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A Model of Independent Restorative Nursing Care on Ischemic Stroke Patients

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Abstract:*Stroke is the second cause of death and disability after heart disease. The long-term stroke can cause functional disorder, such as: physical, psychological, social, and environmental disorder. The effort of stroke patients is more properly done by Restoratif care approach. The current model of stroke patients' care emphasizes highly on medical and healing aspects from the disability condition. The care which improves the patients' and family's self-ability has not been done completely. this research design is a model development design which includes three phases, they are: assessment, model development, and model implementation. The sample of this research was 65 respondents, and the sample of model implementation was 6 respondents. The data analysis was done through t-test and SEM analysis.*

From the research result, it showed that the need of self care on stroke patients was under the median value (56.9%), the family supports in the form of informational support were above the average value (53.8%), instrumental support was 80%, reward support was 58.5%, and emotional support was 66.2%. the nursing care was mostly in the low self-efficacy level (61.5%), self management was high (55.4%), and self regulation was high (63.1%). Self care ability was below the average value on the following aspect, such as: eating aspect was 67.7%, showering was 61.5%, making up was 66.2%, dressing up was 73.8%, doing fecal elimination reached 76.9%, toilet was 75.4%, and transferring was 66.2%. whilst, low indicator occurred on urine elimination indicator, it reached 61.5 %. The model showed that the self care need significantly influenced self care = 1.05. The self care need significantly influenced self care agency = 0.92, self care need significantly influenced nursing care = 1.71. Self-care agency did not significant influence self care = -0.03. Nursing care didn't significantly influence self care agency = 0.01.

From the research, it can be concluded that Restoratif care model was more efficient and guaranteed the care sustainability after the patients returned home to create the stroke patients independence as an effort to fulfill their daily needs

Key Words:*restorative, ischemic stroke, nursing care*

I. Introduction

Based on the WHO report found that in 2003 in Indonesia, approximately 123 684 people Died of a stroke. If Compared with other countries Reviews such as Malaysia amounted to only 10 169 people, Thailand 24 810 people. Based on the WHO report found that in Indonesia number of disability incidence rate in each day that are caused by stroke Patients at 8/1000 Patients (WHO, 2008). Prolonged stroke because interference can be disturbances in physical functioning, psychological functioning, social functioning and environmental functions (Lynch et al. 2008). Stroke Patients have difficulty communicating by 51%, 64% cognitive impairment, impaired independence of 86%, the risks of falls 87%, Decreased independence in bed, sitting 88%, a 86% Decrease balance, 83% weakness in motion, weakness after Suffering a stroke 92% (Cowman et al., 2010).

Both physical and psychological disorders in stroke patients required assistance from various parties such as the community, the nursing profession, a family member or a combination of the nursing profession and the family as the treatment of stroke patients at home by family members who have been trained (Cowman et al 2010). Motivation of the patient can improve patient recovery efforts on the ability of the patient in attempt self-fulfilment activities of daily necessities. Patients require an understanding of the efforts of nurses in the care of you after completing the treatment of hospital (Maclean, 2000). Social factors play an important role in the independence including the role family members. Support family members provide encouragement for patients with stroke in attempt independence stroke patients (Morris et al., 2012).

A model of care for stroke patients is a new focus on medical aspects and attempt recovery of disability conditions. The treatment is improving the ability of patients and families themselves have not been fully carried out. The study aims to determine the components of building a nursing care of stroke patients and determine the independence model of nursing care in patients with stroke.

II. Research Methods

The research design used in the study was cross-sectional. The population is a stroke patient who went to the Hospitaldr. Cipto Semarang and Semarang District General Hospital.
Large samples according Lemeshow (1997) as follows:

$$n = Z^2_{1-\alpha/2} \sum_{h-1}^{L} \frac{N_h^2 P_{h(1-P_h)}}{W_h}$$

Based on a sample size calculation with a confidence level of 95% was obtained samples of 65 samples.

Data was collected through interviews through a questionnaire with home visits. The data collection characteristics of patient age, sex, length of stroke, frequency falls based on the interviews conducted with a structured questionnaire. Family support data collection, the needs of self-care, self-care agency, nursing care and self-care is done through interviews with patients and families.

Data was analysed using confirmatory analysis to determine the validity and reliability of the indicators used every variable and analysis of SEM (Structural Equation Model) to determine the appropriate model related to the treatment of stroke patients with a confidence interval (CI) 95%. The level of significance in the study are set to the value of $p < 0.05$.

III. Results

The study was conducted on 65 patients with stroke who perform outpatient Hospitaldr. Cipto and Hospital Semarang. Based on the results of a study of 65 patients with stroke obtained results as shown in table 1.

Table. 1 Respondent Characteristics of Stroke Patients (age, gender, education level, marital status and occupation) in the hospital dr. Cipto and Hospital Semarang.

No	Patients Circumstances	Frequency	Percent
1	**Gender**		
	Man	43	66.2
	Female	22	33.8
2	**Education**		
	Elementary school	9	13.8
	Middle school	13	20.0
	High school	35	53.8
	College	8	12.3
3	**The Work**		
	Private employees	16	24.6
	Entrepreneur	13	20.0
	Merchant	28	43.3
	Farmer	8	12.3

Table. 1 shows that the majority of stroke patients were male, educated high school, and worked as a trader. When viewed from the characteristics of the illness such as the frequency falls and long suffering a stroke as shown in table 2.

Table 2 Distribution general overview of stroke patients in the hospital dr. Cipto and Hospital Semarang.

No	Patients Circumstances	Frequency Mean	per cent Elementary school
1	**Fell last week**		
	Yes I Do	17	26.2
	Do Not	48	73.8
	Total	65	100
2	**Fell last month**		
	Yes I Do	28	43.1
	Do Not	37	56.9
5	**Long Illness**		
	1 year	42	64.6
	2 years	9	13.8
	3 years	7	10.8
	4 years	5	7.7
	5 years	2	3.1

Table 2 shows that in the last week there were 26.2% of patients experienced a fall, in the last month 43.1% of patients had experienced falls. The results also showed that the majority of research subjects suffered a stroke during the last 1 year.

Based on the components that build self-reliance of nursing care such as self-care needs, nursing care, self-care agency, self-care and family support as shown in the following table:

Table 3. Results validity and reliability indicators of self-care needs in stroke patients in Hospital dr. Cipto and Hospital Semarang.

Self-Care Needs	Validity		Reliability		Information
	λ	t_{λ}	1- δ	$t_{1-\delta}$	
Physical	0.76	7.27	0.41	5.65	Valid & reliable
Psychology	0.98	10.90	0.04	5.34	Valid & reliable
Emotion	1.00	11.30	0.00	0.65	Valid &unreliability
Spiritual	1.00	11.22	0.01	2.89	Valid & reliable

* RMSEA = 0.019

Table 3 concluded that physical, psychological, emotional and spiritual are valid, while reliability was found that the physical, psychological and spiritual is a reliable indicator while emotions are not reliable. Driven self-care needs (indicators) by physical, psychological, emotional and spiritual. The model results show that the model is fit which is indicated by the value of RMSEA 0.019.

Table 4. Results Validity and reliability indicators of family support in stroke patients in the Hospital dr. Cipto and General Hospital Semarang.

Family Support	Validity		Reliability		Information
	λ	t_{λ}	1- δ	$t_{1-\delta}$	
Information	0.87	8.63	0.24	4.12	Valid &reliable
Instrument	0.86	8.58	0.25	4.18	Valid &reliable
Reward	0.86	8.63	0.24	4.13	Valid &reliable
Emotion	0.86	8.45	0.26	4.28	Valid & reliable

* RMSEA = 0.0127.

Table 4 shows that support information, instrumental, reward and emotion is an indicator variable support for the family. It was concluded that the information support, instrumental, reward and emotion are valid and reliable. The model is shown to fit RMSEA value 0.0127.

Table 5. Results validity and reliability of self-care agency in stroke patients in Hospital dr. Cipto and General Hospital Semarang.

Self-Care Needs	Validity		Reliability		Information
	λ	t_{λ}	1- δ	$t_{1-\delta}$	
Physical	1.00	11.27	0.00	1.99	Valid &reliable
Psychology	0.99	11.11	0.02	4.73	Valid &reliable
Emotion	0.97	10.68	0.06	5.41	Valid &unreliability
Spiritual	0.99	11.19	0.01	3.97	Valid &reliable

* RMSEA = 0.000.

Table 5 shows that the indicator of physical, psychological, emotional and spiritual is a valid and reliable indicator for the variable self-care agency. Based on the model shows that the model is fit is indicated by the value of RMSEA 0.000.

Table 6. Results of the validity and reliability of the nursing care of stroke patients in hospital dr. Cipto and General Hospital Semarang.

Family Support	Validity		Reliability		Information
	λ	t_{λ}	1- δ	$t_{1-\delta}$	
Self-Efficacy	0.98	10.80	0.05	5.37	Valid &reliable
Self-Management	1.00	11.38	-0.01	-2.01	Valid &reliable
Self-Regulation	0.99	11.10	0.02	4.33	Valid &reliable

* RMSEA = 0.000

Table 6 concluded that self-efficacy, self-management and self-regulation is valid and reliable, so it was concluded that nursing care is moved (indicators) by self-efficacy (λ = 0.98), self-management (λ = 1.00), self-regulation (λ = 0.99) . The model results show that the model is fit as indicated by the value of RMSEA 0.000.

Table 7. Results of validity and reliability of self-care in patients with stroke in Hospital dr. Cipto and General Hospital Semarang.

SC	Validity		Reliability		Information
	λ	t_λ	1- δ	$t_{1-\delta}$	
Eat	0.88	8.89	0.23	4.81	Valid &reliable
Take a bath	0.85	8.47	0.27	4.55	Valid &reliable
Titivate	0.91	9.40	0.17	4.48	Valid &reliable
Dress	0.84	8.22	0.30	5.08	Valid &reliable
Defecation	0.90	9.22	0.19	4.62	Valid &reliable
Urination	0.83	8.15	0.31	5.10	Valid &reliable
Transfer	0.88	8.92	0.22	4.79	Valid &reliable

Table 7 shows that the indicators of eating, bathing, ornate, dress, defecation, urination, and the transfer is an indicator for the variable self-care. Concluded that eating, bathing, ornate, dress, defecation, urination, and the transfer are valid and reliable. The model results show that the model is fit which is indicated by the value of p = 0.000.

Model analysis performed on the variable needs of self-care, family support, self-care agency, nursing care, and self-care patient's stroke.Analysis the model aims to determine the model that occurred related to the treatment of stroke patients conducted so far. The results of the analysis of the model as shown in figure 1 below:

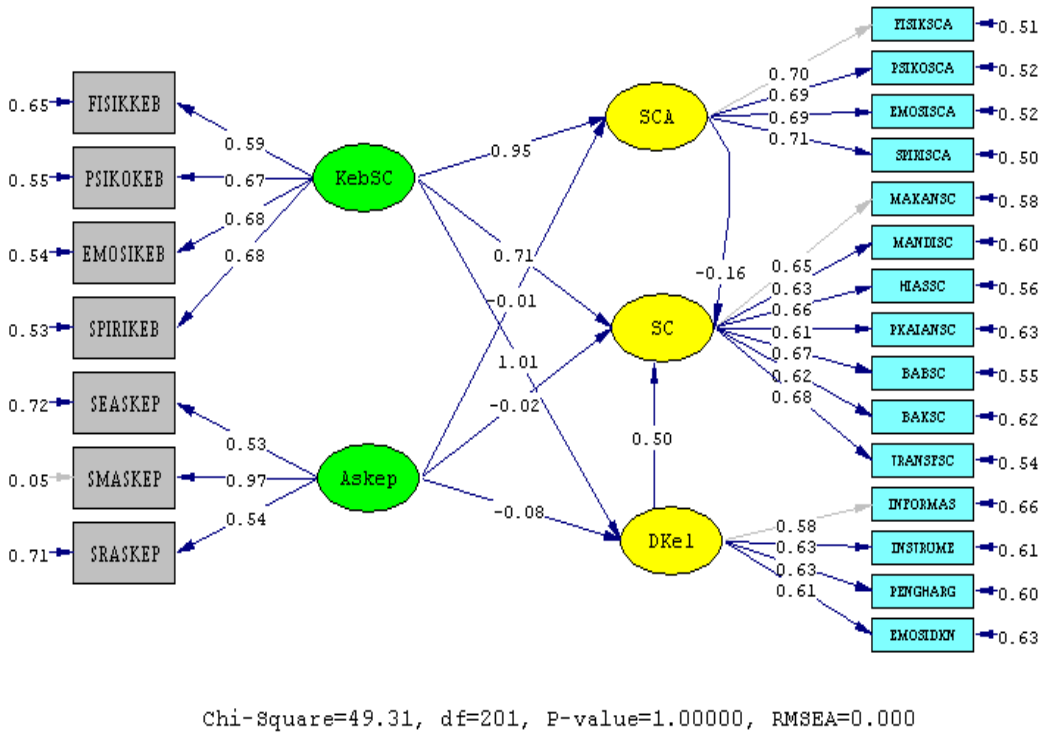

Figure.1 Model of care for stroke patients has been conducted in Hospital dr. Cipto and General Hospital Semarang.

Model analysis shows that the impact on the need for self-care agency λ = 0.95, self-care patients with stroke λ = 0.71, λ = 1.01 The family support. Nursing care is not significantly impact on family support λ = -0.08, nursing care is not significant impact on self-care agency λ = -0.01 and nursing care was not significantly impact on the self-care λ = -0.02. Self-care agency does not significantly impact on the self-care λ = -0.16 and family support significantly affect self-care λ = 0.5.

Based on the results of the analysis of the model showed that the need for self-care can improve self-care patients with stroke through family support stroke patients. It is seen from the path of self-care needs significantly improve self-care through family support λ = 1.01 the greater when compared directly affect self-care λ = 0.71.

IV. Discussion

Treatment of stroke patients to be comprehensive, involving a variety of roles both from patients, families and medical workers and medical personnel. Family members can play a role in the form of a role in the provision of informational support, instrumental, awards, and emotional support. Support information for the provision of information about how to care, instrumental form of providing equipment, support an award of credit for what stroke patients, emotional support in the form of reinforcement and encouragement to face the attack of stroke patients. Morris et al (2012) the family and social factors play an important role in the maintenance of independence.

Physical needs cause physical dependence for patients with stroke. Both physical and psychological disorders needed assistance from various parties such as the community, the nursing profession, a family member or a combination of the nursing profession and family Lynch et al (2008) the help of the various parties may be social support, coping mechanisms, communication, physical function and independence in carry out activities of daily living.

Hudak and Gallo (1994) post-stroke patients showed problems-emotional and behavioural problems which may vary from state before the stroke. Emotions can be unstable patients, tolerance to stress likely to decline, and sometimes-sometimes family cannot understand the patient's condition.

Service delivery relies on nurses caused dependence on nurses in order to fulfil the daily needs of stroke patients. The role of service providers (nurses) not only as service providers but May as knowledge transfer. Nursing care is very important to the families in an effort to patient autonomy.

Nursing profession plays a role in communication and coordination between providers of nursing care team and the patient, the family and society. Communication and coordination between teams is critical to the successful treatment of stroke patients. Independence of the main stroke patients in the daily fulfilment among others, the need to eat, dress, BAB, BAK, toilet and transfer is a fundamental requirement in meeting the daily needs of stroke patients. Treatment of stroke patients, among others, the need to eat, need for bowel elimination, mobilization, skin care, daily necessities (Vandermeulen& Fahey, 2011).

Mobilization needs for stroke patients is very important. Immobile cause pressure sores in patients with stroke so that the stroke patient tissue necrosis of the skin. Tissue deaths experienced by stroke patients require skin care.

Ostir et al (2008) positive emotional support to patients with stroke is very important, positive impact on strengthening the support of motor and cognitive functions. Motor function is essential to the fulfilment of daily needs and some research suggests that stroke survivor's independence with regard to the quality of life of patients with stroke. Support positive emotions can reduce the risk of onset of disability and improve motor function and cognitive status.

Orem (2001) condition requiring nursing assistance in Stroke Patients Individuals adult is when personnel Stroke Patients experiencing self-care deficit (limitations) that the absence of the ability of self-care agency to maintain the quantity and quality of the therapeutic self-care continuously in maintaining life and health.

Self-care needs of the human regulatory function based on an individual's ability to perform maintenance themselves. Deficit treatment in patients with stroke caused human beings stroke patients seek care provider. Doenges (2002) treatment of stroke patients involves a variety of disciplines such as nurses, physiotherapy, and psychology, occupational and spiritual. Van der Ploeg, et al. (2006) play a role in the training of patients with disorders of posture, movement disorders and muscle problems. Legg (2007) Occupational acts perform fine motor movements daily activities. Speech therapy helps communication role. Care needs to encourage the ability to self-efficacy, self-management and self-regulation. Resnick (2009) emphasized the independence of self-efficacy in physical exercise.

Low family support causes stroke patients experience a loss of self-care in order to meet daily needs. Support positive emotions and positive support for stroke survivor's impact on the strengthening of the motor and cognitive function. WHO (2009) self-care efforts in principle emphasizes that the individual micro level and macro level, namely the family, community and social. Independence that was pursued at the level of individual emphasis on the ability to fulfil daily needs. Self-reliance on family aspects include independence in providing care and support to patients including financial fulfilment, independence on the social aspects include independence in forming the group receiving stroke patients.

Self-care needs effectively improve the ability of patients in self-care through family support. Support families provide moral support and the family can replace most of the role of nurses in the care of stroke patients independence.

V. Conclusion

Factors associated with the independence of the stroke patient care among other needs of self-care, self-care agency, nursing care and family support. Model independence of stroke patients is effective in improving self-care patients with stroke is through family support. Appropriate treatment care for stroke patients by improving the ability of families and patients through self-efficacy, self-management and self-regulation.

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