



## CONNECTION SUPPORT FAMILY AND EDUCATION LEVEL WITH POST STROKE DEPRESSION (PSD) IN STROKE PATIENTS

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ABSTRACT	Keywords
<p>Stroke is the main cause of death globally and the main cause of disability with an increasing incidence in developing countries . Stroke is divided into two types, namely ischemic stroke and hemorrhagic stroke. Stroke can cause disturbances in areas of the brain that function as <i>neurobehavior</i> , which can cause psychiatric symptoms such as post-stroke depression. Depression occurs as a result of one of the complications after experiencing a stroke (post-stroke) and is associated with decreased healing function, activity or social support and cognitive function . Meanwhile, <i>Post Stroke Depression</i> (PSD) is a post-stroke <i>neuropsychiatric complication</i> that most often occurs in around half of all stroke patients. Several hypotheses are involved in the incidence of PSD, namely psychosocial vulnerability and biological determination . The aim of the research is to find out i There is connection support family and level education with <i>post stroke depression</i> in stroke patients.This use <i>cross-sectional</i> . Amount population as many as 94 stroke patients with sample of 76 respondents , with technique <i>purposive sampling</i>. Instruments used is questionnaire support family and HDRS. Test statistics use correlation test <i>sperman rank</i> with <i>a</i> 0.05. Researcher suggestions expected can increase understanding about stroke, increase draft self so that spared from depression</p>	<p><b>Stroke, Support Family , Education Level, Depression Level</b></p>

### INTRODUCTION

Stroke is reason main death Good globally and causes main disability with ongoing incidents increasing in developing countries . Split stroke become two types , namely ischemic stroke and hemorrhagic stroke . Ischemic stroke happen when vessels supplying blood blood to brain blocked This type of stroke is the most common occurs ( almost 90% of strokes are ischemic strokes ). Meanwhile, hemorrhagic

stroke caused by leaks or broke vessels blood in the brain or around brain so that stop supply blood to network target brain . Disturbance nerve This give rise to a number of complaint including paralysis face or limbs , talk No smooth , talk No clear ( pelo ) , change awareness , and distraction sight . Strokes have number high pain so that cause disability or weakness in one side body , confusion , difficulty walk , lose balance , and pain head (Mufidah., et al. 2021).

Stroke can cause disturbances in areas of the brain that function as *neurobehavior*, which can cause psychiatric symptoms such as post-stroke depression. Depression occurs as a result of one of the complications after experiencing a stroke (post-stroke) and is associated with decreased healing function, activity or social support and cognitive function (Pribadhi H, 2019). Meanwhile, *Post Stroke Depression* (PSD) is a post-stroke *neuropsychiatric complication* that most often occurs in around half of all stroke patients. Several hypotheses are involved in the incidence of PSD, namely psychosocial vulnerability and biological determination (Nurhasanah et al., 2023).

According to *the World Stroke Organization* (WHO) globally, more than 12.2 million or one in four people over the age of 25 will experience a stroke or more than 101 million people alive today, more than 7.6 million or 62% of strokes are ischemic new every year. More than 28% of all strokes are intracerebral hemorrhages, 1.2 million are subarachnoid hemorrhages. About 795,000 people in the United States suffer a new or recurrent stroke. Around 610,000 of them were first-time strokes, while 185,000 were recurrent strokes (WHO, 2022).

Prevalence (per mile) of Stroke based on Doctor's Diagnosis in Population Aged  $\geq 15$  Years according to Province, Riskesdas 2018 has a result of 10.9% (RISKESDAS, 2018). Meanwhile, stroke data in East Java is 1.24 per 1,000 population, this figure has decreased significantly compared to the previous year (Putri, 2023).

Factor affecting level depression against post stroke, namely level low education, social status economy low, support family and concept self (Egypt et al., 2020). Whereas according to (Reni et al., 2020) reason depression in post stroke, namely level education, length of time suffering from stroke and disorders motor.

The impact of the level of depression on stroke, namely, a negative effect on the recovery of cognitive function and daily activities, a worse functional recovery process, a worse quality of life, a higher risk of mortality, depression not only has an effect on the quality of life, but also reduces

functional ability, worsen healing outcomes and increase mortality (Baihaki et al., 2021).

There are treatments for *post stroke depression* two type that is pharmacotherapy and non-pharmacotherapy. Pharmacotherapy normal use Antidepressants SSRI (*Selective Serotonin Re-uptake Inhibitor*) and SNRI (*Serotonin and Norepinephrine Re-uptake Inhibitor*) groups can used in PSD patients are Escitalopram, Citalopram, Fluoxetine. Whereas non-pharmacotherapy can considered as PSD adjuvant ie combination electroacupuncture and *psychological intervention, Cognitive Behavior Therapy (CBT), Computerized Cognitive Training (CCT), Behavior Activated therapy, and Mindfulness-based intervention.* (Nurhasanah et al., 2023).

## METHOD

Type of research used is *cross sectional*. This research carried out at the Anna Medika Madura General Hospital in March – April 2024. Population study of 94 stroke patients with amount sample of 76 stroke patients. Retrieval technique sample use

*porposive sampling*. Variable in study This adalan support family, education level, and PSD. Instrument use questionnaire support family and HDRS. Data analysis using univariate (distribution frequency) and bivariate (tabulation cross and *spearman rank statistical test*)

## RESULTS

**Table 1. Distribution Respondent Based on Age**

Characteristics Respondent	Frequency	Percentage (%)
Age		
46-55 Years ( Early Elderly)	40	53%
56-65 Years (Late Elderly)	25	33%
>65 Years ( Seniors )	11	14%
Total	76	100%

Based on table 1 shows that half of the respondents are categorized as Late Elderly with a percentage of 53% (40 respondents).

**Table 2. Distribution Respondent Based on Stroke Length**

Characteristics Respondent	Frequency	Percentage (%)
Long Stroke		
<6 Months	4	5%
>6 Months – 2 Years	53	70%
>2 Years	19	25%
Total	76	100%

Based on table 2 , it shows that half of the respondents were categorized as having a stroke duration of >6 months – 2 years with a percentage of 70% (53 respondents).

**Table 3. Distribution Respondent Based on Support Family**

Support Family	Frequency	Percentage (%)
Support Family Low	10	13%
Support Medium Family	38	50%
Support High Family	28	37%
Total	76	100%

Based on table 3 , it shows that half of the respondents were categorized as moderate family support with a percentage of 50% (38 respondents).

**Table 4. Distribution Respondent Based on Education Level**

Level of education	Frequency	Percentage (%)
basic education	42	55%
Middle education	27	36%
higher education	7	9%
Total	76	100%

Based on table 4, it shows that the majority of respondents are categorized as moderate self-concept with a percentage of 55% (42 respondents).

**Table 5. Distribution Respondent Based on Level of Depression**

Depression Levels	Frequency	Percentage (%)
Major Depression	10	13%
Moderate Depression	21	28%
Depression Light	17	22%
Not depressed	28	37%
Total	76	100%

Based on table 5 , it shows that the majority of respondents are categorized as experiencing depression with a percentage of 63% (48 respondents).

**Table 5. Cross Tabulation Between Supports Family with *Post Stroke Depression***

			Depression Levels				Total
			Heavy	Currently	Light	No Depression	
Support Family	Low	Count	10	0	0	0	10
		% of Total	100%	0.0%	0.0%	0.0%	100%
	Currently	Count	0	21	17	0	38
		% of Total	0.0%	55.3%	44.7%	0.0%	100%
	Tall	Count	0	0	0	28	28
		% of Total	0.0%	0.0%	0.0%	100%	100%
Total		Count	10	21	17	28	76
		% of Total	13.2%	27.6%	22.4%	36.8%	100%

*Spearman Rank Statistical Test*  
 $\alpha = 0.05$   
 $P = 0.000$   
 $r = -0.898$

Based on table 5 above show that patients at the Neurology Polyclinic of RSU ANNA Medika Madura were partially recovered small from respondents has support value family tall with No There is depression as many as 28 respondents (36.8%). From the results of the *Spearman Rank* statistical test, a *P value* of 0.000 is

obtained , meaning the *P value* <  $\alpha$  (0.05). With a correlation value of -0.898 , which means that the correlation coefficient between the two variables is very strong , so H1 is accepted. This shows that there is a support relationship family with level depression at the Neurology Polytechnic of RSU ANNA Medika Madura.

**Table 6. Cross Tabulation Between Education Level and *Post Stroke Depression***

			Depression Levels				Total
			Heavy	Currently	Light	No Depression	
Level of education	basic education	Count	10	16	16	0	42
		% of Total	23.8%	38.1%	38.1%	0.0%	100%
	Middle education	Count	0	5	1	21	27
		% of Total	0.0%	18.5%	3.7%	77.8%	100%
	higher education	Count	0	0	0	7	7
		% of Total	0.0%	0.0%	0.0%	100%	100%
Total		Count	10	21	17	28	76
		% of Total	13.2%	27.6%	22.4%	36.8%	100%

*Spearman Rank Statistical Test*  
 $\alpha = 0.05$   
 $P = 0.000$   
 $r = -0.737$

Based on table 6 above show that patients at the Neurology Polyclinic of RSU ANNA Medika Madura were partially recovered small from respondents own level education base with depression heavy as much 10 respondents ( 23.8 %) were depressed moderate 16 respondents (38.1%),

and depression mild 16 respondents (38.1%) . From the results of the *Spearman Rank statistical test*, a *P value* of 0.000 is obtained, meaning the *P value* <  $\alpha$  (0.05). With a correlation value of -0.737 , which means that the correlation coefficient between the two variables is strong , so H1

is accepted. This shows that there is a level relationship education with level depression at the Neurology Polytechnic of RSU ANNA Medika Madura.

## DISCUSSION

### Connection Support Family With Post Stroke Depression in Stroke Patients at the Neurology Polyclinic at RSU Anna Medika Madura

Based on the research results, there is a very strong relationship of support family with *post stroke depression* in stroke patients at the Nerve Polytechnic RSU ANNA Medika Madura . This is also appropriate with research that has been carried out (Budianto et al., 2022) . That support family influence conditions in stroke patients , if support good family will suffer minimally depression because presence environment psychosocial good family in stroke patients .

This is also supported by research (Cahyaningrum et al., 2023) . That character function families who are supported family have great influence to well-being member family Good in a way physical , mental, material and spiritual . Family explained as structure interconnected complex depend on and have a strategy for fulfil needs of members family in a way the whole For fulfillment need *Activity of Daily (ADL)*, so lighten up burden patient and family give solution so that patient feel motivated and not experiencing PSD.

Results on research This age patient show that part big from respondents categorized as elderly end with percentage 53% 40 respondents ). According to assumption researcher age is influencing things health physique nor biological someone , where the more old age somebody so the more vulnerable person caught Sick matter This because activity reduced and due to the aging process .

According to researcher sufferer strokes can experience disability and dependency life in activity everyday you can faced by everyone , because That stroke sufferers need exists support family For do continuity life a day - days and recovery process . Family plays a very important role in give support For recovery patient and

helpful need during the recovery period patient . The more Good support family Which given so can minimize patient For No experience *post-stroke depression* because presence environment psychosocial good family .

Based on analysis item questionnaire For questionnaire support family get the highest domain that is support emotional . This matter in line with study (Fahrizal & Darliana, 2020). Support emotional is the most important aspect in support family , support emotional family works as a safe and peaceful place For Rest as well as help mastery emotional patient . Support emotional considered prevent or reduce stress effects as well increase individual mental health or family in a way direct . Reduce stress that occurs is one of necessary factors in post stroke care for reach healing and prevention recurrence .

According to researcher support families of post- stroke patients more about support emotional not just on material support because support strong emotional for For increase *slef efficacy* patient in increase post-stroke rehabilitation and encouragement to sufferers to accept conditions and more speed up the healing process . Patient will more Spirit in operate maintenance self .

Based on analysis item questionnaire For HDRS questionnaire was obtained frequent questions appear It's about " feelings. " guilt , insomnia and genital symptoms ”. This matter in line with study (Putri & Herlina , 2021) that happen decline organ function in stroke causes emergence various problem . Problems aside physicality also occurs problem ultimately psychological will influence patient in evaluate himself Alone with circumstances the illness he suffered . Impact psychological from Patients who have had a stroke include is worried or stress as well depression consequence from stress can give rise to disturbance to the individual form change style life , for example as searcher living will lost source income Because No can Work like again , so patient become Afraid No capable For return Work



. One of complications psychiatry in stroke patients is emergence depression .

According to researcher besides problem Many physical symptoms in post-stroke patients also arise is problem anxious , stressed up depression is one of complications most common after stroke . *Post-stroke depression* is outer bad Because can increase limitation in activity everyday , annoyance cognitive function and increased premature death risk kill yourself , as well decline outer rehabilitation nor outer function social .

### **The Relationship between Education Level and Post Stroke Depression in Stroke Patients at the Neurology Polytechnic of RSU Anna Medika Madura**

Based on the research results, there is a strong relationship between levels education with *post stroke depression* in stroke patients at the Nerve Polytechnic RSU ANNA Medika Madura. This is supported by research (Asmila et al., 2021) . Education generally will influence a person's ability to understand information, so that it can protect a person from bad developments in dealing with mental disorders and can increase the ability to recover from mental disorders. Because higher levels of education are found to use mental health services more often. Education is essentially an effort to help someone improve their ability to achieve optimal health so they don't experience PSD.

According to researcher , p This show that stay Low education in stroke patients will cause lack of resulting knowledge No Can utilise service health with Well , actually education is business For help somebody in increase ability For reach optimal health so No experience disturbance emotional .

Based on analysis item questionnaire For questionnaire level education obtained patient with education low as many as 42 patients . This matter in line with study (Jessyca & Sasmita, 2021). It happened *post-stroke depression* can caused by a lack of knowledge , understanding , and experience about disease That Alone . Low level of education hinder somebody For think more critical and inhibited For understand or draw wisdom from something incident . Ideally

the more tall education somebody the more good knowledge too somebody .

According to researcher Education also has an effect on patients *post t* stroke because caused by a lack of knowledge , understanding , and experience about disease That Alone . Education level plays a role important in obtain knowledge . Low level of education hinder somebody For think more critical and inhibited For understand or draw wisdom from something incident . Because it's ideal the more tall education somebody the more good knowledge too somebody .

### **CONCLUSIONS**

*(No need write Conclusions and suggestions are sufficient written in One points conclusion without numbering )*

There's a relationship between support family and level education with *post-stroke depression*

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