# Correlation between Nurse Caring Behavior and Fulfillment of Activity Daily Living for Ischemic Stroke Patients at RSUD Nganjuk

**Sujatmiko[1], Nursalam[2]**
[1]*Faculty of Public Health, Airlangga University, Indonesia*
[2]*Faculty of Nursing, Airlangga University, Indonesia*

**Abstract**
*One of nurse's efforts to improve self-sufficiency of stroke patients is by implementing the fulfillment of Activity Daily Living (ADL). Fulfillment of ADL will be fulfilled more maximally if caring behavior was also implemented. The purpose of this study was to determine the correlation between nurse caring behavior and the fulfillment of ADL for ischemic stroke patients at RSUD (General Hospital) Nganjuk. The design of this research was correlation with cross sectional approach. The populations were all nurses in ICU and Soka Room at RSUD Nganjuk (General Hospital) which were 35 respondents. Meanwhile, the samples were taken by total sampling technique. Independent variable in this research was nurse caring behavior, while, the dependent variable was the fulfillment of ADL for stroke patient. Data were collected by questionnaire and analyzed by Spearman Rank test with α = 0.05. The results showed that most of respondents had good caring behavior (25 respondents (71.4%)). There were 25 respondents (71,4%) who did nurse caring of ADL fulfillment in good category. The result of Spearman Rank test showed that p = 0.000 < α (0.05) and r = 0.798, thus, Ha was accepted, which meant that there was a significant correlation between nurse caring behavior and ADL fulfillment for ischemic stroke patient at RSUD Nganjuk (General Hospital). However, if the nurse had good caring behavior, they would develop patience and diligence in providing caring to the patient. Therefore, they would be motivated to serve the patient sincerely, fulfill the needs of feeding, bathing and grooming, toileting, and moving in order to achieve patients's sufficiency in a short time. Furthermore, it is recommended for health service institutions to optimize caring training program for nurses, thus, nurse's performance in providing nursing care could improve well. .*
*Keywords: Knowledge, Social support, Nursing care*

## I. INTRODUCTION

Stroke is one of the major causes of death and neurological disability in Indonesia. Stroke is a medical emergency that must be handled quickly, precisely and accurately. Stroke progressivity was occurred in 20-40% of stroke patients, with the highest risk in the first 24 hours of symptom onset (Mansjoer, 2000). In ischemic stroke patients, there was a disorder of blood flow system and it caused various symptoms such as motor and sensory disorders that could affect daily activities (Ganong, 2002). Prolonged stroke caused an interference of physical, psychological, social and environmental function.

The stroke prevalence in Indonesia based on Basic Health Research *(Riskesdas/Riset Kesehatan Dasar)* 2013 was 12/1,000 population or 1.2%, higher rather than stroke prevalence in the United States 3-4 / 1,000 population, Singapore 55 / 100,000 population and Thailand 11 / 100,000 population. Among the total of stroke patients in Indonesia, about 2.5% died and the others were minor or severe disabilities. According to medical records at Dr. Sutomo General Hospital Surabaya-Indonesia, between 1990 - 2000 stroke patients who treated were 750 people/year, in 2001 - 2010 increased to be 1,000 patients / year, and in 2011 increased to be 1,600 / year.

Moreover, the stroke incidence in Nganjuk-Indonesia was quite high and it increased significantly. Data of stroke incidence reported that since 2012 – 2014, the death of patients was in 20-30%, disable and treated patients was in 60-70%, and recovered was in 10-20%. The data at Nganjuk General Hospital 2014, stroke patients who underwent medication were 121 patients/ month, with total care of 91 and partial care of 30 because patients came to hospital with hemiplegia condition, thus, they were unable to do activity.

The effects of ischemic stroke were as follow: almost 50% had hemiparesis, 30% were unable to walk without assistance and 26% underwent limited daily needs (Lynch et al, 2008). Cowman et al (2010) found that 51% of stroke patients had difficulty in communicating, 64% with cognitive impairment, 86% with independence disorder, 87% with decreased independence in sleep, 88% with sitting difficulty, 86% with equilibrium decline, 83% with motion difficulty, and 92% with weakness after stroke. Ischemic patients came to the hospital in compos mentis awareness condition, thus, if treatment was not too late, it could be cured completely.

Nurse had a very important role, not only to help the patient in fulfilling his needs but also to help patient in regaining independence to do activity daily living (ADL), including: ambulating, eating, dressing, bathing, brushing and decorating (Potter & Perry, 2010). One of nurse's efforts in improving patient's sufficiency is by implementing ADL fulfillment. Stroke patient's assistance in ADL was perhaps temporary, permanent, or rehabilitative. In temporary case, patients needed help during specific periods, including feeding, bathing and grooming, going to the toilet and moving (Katz et al., 1963).

Fulfillment of ADL would be fulfilled maximally if caring behavior was also implemented. Caring was an action that aimed at either giving physical care or noticing emotion while improving client's secure sense and safety (Carruth et al., 1999). Griffin (1983) described nursing care as an essential interpersonal process that required nurses to perform specific role activities by conveying the expression of certain emotions to the recipient. According to Swanson (1993), caring behavior could be divided into five dimensions: (1) Maintaining belief, (2) Knowing, (3) Being with, (4) Doing for, and (5) Enabling. Increased self-sufficiency of stroke patients through caring-based ADL fulfillment would help patients to survive and adapt to their illness, prevent recurrence and maximize healing and rehabilitation processes.

## II. LITERATURE REVIEW

### 1. Caring Concept
Caring was a universal phenomenon that affected the way human thought, felt, and behaved when having relation/ communicating with others. Caring could also be interpreted as a way of keeping relation through respecting the others with feeling of belonging and responsibility. Caring keeps the nurses aware of which interventions work and this attention will then lead to subsequent treatment (Potter & Perry, 2010).

Swanson (1993) describes the caring process in 5 caring components:
a. Knowing

   Nurse must know more the patient's condition, comprehend the meaning of an incident in life, avoid the assumption, and focus to the patient, search signs, value accurately and interestingly.
b. Being with

   This included the nurse's presence for the patients, communicating the patient's readiness for helping and sharing the feeling without burdening the patients. However, the nurses' presence were not only physically, but also emotionally.
c. Doing for

   In the implementation of nursing care, the nurse could give contribution for health and cure or until the patient died, the nurse had to perform well while being needed by using all of their own power and knowledge.
d. Enabling

   Enabling had sub dimensions, which were notifying, explaining, supporting, allowing, making alternative, correcting, and giving feedback.
e. Maintaining belief

Maintaining belief had a meaning as in order to maintain patient's belief by believing patient's capacity, respecting patient's value, maintaining expectation behavior, offering realistic expectation, helping to search meaning and always being ready to help patients anytime.

### 2. Activity Daily Living (ADL) Fulfillment
Activity Daily Living (ADL) was a life activity which was usually done in all normal day; including ambulating, eating, dressing, bathing, brushing, and decorating. Conditions that caused the need for help in ADL could be acute, chronic, temporary, permanent, or rehabilitative. Clients with partial paralysis after stroke might experience chronic damage that needed ADL help.

The need for help in ADL might be temporary, permanent, or rehabilitative. In temporary help, the clients needed help during a specific period, then, the clients would learn new way to do ADL. Thus, the clients could be more independent and able to do home care. The need of patient's ADL was in accordance with Index Katz, including; feeding, bathing and grooming, going to the toilet, and moving (Katz et al., 1963).
a. Feeding aimed to assist patients in eating and drinking and to ensure that they received the optimal food and drink in dependence condition. Fulfillment of ADL feeding included: feeding on schedule, helping patients to eat, and feeding through NGT.
b. Bathing and Grooming aimed to take care patient's hygiene, including; helping patients to bathe or bathing the patient, combing hair, cleaning and cutting nails, and washing hair.

c. Toileting aimed to help patients with mobility problems, thus, it was not possible to go to the toilet. Therefore, elimination was done in bed by using a bedpan or urinal, diapers, or urine catheter.

d. Moving aimed to help patient performing efficient movements and minimizing the patient's needed effort to do that, including; helping patient to sit, helping patient to go to the toilet, helping patient to move into a wheelchair, changing the patient's position, and performing ROM exercises (active and passive) (Hilton 2004).

## 3. Stroke Concept

Price, et.al (2006) stated that stroke was a neurologic disorder which was occurred due to inadequate or cessation of blood supply to brain arteries that was occurred suddenly. According to Muttaqin (2008), the cause of stroke was cerebral thrombosis, embolism, and haemorrhage of subarachnoid space or within the brain tissue itself, general hypoxia and local hypoxia.

Price (2006) classified stroke according to its cause as follow;
   a. Ischemic stroke was a disorder of cerebrum circulation that was occurred due to obstruction of one or more arteries in the brain.
   b. Hemorrhagic stroke was bleeding within the subarachnoid space or directly within the brain tissue, due to rupture of intracerebral vascular lesion.

According to Lumbantobing (2007), stroke patient management aimed to;
   a. Lowering blood pressure to prevent re-bleeding. In normotensive (normal tension) patients. The blood pressure was reduced to systolic 160 mmHg, while in hypertensive patient was reduced slightly higher.
   b. The patient should be completely rested, at least 4 weeks, for fibroblastic proliferation and better healing of blood vessel lesions.
   c. The pressure in the cranial cavity was lowered by elevating the head position of 15-300 (one pillow), administering anti-edem, and dexamethasone. In addition as anti-edem, it could prevent attachment to arachnoids leading to hydrocephalus and elevation of skull pressures.
   d. Prevent re-bleeding, at least during the first 2 to 4 weeks. The patients might be treated with anti-fibrinolytic such as 4 to 6 mg intravenous tranexamic acid for 2 weeks.
   e. Prevent arterial spasm which was often occurred on day 3 to 10. In this condition the patients could be given nimodipin 4x30-60 mg daily for 2 weeks.

## III. METHODS

The design of this research was correlational analytic by using cross sectional approach, which was a research that emphasized time measurement or observation data of either independent or dependent variable only once at a time (Nursalam, 2013). This research was conducted on November 2017 in RSUD Nganjuk (General Hospital). Population were all nurses in ICU and Soka Room at Nganjuk General Hospital, which were 35 nurses. The samples were taken by total sampling technique. Independent variable was nurse caring behavior (X), meanwhile, the dependent variable was ADL fulfillment of stroke patient (Y).

The data collection of this study used questionnaires with scores scale as follow;

**1. Nurses Caring Behavior:**

Score Scale:
Yes                          : 1
No                           : 0
Category:
Good                         : 76% - 100%
Sufficient                   : 56% - 75%
Less                         : ≤ 55%
(Adapted from Nursalam, 2013).

**2. The ADL Fulfillment of Stroke Patients:**

Score Scale:
Never                        : 1

Almost Never   : 2
Sometimes    : 3
Usually     : 4
Almost Always   : 5
Always     : 6
Category :
Good     : 76% - 100%
Sufficient    : 56% - 75%
Less      : $\leq$ 55%
(Adapted from Nursalam, 2013).

Data that had been categorized, then, analyzed by Spearman Rank test with $\alpha$ 0.05 by using SPSS program. Hypothesis testing guidance was when $\rho \leq \alpha$ (0.05), Ha was accepted, which meant that there was a significant correlation between nurse caring behavior and ADL fulfillment for ischemic stroke patients at RSUD Nganjuk (General Hospital). Meanwhile, if $\rho > \alpha$ (0.05), Ha was rejected, which meant that there was no significant correlation between nurse caring behavior and ADL fulfillment for ischemic stroke patient at RSUD Nganjuk (General Hospital).

## IV. RESULT

Table 1. Distribution of Caring Behavior and ADL Fulfillment

| Variable | Category | f | % |
|---|---|---|---|
| Caring Behavior | Less | 2 | 5.7 |
| | Sufficient | 8 | 22.9 |
| | Good | 25 | 71.4 |
| Total | | 35 | 100 |
| ADL Fulfillment | Less | 3 | 8.6 |
| | Sufficient | 12 | 34.3 |
| | Good | 20 | 57.1 |
| Total | | 35 | 100 |

Based on the results above, it was known that among 35 respondents (the nurses in ICU and Soka room at RSUD Nganjuk), most of respondents had good nurse caring behavior (25 respondents (71.4%)). It was also known from the table that most of them also had good category of caring behavior in ADL fulfillment for stroke patients (25 respondents (71.4%).

Table 2. Distribution ADL Fulfillment Based on The Caring Behavior

| Caring Behavior | ADL Fulfillment | | | Total |
|---|---|---|---|---|
| | Less | Sufficient | Good | |
| Less | 3 | 0 | 0 | 3 |
| Sufficient | 0 | 6 | 2 | 8 |
| Good | 0 | 6 | 18 | 24 |
| Total | 3 | 12 | 20 | 35 |
| | $\alpha$ = 0.05 | p-value = 0.000 | r = 0.628 | |

The result of cross tabulation between variables of nurse caring behavior and ADL fulfillment for ischemic stroke patients in ICU and Soka Room at RSUD Nganjuk (General Hospital) showed that most of respondents had good category of nurse caring behavior and ADL fulfillment (18 respondents). The result of Spearman Rank test showed that p = 0.000 <$\alpha$ (0.05), Ha was accepted, which meant that there was a significant correlation of nurse caring behavior and ADL fulfillment of ischemic stroke patient in Nganjuk General Hospital. The value of r = 0.628 indicated the medium correlation power and one-way correlation. It meant that the better the nurse caring behavior, the better the ADL fulfillment for stroke patients, and vice versa.

## V. DISCUSSION

Measurement of nurse caring behavior variable in this research referred to Caring theory by Swanson (1993), including indicators as follow: maintaining belief, knowing, being with, doing for, and enabling. While, the

variable of ADL fulfillment by the nurses in this research was measured by four Katz indicators (in Potter & Perry, 2010) which were consisted of: fulfillment of feeding, bathing and grooming, toileting, and moving needs. The results of this research showed that there was a significant correlation between nurse caring behavior and ADL fulfillment for ischemic stroke patients at Nganjuk General Hospital with medium correlation power and one-way correlation, which meant that the better the nurse caring behavior, the better the fulfillment of ADL for stroke patient, and vice versa.

In ischemic stroke patients, there was a disruption of the blood flow system that caused various symptoms. One of the symptoms was motor and sensory disturbance, which was occurred in hemisparese that affected ADL. This activity could not be fulfilled due to several things because stroke would cause dependence on others (Graf, 2013). Therefore, ADL fulfillment by nurses was needed by stroke patients to be able to stimulate the patient's sufficiency in doing ADL and developing plans to continue to have medical treatment from hospital to home and community.

According to Aadal (2013), if the nurse did not perform an ADL-related nursing care to a stroke patient, it might inhibit the fulfillment of patient's need, deteriorate patient's independence, and might cause depression for the stroke patients because they felt unable to do anything and depression in people who helped to treat patients. In line with the result of conducted research by Syairi (2013) who stated that rehabilitation programs were effective in improving the functional status of stroke patients. ADL training was still needed to reduce patient's dependency. If only medical rehabilitation was done without any ADL training, stroke patients would depend on the caregiver, and might also worsen their disability.

The role of caring in ADL fulfillment was explained by Tomey (1994) that caring was the core of ethical and philosophical nursing practice. It meant that all nursing care forms should be done based on nurse caring behavior. Similarly, in the case of ADL fulfillment for stroke patients, it would not work properly if it was based solely on basic tasks and functions without any implementation of nurse caring behavior. Conversely, if the nurse had good caring behavior, her patience and persistence in caring the patient as part of his natural attitude and would make herself to serve others very well and sincerely. Thus, the nurses would be motivated to serve the patient sincerely, doing the fulfillment of the needs for feeding, bathing and grooming, toileting, and moving in order to make patient independence in a shorter time.

## VI. CONCLUSION

This study had proven that nurse caring behavior had a positive correlation with the ADL fulfillment for ischemic stroke patients in ICU and Soka Room at RSUD Nganjuk (General Hospital). Therefore, it is advised for the nursing profession to improve knowledge about caring and develop caring attitudes in implementing nursing care, especially for stroke patients in hospital. For policy makers in health service agencies, it is recommended to optimize caring training program for nurses, thus, the nurse's performance in providing nursing care could improve more. For nursing education institutions, it is advised to provide as early as possible for caring education either in lectures or practice/ apprenticeship as part of the graduate competency standards that must be achieved. Hence, the formation of nurse caring behavior could be implemented more effectively.

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