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Independency Models of Nursing Self-Care for Ischemic Stroke Patient

Fery Agusman Mendrofa[1], Chatarina U. Wahyuni[3], Nursalam[2], Hasan Machfoed[4], Kuntoro[3], Hari Basuki Notobroto[3], Rachmad Hargono[3], Bagus Widjonarko[5]
[1] Department of Nursing Sciences, Karya Husada Institute of Health Science, Indonesia
[2] Department of Nursing Science, Airlangga University, Indonesia
[3] Department of Public Health Science, Airlangga University, Indonesia
[4] Medicine Faculty, Airlangga University, Indonesia
[5] Department of Public Health Science, Diponegoro University, Indonesia

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ABSTRACT

Stroke injury such as physical and psychological disorders was required assistance such as the community, nursing professional and family. Family and social factors play an important role in independence strokes such as support family members provide encouragement for self care.The objective of aim the study wasto assess indicator of self care and model family support related self care. A cross-sectional survey research design was used. Data was collected with interviews by home visited method. Data were analyzed with confirmatory analysis for determined of validity and reliability indicator, models analyzed by SEM (*Structural Equation Model*).Family support such as information, instrumental, reward and emotion were valid indicator for family support. Self care indicators such as eat, bath, titivate, dress, defecating, urination and transfer to building of self-care. Indicators of eating, bathing, titivate, dress, defecate, urination, and transfer is an indicator for self care. It could be concluded that eating, bathing, ornate, dress, and the transfer is valid and reliable. Model showed that self-care needs were improved of self-carepatients with through family support.

Corresponding Author:

Fery Agusman Mendrofa,
Department of Nursing Sciences,
Karya Husada Institute of Health Science,
Jl. Intan Raya No 1 Kedungmundu, Semarang – 50000, Indonesia.
Email: ferymendrofa@stikes.karyahusada.ac.id

1. INTRODUCTION

Based on the WHO report that in Indonesia estimated 123.684 people died caused stroke disease for 2003, compared with other countries such as Malaysia estimate only 10.169 people and Thailand 24.810 people. Incidence rate of disability each day in Indonesia estimated 8/1000 patients [1]. People with suffered a stroke long time have disturbed physical, psychological, social, and environmental functions [2]. Stroke patients have difficulty communicating (51%), cognitive impairment (64%), loss of independence (86%), falls (87%), decreased independence in bed (88%), muscle disorders (86%), emotional imbalance (83%), and weakness (92%) [3].

Stroke injury such as physical and psychological disorders was required assistance such as the community, nursing professional and family. Family members could changes give service nursing home care with trained method. One of ways method knowledge transferred with Training of trainer (TOT). Implemented of roles of nursing system is supporting education. Family motivation has improvement emotional and psychological to independency activity daily at home [4]. Social factors play an important role in independence strokes such as support family members provide encouragement for self care [5].

Disorders of physical and psychological during stroke attached, family support have been main focused for sustainable nursing care post discarger hospitalisation. Nursing service sustainable related to family support during stroke patient at home: Family support program through education program especialy for family and community; family support program to guide the timing of delivering nursing service through education and support to meet caregivers' evolving needs [3].

Models self-care services for stroke patients who have recently focused on the medical aspects and attempt recovery of disability conditions. Self-care service based for treatment to improving ability self care of patient and families didn't focused.The study aims to determine components building models independency self care of stroke patients and determine the independence models of nursing self-care in stroke patients.

2. RESEARCH METHOD

A cross-sectional survey research design was used. Population study was required stroke patientwho visited tothe hospital on clinicof dr Ciptoandgeneral hospital region of Semarang.Sample was required with inclusion and exclusion criteria. Inclusion criteria as stroke patients with the diagnosis of CT scans, stroke patients who had previously treatment in hospital study was conducted, stroke patients currently active treatment. Exclusion criteria as patients stroke during the study processare not eligible research, Patients with stroke from hospital care referral from another hospital study.

Sample was calculated using formula [6]:

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

Based ona sample size calculation with a confidence level of 95%, sample was calculated based on two stratas hospital status: goverment hospital type and non goverment hospital. Based on formula was required of 65 samples. Sample collected with systematic random sampling method. Data was collected with interviews by home visited method. The data characteristics such as age, sex, length of stroke, frequency falls collected with interview by structured questionnaire guided and medical record history.The research variable data such as family support, self-care, self-care agency, nursing care and self care was collected by interview with patient and families. Self care variable measuring with barthel index instrument.

Data were analyzed with confirmatory analysis for determined of validity and reliability indicator such as family support, self-care, self-careagency, nursing care and self care. Modeling interaction variable was analyzed by SEM (*Structural Equation Model*) to determinate the appropriate model related to self care treatment of stroke patients with a confidence interval (CI) 95%, level of significance value of $p < 0.05$. Descriptive statistics were used to depict the patterns (frequency, percent).

3. RESULTS AND DISCUSSION

3.1. Results

The study was conducted on 65 patients with stroke who perform hospital clinical visited at Panti Wilasa dr. Cipto and general government hospital of Semarang. Description characteristic of subject shown Table 1.

Tabel 1. Characteristic subject such as sex, education and occupation

No	Subject characteristic	Frequency	Percent
1	**Sex**		
	Male	43	66.2
	Female	22	33.8
2	**Education**		
	Elementary school	9	13.8
	Junior high school	13	20.0
	High school	35	53.8
	Academic	8	12.3
3	**Occupation**		
	Private employees	16	24.6
	Entrepreneurship	13	20.0
	Merchant	28	43.3
	Farmer	8	12.3

Table 1 concludes that stroke patient dominated by male, high school, and merchant occupation. Based on stroke characteristic such as falls in week, moon or period of stroke shown in Table 2.

Tabel 2. Characteristic of stroke such as falls and stroke period

No	Stroke characteristic	Number	Percent
1	**Falls in Last Weeks**		
	Yes	17	26.2
	No	48	73.8
2	**Falls in Last Moon**		
	Yes	28	43.1
	No	37	56.9
3	**Period of stroke**		
	1 years	42	64.6
	2 years	9	13.8
	3 years	7	10.8
	4 years	5	7.7
	5 years	2	3.1

Tabel 3. Validity and reliability indicators of self-care needs variable in stroke patients

***Self Care* Needs**	**Validity**		**Reliability**		**Status**
	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 &Not reliable
Spiritual	1.00	11.22	0.01	2.89	Valid & reliable
Family support					
Information	0.87	8.63	0.24	4.12	Valid & reliable
Instrumental	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
Self Care Agency					
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 & Not reliable
Spiritual	0.99	11.19	0.01	3.97	Valid & reliable
Nursing Care					
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

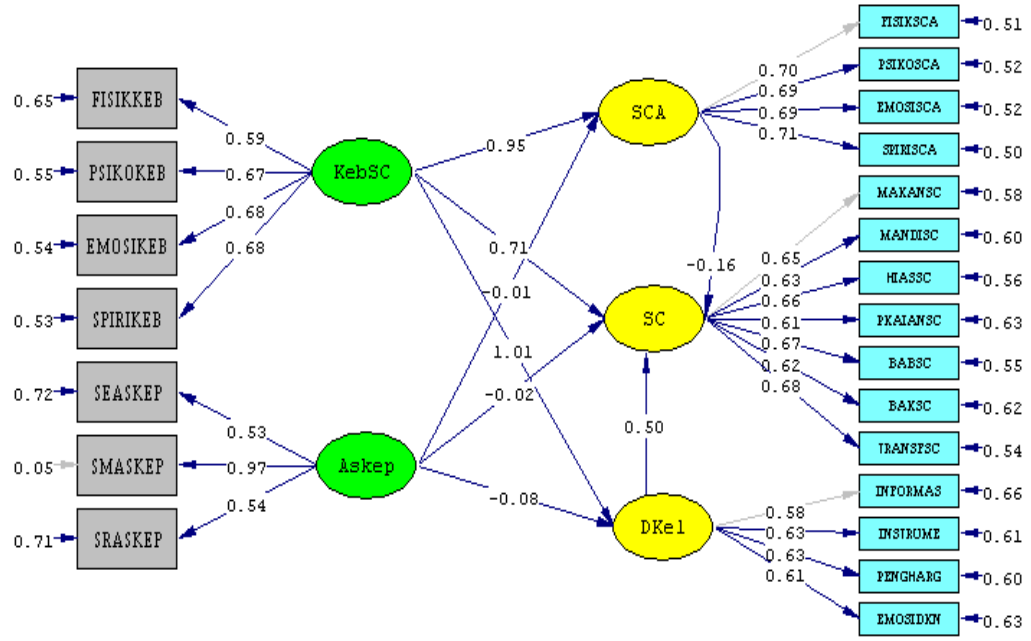
Table 2 shows that estimated 26% subject was falls in week and 43% in moon. Long period of stroke majority subject was attaching for one year. Based on components was nursing self-care built such as self-care needs, nursing care, self-care agency, self-care and family support as shown in Table 3. Table 3 shows that physical, psychological, emotional and spiritual are valid for self care needs indicators, but emotion not reliable for self-care needs indicators. Based on family support such as information, instrumental, reward and emotion was valid indicator for family support. Self care indicators such as eat, bath, titivate, dress, defecating, urination and transfer to building of self-care shown Table 4.

Table 4. Validity and reliability test ofself-care in patients with stroke

Self Care	**Validity**		**Reliability**		**Status**
	Λ	t_{λ}	1- δ	$t_{1-\delta}$	
Eat	0.88	8.89	0.23	4.81	Valid &reliable
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
Defecate	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 4 shows that indicators of eating, bathing, titivate, dress, defecate, urination, and transfer is an indicator for self care. Concluded that eating, bathing, ornate, dress, and the transfer is valid and reliable. Analyzed for modeling such as self-care, family support, self-careagency, nursing care, andself-carewas aims

to determinethe model was effectively for treatment stroke disease. The results of the analysis of the model is shown in Figure 1.



Note:
KebSC = Self Care need SCA = Self Care Agency SC = Self care
Askep = Nursing care Dkel = Family Support

Figure 1. Independency of nursing self-care Models for Stroke Patients

Figure 1 shown that that self care needs was impacted on self-care agency λ=0.95, self-care λ=0.71, family supported λ= 1.01. Nursing careis not significantly impact on family support λ=-0.08, self-careagencyλ=-0.01andself-careλ=-0.02. Self-care agency is not significantly impact on thes elf-care λ=-0.16 and family support significantly affect self-care λ=0.5. Results of Analyzed showed that self-care needs were improved of self-care patients with through family support. It is seen from the path of self care needs significantly improved self-care through family support λ= 1.01, if compared directly affect self-care λ=0.71.

3.2. Discussion

Comprehensively treatment was effectively involved roles of patient, family, medical personnel and medical. Family members can role play such as informational support, instrumental, awards, and emotional support. Support information such as information about how to care during at home. Support instrumental such as providingequipment. Support an award such as praise for the success of activities under taken. Support emotion such as reinforcement and encouragement to encounter attack of stroke patients. Family and social factors play an important role in the maintenance of independency [5].Cronic diseases patient post discarge hospitalisation need for holistic services thus an services was colaboration to other tems likes nursing, fisioteraphis, occupation therapist and medical. Cronic disease patient post discarge hospitalisation effective for teams' services and the team was improved quality of life and satisfaction [7].

Post stroke discarger needs sustainable nursing services during at home. Nursing services was sustainable through multi-disciplines services such asnurses, physiotherapy, psychology, occupational. Previous study show that sustainable nursing service is importance caused post discharger stroke hospitalisation difficult for get nursing service at home. It's condition caused distribution of nursing betwen rural and urban inbalanced. Nursing in urban 24.6% and rural only 19.2% was home care service practice [8]. Nursing distribution one of factors caused nursing home system difficulted for implemented specialy for stroke post discarger hospital service.

Main problem for stroke patient at home is daily activities because Muscle disorder. Falls are one of the most common unexpected experienced by survivors of stroke and may be related to cognitive and or motor deficits. Approximately 10% of survivors of strokeexperienced at least one fall after their stroke that was serious enough to require treatment in hospital [9]. Physical activity is focused for stroke mobilization extremities. Muscle disorder caused physical dependence for patients with stroke. 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. Independency of stroke patient to needs multi aspect such as social support, copingmechanisms, communication, physical function. Holistic problem solved independencein carrying outdaily activities [2]. Independence of stroke patients is fulfillment daily living such as eating, bathing, titivate, dress, defecate, urination, and the transfer. Intervention for stroke patient such as eating, bowel elimination, mobilization, skin care, daily living activity is main requirement. Mobilization for stroke patients is very important. Immobilization caused skin tissue death. Patients with conditions was tissue death experienced by stroke patients require skin care [10].

Post-stroke patients showed demotional and behavioral problems which differences before the stroke state. Some of the circumstances such as emotions labile, decrease tolerance, and family not understand the patient's condition [11]. Positive emotional support for patient stroke is very important, positive impact on strengthening motor and cognitive functions. Motor functionis essential for fulfilled daily living and some research suggests that independence with regard to increased quality of life of stroke patients. Support positive emotions can reduce the risk of on set disability and improve motor function and cognitive status [12]. This suggests that survivors who are being discharged home with these impairments will need closer supervision and their family caregivers. Nurses must identify the potentialmedications, extrinsic and environmental factors that can contribute to falls, and initiateinterdisciplinary discharge education to address these factors. Nursing services was delivered only nursing services caused reliance on nurses for addressing nursing service daily activities of stroke patient. The role of service providers (nurses) not only as service providers but transfer of knowledge. Activities transfer of knowledge with supportive educative nursing through training of trainer for patient or family. Nursing profession plays a role in communication and coordination between providers of nursing care team and patient, family and society. Communicating and coordinating very important in the effort to successful treatment of stroke patients. Post stroke hospital discarger need for education for survivors of stroke and their caregivers prior to discharge. Education was focused for lifestyle, nursing services strategic and referrals throughout inpatient rehabilitation [9].

Required of nursing services is decreased ability self care to maintain the quantity and quality of the therapeutic self-care sustainability in daily living.Self-care needs of the human regulatory function based on an individual's ability to perform maintenance themselves [13]. Treatment of stroke patients involves multi-disciplines such as nurses, physiotherapy, psychology, occupational and spiritual [14]. Occupational intervention for perform fine motor movements thus increased daily activities.Speech therapy helps communication role. Nursing service focused to encouragethe ability to self-efficacy, self-management and self-regulation [15]. The emphasized the independence of self-efficacy in physical exercise [16].

Post stroke discarger was effective to family support services in order with Transfer of knowledge education method. Previous study conducted in Canada was concluded that education for stroke family was improving their perception of being supported and emotional well-being. Education guideline for family is efective for transitions hospitalisation discharger [17]. Transitions for service with family support more efective by economic aspect. Rehabilitation nurses are crucial to preparing survivors of stroke and their family membersfor demanding and challenging post-discharge care at home. Family was supporting an provide some evidence for the need for thorough risk assessments, earlyimplementation of risk reduction strategies and lifestyle education, and community referralsthroughout inpatient rehabilitation [17].

In community stroke intervention was focused for falls in order stroke daily activity. Falls stroke frequently was seriously injuries, thus intervention was focused for family or community closed patient stroke. Preventing falls in people affected by stroke is an important nursing care goal. In order nursing care service effective involved family support. Transfer of knowledge intervention schedule to family one of solve problem with discharge. Nursing transferred knowledge is importance to understanding family when falls following discharge hospital. Treatment of stroke patients at home can be done by a family member so that the independence of the treatment can be carried out by family members. Falls in community-dwelling stroke survivors are a frequent occurrence following on patient rehabilitation. Intervention was effectively prevented falls among people affected by strokes [18]. The provision of nursing care support for families to take care of elderly relatives would appear to be essential for an effective nursing and social care system [8].

Low family support caused stroke patients dependency of self-care in order daily activities. Support positive emotions impacted on the strengthening of the motor and cognitive function. Self-care effort sin principles pressure an individual micro level and macro level such as family, community and social [1].

Independency for individual level pressure ability to fulfilled daily needs. Self-reliance on family aspects include independence in providing care and support to patients included financial fulfillment, independence on the social aspects included independence in forming the group received stroke patients. Self care needs effectively improve the ability of patients in self-care through family support. Support families provide moral support and family can replace role of nurses in independency services of stroke patients.

4. CONCLUSION

Factors associated with the independence self-care of the stroke patient such as self-care, self-care agency, nursing care and family support. Model independence of stroke patients is effectively an improving self-care patient with stroke through family support. Appropriate treatment self-care for stroke patients by improving the ability of families and patients through self-efficacy, self-management and self-regulation.

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COMPETING INTERESTS

The authors declare that they have no competing interests.

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