



## STRESS AS PSYCHOLOGICAL RESPONSE AMONG STROKE PATIENTS WITH PHYSIOTHERAPY PROGRAMS

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### Abstract

Strokes can occur at any age, but the number of strokes increases with age. Stroke is caused by disruption of blood flow to the brain, usually because blood vessels rupture or are blocked by blood clots thereby cutting off the supply of oxygen and nutrients that cause damage to brain tissue. The purpose of this study is to describe the symptoms of stress in stroke patients. Data collection uses observation and interviews. Data validation techniques using triangulation of data sources and methods. The data analysis technique uses an interactive model of qualitative analysis. The results found that stroke sufferers generally experience stress, which is caused by the mind and mood, which is thinking about a disease that does not go away, and must be forced to depend on others when doing daily activities. Stress in stroke patients can be seen from physical, emotional, and behavioral signs. To reduce stress as well as an effort to relieve or cure a stroke, one with behavioral therapy is based on learning theory, and perform self-improvement psychologically or mentally, physically and socially, as well as spiritually.

Keywords: *psychological factors, stress, stroke sufferers.*

### 1. Introduction

Stroke is a disease that has become a problem in the world, this is illustrated by the commemoration of world stroke day October 29th. The world stroke organization has recorded that almost 85% of people have a risk of having a stroke, but this can be avoided if there is awareness to overcome risk factors early on. The world health agency predicts that the cause of death in the world caused by stroke will increase along with the increase in deaths from heart disease and cancer, approximately 6 million in 2010 and to 8 million in 2030 Naby (2012).

According to WHO data, in 2012 there were 6.2 million deaths caused by stroke, and were the cause of death no. 3 in the world after coronary heart disease and cancer. Data from the American Heart Association (AHA) in the 2012 Heart Disease and Stroke Statistics Update, states that every 4 minutes a person results from

a stroke, and stroke contributes to every 18 deaths in the United States in 2018 Rogers, (2011). Stroke is a cause of 18-37% for first stroke, and 62% for recurrent stroke Smeltzer (2002), meaning that recurrent stroke sufferers have a risk of death 2 times greater than stroke sufferers.

Stroke is a disease that is classified as a chronic disease that is not contagious. This disease is caused by impaired cerebral blood flow, usually caused by broken vessels or blocked by blood clots, thus cutting off the supply of oxygen and nutrients that cause damage to WHO brain tissue (2019). Strokes can occur at any age, but the incidence of stroke increases with age. The peak case of stroke is there at the age of 35-60 years and cases in men more than in women. The incidence of stroke is 200 per 100,000 Lumbantobing population (1988).

Approximately 50% of stroke survivors are malfunctioning, unable to work again, and become a burden on the Lumbantobing family

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(1988). This situation causes frustration and will get worse if the patient does not have the support of the family. The family itself will experience stress due to the patient's condition which requires the family to adapt and take adaptive steps. A prolonged state of stress if not addressed will lead to more severe mental disorders.

In the United States it is estimated that each year the incidence of stroke is still around 500,000 new stroke patients, and 150,000 patients die of stroke. In developed countries, the incidence of hemorrhagic stroke is between 15-30% and non-hemorrhagic stroke between 70-85%, but for developing countries like Asia the incidence of hemorrhagic stroke is around 5% and non-hemorrhagic stroke 70%. Non-hemorrhagic stroke is caused by brain thrombosis (thickening of the arterial wall) 60%, emboli (sudden blockage) 5%, and others 35% Junaidi (2011).

Based on the Indonesian stroke foundation Yastroki (2013) in his particular Asian country, Indonesia is estimated to have 500 thousand people having a stroke each year. Of these events, about 2.5% have died and the rest have severe and mild disabilities. Stroke is a serious cause of disability and is the number one worldwide. In Indonesia the problem of stroke is increasingly important because the number of strokes in Indonesia is the largest number in Asia.

Basic health research (Indonesian Ministry of Health (2013) in 2013 stroke was the first cause deaths in Indonesia and in the same year Indonesia was the country with the most stroke sufferers in Asia. Data from the Indonesian Ministry of Health (2014) notes that the number of stroke sufferers in Indonesia in 2013 based on the diagnosis of health workers (health workers) was estimated at 1,236,825 people.

Stroke is a cerebral blood circulation disorder which results in disruption of brain function. This disorder can be caused by ikshemia, namely reduced / interrupted blood flow in part of the brain and bleeding due to rupture of blood vessels of the brain. This can lead to a decline in language, communication, sensing, sexual, behavioral and memory disorders.

In Indonesia stroke occupies the third position after heart disease and cancer. It was found as many as 28.5% of patients died and the rest suffered from partial or total paralysis. Only 15% can recover completely from stroke and disability. The high incidence of death in

recurrent stroke sufferers needs special attention because it is estimated that 25% of people who recover from a first stroke will get a recurring stroke within 1-5 years.

The occurrence of recurrent strokes in stroke patients is generally triggered by psychological patients who feel surrendered to the disease and the condition of their bodies that experience disability or long-term paralysis after stroke, so that patients can not do the activities and roles as before. The low motivation and hope for patients to recover as well as the lack of family support are very likely to cause burdens and lead to stress.

Individuals who have had a stroke experience a decrease in physical, mental and social activity, resulting in patients no longer able to carry out activities independently. So that stroke patients can carry out their lives then it takes someone who can help all their activities.

The results of his advertisement study (2012) concluded that stress in the incidence of stroke showed that 71 respondents (78.9%) experienced stress, 30

The method of triangulation is done by matching / verifying the number of informants with the results of field observations. The data analysis technique uses an interactive model of qualitative analysis from Miles and Huberman Sugiyono (2013), which consists of: data collection, data reduction, data presentation, data conclusions and respondents (33.3%) mild stress, 28 verification, respondents (31.1%) moderate stress, 13, respondents (14.4%) severe stress and 0 research results and respondents (0%) were very stressed.

Stress is a condition caused by interactions between individuals and the environment, giving rise to a perception of the distance between the brasal demands of a situation that originates in the biological, psychological, and social systems of a person Sarafino (1994). in individuals, the source of stress that comes from the family, comes from the community and society.

The problems raised in this study are related to stressors that can be seen from psychological aspects, and stress symptoms that are felt. The benefits of the results of this study are to provide an understanding of the causes of stress and stress symptoms, and reduce stress.

## 2. Method

This type of research is *descriptive-qualitative research*, with the aim of describing the

symptoms of stress in stroke patients. Data collection uses observation and interviews. The number of informants in the study were five stroke patients who were domiciled in the Karangnom village, Klaten District, North Klaten Regency. Data validation techniques using triangulation of data sources and methods. Tianggulasi data sources carried out by matching/ verifying the answer of one informant with other informants.

### 3. Result and Discussion

According to WHO, stroke is a functional disorder of acute nerve function caused by brain blood circulation disorders, where suddenly (a

few seconds) or quickly (several hours) symptoms and signs arise that correspond to focal areas in the brain that are disturbed (2014). Stroke is the largest cause of death in the world with a mortality rate of 18-37% for the first stroke and 62% for the recurrent stroke of Smeltzer (2002). Therefore, people with stroke generally experience stress, which can be caused by thinking about his condition that many need help from others to do activities, as well as thinking about his illness that does not go away.

Based on the results of the interview above, the stress causing factors can be presented as the table 1.

**Table 1.** Perceived physical symptoms

No	Resp	Age	Education	Physical symptoms
1.	TM	58 th	SLTP	headache, muscle aches, back pain, fatigue (weakness), indigestion, loss of appetite, frequent urination, high blood pressure, unable to sleep or sleep sometimes do not wake up (excessive).
2.	JM	55 th	SD	muscle aches, back pain, fatigue (weakness), indigestion, nausea or vomiting, palpitations, frequent urination, high blood pressure, unable to sleep or sometimes sometimes not waking up (excessive sleep) .
3.	NRL	63 th	SD	headache, muscle aches, back pain, fatigue (weakness), indigestion, abdominal pain, palpitations, frequent urination, high blood pressure, and unable to sleep or if sometimes sleep does not wake up (excessive) .
4.	SHL	61 th	SLTP	nausea or vomiting, lost appetite, frequent urination, and high blood pressure.
5.	ARF	38 th	SLTA	headache, muscle aches, back pain, fatigue (weakness), indigestion, abdominal pain, loss of food, frequent urination, high blood pressure, unable to sleep or sometimes sometimes not waking up (excessive sleep).

Based on the nature of cerebral lesions, the stroke is divided into 2 namely ischemic / infarction and bleeding. About 80% of stroke cases are ischemic stroke and another 20% are haemorrhagic indiyarti strokes (2003). Ischemic / cerebral infarction results from a temporary or permanent result of extracranial / intracranial arteries or venous thrombosis which will cause cell damage due to lack of oxygen and nutrient supply. Ischemic strokes can be classified into lacarar infarction (LACI), total anterior circulation infract (TACI), partial anterior circulation infract (PACI) and posterior circulation infract (POCI). Research by BamFord et al obtained TACI by 17%, PACI 34%, POCI 24%, and LACI 25% (BamFord et al, 1991 (indriyati). While spontaneous cerebral hemorrhage is due to abnormal blood vessel rupture (AVM aneurysm) with manifestations of intracerebral hemorrhage or subarachnoid bleeding Indriyati, (2003).

Someone has a stroke and can not do the activities and roles as before. Also triggered by

low motivation and hope for recovery of patients and reduced family support is very potential to cause burdens and lead to stress Kumolohadi (2001). Stress is a pressure or something that feels pressing in an individual. That something can be caused by an imbalance between expectations and the reality desired by individuals, both physical and spiritual desires. According to Weinberg and Gloud (2003), stress is defined as "a substantial imbalance between demand (physical and / or psychological) and response capability, under conditions where failure to meet that demand has importance consequences". This means that stress will arise on the individual if there is an imbalance or failure of the individual in meeting his needs, both physical and spiritual.

Causes of Stress in Stroke Patients Stress can occur due to: (1) frustration, namely the disruption of psychological balance because the goals fail to be achieved; (2) conflict, which is the disruption of balance because the individual is confused about facing a number of needs or

goals which one must choose; (3) pressure is something that is urgent to be done by individuals. Pressure can come from yourself, for example, a very strong desire to achieve something. Pressure can also come from the environment; (4) crisis is a situation that occurs suddenly and which can cause a disturbance in the balance of Maramis (2009).

Along with the aging process results in changes (decrease) in the structure and physiological in a person such as: vision, hearing, lung system, bone joints. Along with the decline in physiological function, the resilience of the body decreases so that contracted various diseases. This decrease in physical abilities can cause a person to become stressed, which in the past all the work can be done alone, now sometimes it must be helped by others. This feeling of burdening other people can cause stress.

Based on an interview with MT (February 26, 2019), 58 years old, having a junior high school education and not working, information was obtained that he was experiencing stress because he was always thinking about his condition, which did not heal from his illness. He also had a slight speech disorder. The same thing was said by Mrs. JM (interview 27 February 2019), 55 years old, educated in elementary school and not working, information was obtained that she was experiencing stress because she always thought about her condition, there were limited activities because she only sat in a wheelchair.

Recognizing the state of himself that must require others to carry out daily activities causes stress sufferers of stroke. In addition, the stress of stroke sufferers can also be caused by a frantic mind for thinking that the disease will never heal. Based on an interview with Mr. NRL (February 28, 2019), 63 years old, having an elementary school education and not working, information was obtained that he was experiencing stress because he always thinking about the recovery of his illness, he felt his illness had not been cured for a long time. The same was said by Mr. SHL (interview March 1, 2019), 61 years old, educated at a junior high school equivalent, the work of the worker was obtained information that he was experiencing stress because of thinking about his illness that did not heal.

Stroke sufferers, can experience stress can also be caused by other factors, such as having to wait for a queue for treatment. This is the case with Mr. ARF (interview 2 March 2019), 38 years

old, with a senior high school education, and entrepreneurship was obtained by information that he often experiences stress when he has to queue for a long time when he is on medical treatment or check-up.

Based on the results of the interview above, the causes of stress in stroke sufferers are generally caused by thoughts and moods, that is thinking of illnesses that do not heal, and must be forced to depend on others when doing daily activities.

Physiotherapy as an Effort to Cure Stroke. One of the efforts made by stroke sufferers to cure their illness is to follow a physiotherapy program. This is like what was done by Ms. TM (interview, 26 February 2019) who explained that she was taking a physiotherapy program once a week at Soedjarwadi Klaten Hospital. The same thing was done by Mrs. JM (interview, 27 February 2019) who explained that she participated in the physiotherapy program once a week at Soedjarwadi Klaten General Hospital, and continued at Bagas Waras Klaten Regional Hospital. While Mr. ARF (interview, 2 March 2019) explained that he had participated in the program physiotherapy once a week for 1 year at RSJD Soedjarwadi Klaten, such as through radiation, electrical stimulation, and exercise. At this time he had begun to walk, although he had to slowly.

Based on the interview above, physiotherapy is one of the treatment efforts that can be done by stroke sufferers. The type of physiotherapy given to stroke sufferers varies from one another to another, depending on the type of stroke he suffers.

However, sometimes stroke patients are impatient to follow the physiotherapy program to the end, and finally look for other alternative treatments. This is like what was done by Mr. NRL (interview, 28 February 2019) who explained that he had participated in the physiotherapy program twice a week 12 times (3 months) at the Bagas Waras Hospital in Klaten. But after that, switch to alternative medicine. The same was done by Mr. SHL (interview, 1 March 2019) who explained that he had attended the physiotherapy program once a week for 8 months at the RSUD Bagas Waras Klaten. But after that, switched to alternative medicine at the initiative of his son

#### 4. Conclusion and Sugestion

Emotional stress is called psychological stress. Various emotional states such as anger,

aggression, worry, and fear can cause chronic emotional stress. In addition, mental stress arises because of excessive anxiety and general worries. Furthermore, those who want to appear perfect or who always feel never satisfied with what they have achieved are the main groups of people who are prone to suffering from mental stress. Mental stress also often arises because there is a feeling of pressure

Emotions as feelings or effects that involve a mixture of physiological turmoil (for example, a rapid heartbeat) and visible behavior (eg, smile or cry). Psychologists have classified emotions in many different ways, but one characteristic of almost all classifications is whether it is positive or negative. Feelings or emotions are human spontaneous reactions that if not carried out or followed by behavior, it cannot be judged as good or bad. Unstable emotions or feelings and color one's perception of the world and its surroundings. Normal feelings or emotions can also be positive feelings (happy, proud, love, amazed, euphoria) and negative emotions (fear, worry, suspicion, sadness, anger, depression, disappointment, frustration, anxiety, humiliation). Can be judged by its quality, depth or intensity, duration, reactivity or irritability, fluctuation or stability, controller (unstable), harmony with the contents of the mind, situation and culture, can or not start, maintain and end the emotional response and can or not in feel it. Emotional responses from a person for a moment or expressions come out as a personal experience of the patient and as an emotional response to external and internal events. A person's psychological condition, for example experience, nature, personality type and perspective. Can influence in dealing with stress. The perspective of someone who is positive in dealing with problems, can solve the problem through the process of a positive resolution mechanism as well. Problem-oriented, always looking for a middle ground based on consideration of good and bad experiences. People who always respond positively to all the pressures of life will have a small risk of being stressed. The wider and higher the person's expectations about life (optimistic), the impact on a wise attitude, accepting what God has given him (resigned), showing affection for others, thus someone is able to calm the heart and clear the mind so that it will be further away from stress.

Symptoms of the behavior of stroke sufferers who experience stress. Stroke sufferers who experience stress with behavioral

symptoms will experience interpersonal symptoms, which are stress symptoms that affect relationships with others, both inside and outside the home. The behavior seems like being lazy to get along or interact with neighbors or other people.

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