status		
	a. Does not work	10	35,7
	b. Work	18	64,3
	Total	28	100
4	Income		
	a. <3,000,000	15	53,5
	b. > 3,000,000	13	46,5
	Total	28	100
5	Complaint		
	a. Dizzy	0	0
	b. Tingling	0	0
	c. Numb	10	35,7
	d. Rero (unclear speaking)	0	0
	e. Stiff necks (stiff neck and back)	10	35,7
	f. Weakness or numbness on one side of the body on the face, hands, feet.	8	28,6
	g.. Blurred vision	0	0
	Total	28	100

Based on the results of research on 28 respondents obtained data distribution of the characteristics of respondents that the percentage of respondents most education is elementary education that is as many as 21 people (75%), the percentage of gender most respondents are



male as many as 16 people (57.1%) , the percentage of respondents most jobs are not working that is as many as 10 people (35.7%), the percentage of respondents most income is <from 3,000,000 that is as many as 15 people (53.5%), the percentage of complaints most respondents are numb and neck stiffness (stiff neck and back) as many as 10 people (35.7%).

Descriptive level of knowledge

Based on the calculation, the categorization of knowledge level variables shows that the level of knowledge that is less <56% correct answers on 19 questions questionnaire level of knowledge about the high risk of stroke that is <10 correct answers, sufficient knowledge 56% -75% correct answers ie 10-14 correct answers , and good knowledge 76% -100% ie 15-19 correct answers. Proportion of each level of knowledge in table 3.

Table 3. Distribution of respondents based on the level of knowledge of respondents about the high risk of stroke in the working area of Tanggul Health Center in Jember Regency in December 2016 (n = 28)

High Level of Knowledge about Pregnancy	Amount (person)	Percentage (%)
Lack of knowledge	19	67,8
Enough level of knowledge	9	32,2
Good level of knowledge	0	0
Total	28	100

Source: Primary Data, December, 2016

Descriptive Lifestyle

The categorization of lifestyle variables is based on the cut of point data by referring to the data distribution. Lifestyle variable data are normally distributed so the cut of point uses a mean of 46.83. Respondents are said to have a bad lifestyle, if the score obtained is <46.83 and the lifestyle is good, if the score obtained is ≥ 46.83 . Proportion of each lifestyle category in table 4.

Table 4. Distribution of respondents based on the lifestyle of respondents in the working area of the Tanggul Health Center in Jember Regency in December 2016 (n = 28)

Labor Preparations	Amount (person)	Percentage (%)
Bad lifestyle	18	64,2
Good lifestyle	10	35,8
Total	29	100

Source: Primary Data, December, 2016



2. Bivariate Analysis Results

The results of spearman rank analysis between the level of knowledge of the high risk of stroke and lifestyle can be seen in table 5.

Table 5. Distribution of respondents based on the relationship of knowledge level of respondents about the high risk of stroke with lifestyle in the working area of the Tanggul Health Center in Jember Regency in December 2016 (n = 28)

Variable	Correlation Value (R)	P Value	A	Relationship with lifestyle
High level of knowledge about the risk of stroke	0,404	0,030	0,05	There is a relationship, direction (+), medium strength correlation

Source: Primary Data, December, 2016

The p value in table 5. shows that $p < \alpha$ ($0.030 < 0.05$), it can be concluded that there is a relationship between the level of knowledge about the high risk of stroke and lifestyle in respondents in the working area of Tanggul Health Center in Jember Regency (H_0 failed to be rejected). The strength of correlation can be seen through r that is equal to 0.404 which means that the strength of the relationship between variables is moderate. The direction of the correlation on the results of this study is positive (+) which means that the higher the level of knowledge of the respondent, the better the lifestyle and vice versa the lower the level of knowledge of the respondent, the worse the lifestyle in the working area of the Tanggul Health Center in Jember Regency.

3. DISCUSSION

Level of Knowledge of Respondents about the High Risk of Stroke in the Work Area of Tanggul Health Center in Jember Regency

Distribution of data on the level of knowledge about the high risk of stroke can be seen in table 3. It can be seen that respondents with less knowledge are 19 people (67.8%). Meliono (2007) explained that a person's knowledge is influenced by several factors, namely education, the media, information exposure, experience, and the environment. Notoatmodjo (2007) explained



that knowledge is very closely related to education, with higher education, the individual will be more knowledgeable. The results showed as many as 21 respondents (75%) with their last elementary school education. This shows that the low education of respondents influences the knowledge of respondents about the high risk of stroke.

Information obtained from formal education such as primary education, secondary education, and higher and non formal education such as joint activities in the study and mass media that can provide short-term influence (immediate impact) so as to produce changes or increase knowledge. The advance of technology will be available in various mass media that can influence knowledge (Notoatmodjo, 2007). There are three villages in the working area of the embankment Community Health centers located in mountainous areas, namely Manggis, Patemon, Selodakon (Profile of Tanggul Subdistrict, 2010). Information that is seen in the working area of Community Health centers Tanggul, especially in mountainous areas, is very little to get information from health workers because it is seen from the demographic conditions that are far away so that the media is difficult to reach. This results in a lack of information obtained by respondents regarding the high risk of stroke.

Experience as a source of knowledge is a way to obtain the truth of knowledge by repeating the knowledge gained in solving problems faced by the past (Notoatmodjo, 2007). All respondents are stroke sufferers, so they have experience related to stroke and do not have the memory of knowledge about the high risk of stroke. Experience is not only obtained from the respondent alone, immediate family and neighbors can provide motivation and information about the high risk of stroke so that it will help in increasing respondents' knowledge about the high risk of stroke and efforts to prevent a situation that endangers the respondent and does not occur complications. The environment influences the process of the entry of knowledge into individuals who are in the environment (Notoatmodjo, 2007). Mountain areas that are difficult to reach by health information affect the process of knowledge entry to respondents causing the lack of information obtained by respondents about the high risk of stroke. Cultural influences and myths and false beliefs on the environment affect knowledge in taking action as an effort to prevent stroke cases.

Notoatmodjo (2007) explains that age influences one's comprehension and mindset. As you get older you will also develop your grasp and mindset, so that the knowledge you get is better. The respondent's youngest age is 45 years and the respondent's oldest age is 49 years. Age of respondents included in the range of adult age, this age has a high risk of stroke because there has been a decline in body function.



4.2 Lifestyle of Post-Stroke Patients in the Work Area of Tanggul Health Center in Jember Regency

Distribution of respondents' lifestyle data in the working area of Tanggul Health Center in Jember Regency can be seen in table 4. Poor lifestyle as many as 18 people (64.2%) and good lifestyle as many as 10 people (35.8%). Based on the results of these studies still found more respondents who have a bad lifestyle that respondents smoke, consume foods high in salt and fat, lack of vegetables and lack of exercise. According to the theory of stroke can be prevented by up to 80% through lifestyle and routinely control health conditions in order to avoid stroke (Andersen, et al, 2015).

Respondents mostly have a low income below Rp. 3000,000, so that respondents choose foods consumed that do not meet health, that is by consuming salted fish because it is cheaper, which has very high salt levels which if consumed too much will result in high blood pressure which is at risk of stroke. The theory explains that choosing healthy food choices and snacks helps prevent strokes. Eating foods low in saturated fats, trans fats and cholesterol and high fiber can help prevent high cholesterol, limit salt and cholesterol. Being overweight or obese increases the risk of stroke (Mogensen, et al, 2013). The results of previous studies show that smoking, obesity, lack of physical activity, alcohol consumption, and poor eating patterns are stroke risk factors related to lifestyle. The combined effect of several modifiable lifestyle factors on stroke risk has shown a 44% to 79% reduced risk (Fekete, et al, 2014). The results of previous studies indicate that a healthy lifestyle has a low risk of stroke (Vemmos, et al, 2011).

4.3 Relationship Between high Stroke Risk Knowledge and Lifestyle in Post Stroke Patients in the Work Area of Tanggul Health Center, Jember Regency

The results of the distribution of respondents regarding the relationship of the level of knowledge about the high risk of stroke with lifestyle in the working area of Tanggul health center in Jember



regency can be seen in table 5. The statistical test results with the spearman Rank correlation test show the value of $p < \alpha$ ($0.03 < 0.05$). then the conclusion shows that there is a relationship between the level of knowledge about the high risk of stroke and lifestyle in the work area of the Tanggul health center in Jember Regency (H_a failed to be rejected)

The direction of the correlation in the results of this study is positive (+) so that the higher the level of knowledge about the high risk of stroke by respondents, the better the lifestyle and the less the level of knowledge about the high risk of stroke owned by the respondent, the worse the lifestyle of the respondent. Although the results of this study indicate a positive direction (+), but have a close relationship between variables that are being. Therefore, the knowledge possessed is better enhanced to obtain a good lifestyle, so as to avoid a stroke.

Based on the spearman test that has been done, it is found that the correlation strength in the results of this study is 0.404, which is between 0.40 - 0.599, which indicates that there is a moderate relationship between the level of knowledge about the high risk of stroke and lifestyle in the working area of the Tanggul Health Center in Jember Regency. This means that 40.4% of the variable level of knowledge about the high risk of stroke determines the lifestyle of the respondent and the remaining 59.6% indicates the lifestyle of the respondent is influenced by other factors besides the level of knowledge about the high risk of stroke namely education, income, food consumption, smoking.

One of the factors which influence behavior is the level of knowledge (Notoatmodjo, 2007). A good level of knowledge will help someone to form a behavior that is more directed than a low level of knowledge. The results showed as many as 19 respondents have a low level of knowledge, so this will have an impact on the formation of behavior that is a bad lifestyle. The low level of respondent's knowledge influences his lifestyle, due to factors of experience, education obtained by the respondent, as well as lack of information, media. respondents with a high level of knowledge know that they are included in the high risk category, preparing plans and programs to prevent stroke, so that a good lifestyle and avoid a stroke.



The phenomenon that exists in the working area of the embankment Community Health centers requires a role of health workers, one of which is nurses, especially community nurses in an effort to increase knowledge from the community. Nursing is a form of professional service that is an integral part of health services based on nursing knowledge and tips, in the form of services in the form of comprehensive bio-psycho-socio-spiritual services, proposed to individuals, families, and communities both sick and healthy which covers the entire process human life (National Workshop on Nursing in Mubarak, 2007).

4. CONCLUSION

Research on 28 respondents with stroke in the Work Area Community Health centers embankment Jember obtained data most of the respondents were in the age category 45-49 years, elementary school education level, housewife and private work, income every month under the UMR Regency Jember, complained about numbness, stiff necking (stiff neck and back), weakness or numbness on one side of the body on the face, hands and feet. The level of knowledge of the majority of respondents is low and the lifestyle is bad. Spearman rank analysis shows that there is a correlation between the level of knowledge about the high risk of stroke and the lifestyle of stroke patients in the work area of the Community Tanggul Health centers in Jember Regency with a p value = 0.030.

Suggestion

The suggestion of this study is that community nurses in particular are expected to be able to apply community nursing care to high risk groups for stroke. Development of health services in the form of improving the skills of health workers including cadres with regular training, especially in terms of moving the community and providing information related to high risk of stroke and lifestyle; the provision of posyandu infrastructure such as leaflets, booklets and flipcharts. The results of the analysis can be used as an evaluation for community Health centers to improve service quality by increasing the degree of public health.

**Reference**

- American heart association statistics committee and stroke statistics subcommittee. (2013) Heart disease and stroke statistics : update : a report from the American heart association. Circulation.
- Andersen KK, Olsen TS. (2015).The obesity paradox in stroke: lower mortal- ity and lower risk of readmission for recurrent stroke in obese stroke patients. *Int J Stroke*.10:99–104.
- Dourman k (2013) waspadai stroke usia muda. Jakarta : cerdas sehat
- Fekete K, Szatmári S, Szöcs I, Szekeres C, Szász J, Mihálka L. (2014). Pre stroke alcohol consumption and smoking are not associated with stroke severity, disability at discharge, and case fatality. *J Stroke Cerebrovasc Dis*. 23:e31–e37. doi: 10.1016/j. jstrokecerebrovasdis.
- Junaidi (2011) stroke waspadai ancamannya. Yogyakarta; Penerbit andi
- Kementerian kesehatan republik Indonesia (2011) 8 dari 1000 orang di Indonesia terkena stroke. Jakarta : pusat komunikasi public secretariat jenderal kementerian kesehatan RI
- Kementrian kesehatan RI (2014) situasi kesehatan jantung. Jakarta pusat data dan informasi kementerian kesehatan RI.
- Lee JH, Lee JY, Ahn SH, Jang MU, Oh MS, Kim CH. (2015). Smoking is notagoodprognosticfactorfollowingfirst-everacuteischemicstroke.*J Stroke*. 17:177–191. doi:10.5853/jos.2015.17.2.177.
- Misbach J (2011). Guideline stroke tahun 2011. Perdossi. Jakarta
- Movva R, Figueredo VM.(2013) Alcohol and the heart: to abstain or not to abstain? *Int J Cardiol*. 164:267–276. doi: 10.1016/j. ijcard.2012.01.030
- Mogensen UB, Olsen TS, Andersen KK, Gerds TA. (2013). Cause-specificmor- tality after stroke: relation to age, sex, stroke severity, and risk factorsin a 10-year follow-up study. *J Stroke Cerebrovasc Dis*. 22:e59–e65. doi:10.1016/j.jstrokecerebrovasdis.2012.04.006.
- National stroke association. (2013) explaining stroke ; national stroke association
- Pinzon rizaldy, astute L, (2010) awas stroke, pengertian, gejala, tindakan, perawatan dan pencegahan. Yogyakarta : penerbit andi
- Supriyantoro (2013) profil kesehatan Indonesia tahun 2013. In : Indonesia KKR. Editor. Jakarta : Kementrian Kesehatan Republik Indonesia
- Trihono (2013) riset kesehatan dasar (RISKESDAS). In ; Indonesia KKR, editor . Jakarta : Kementrian Kesehatan Republik Indonesia



Vemmos K, Ntaios G, Spengos K, Savvari P, Vemmou A, Pappa T. (2011). Association between obesity and mortality after acute first-ever stroke: the obesity-stroke paradox. *Stroke*. 2011;42:30–36. doi:10.1161/STROKEAHA.110.593434.

