RESEARCH ARTICLE
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Development of a "Model for Improving Quality of Life" for Stroke Patients Based on Preventive Efforts

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ABSTRACT

Stroke in Indonesia is the third leading cause of death after heart disease and cancer. High rates of death and stroke-related disabilities are related to pathophysiological processes that occur in brain tissue. Changes in blood flow in the brain cause disruption of the nervous system. Such disturbance may result in permanent disability of the device in the form of paralysis. Physical changes that are often experienced by the patient is paralysis of motion, loss of swallowing ability, cognitive disturbances, and psychological disorders. These conditions will affect the psychological health and quality of life of patients. This research was conducted in 2 stages. The first stage is done by using Partial Least Square test to see the variable that influence the ability of patient and family in doing stroke prevention. The sample size used was 60 people taken by accidental sampling. The second stage is a pre-experiment that compares the conditions before and after treatment using t-test. The results showed that the predisposing factor (self efficacy and cues to action) had an effect on the behavior of stroke prevention; reinforcing factors (family roles) affect the behavior of stroke prevention; enabling factors (health promotion) affect the behavior of stroke prevention.

Keywords: Self efficacy, Cues to action, Family role, Health promotion, Stroke prevention behavior

INTRODUCTION

Stroke is a clinical syndrome with symptoms of brain dysfunction locally or globally, which can lead to persistent abnormalities over 24 hours or death without other causes except for vascular disorders. Stroke is divided into two main groups of ischemic and hemorrhagic strokes. Ischemic stroke include thrombolic and embolic strokes. Estimated ischemic stroke occurs 85% of the number of strokes that exist. Risk factors for ischemic stroke are atherosclerosis (20%), small arterial disease (25%), cardiogenic embolism (20%), cryptogenic (30%) and others (5%). Hemorrhagic stroke is divided into two categories based on the mechanism of hemorrhagic hemorrhagic stroke and subarachnoid hemorrhagic stroke (Hickey, 1997).

Changes in cerebral blood flow cause disruption of the central nervous system and cranial nerves. Such disturbance may result in permanent disability of the device in the form of paralysis. Physical changes such as that often experienced by patients are paralysis partial motion, loss of swallowing ability, cognitive impairment, and psychological disorders (Black & Hawks, 2005). This will have an impact on the ability of patients to perform daily activities such as eating, dressing and personal hygiene and others. This disability can be experienced by patients after a stroke from three months to a year or more. These conditions will affect the psychological stroke patients. Psychologically stroke patients vary according to the patient's acceptance and understanding of her. One of the psychological conditions affected with the patient's physical status after a stroke is quality of life (Hickey, 1997). Quality of life is an abstract statement and a multidemensional concept. Quality of life is free from pain, able to perform daily activities and fight for life (Wig, et al, 2006)

Quality of life covers various aspects of life that are grouped into seven categories related to physical symptoms. Physical symptoms include pain, functional ability such as activity, family welfare, emotional well-being, therapeutic satisfaction, financial problems, sexuality and others (Cella, 1998). Quality of life is one indicator of the success of stroke patients. Ahlsio, et al (1984) found that post-stroke disability affected the quality of life of patients. Patel, et al. (2007) found that the quality of life of stroke patients was influenced by the clinical

status of patients after suffering a stroke. Clinical status include cognitive impairment, urinary incontinence and lesions in the hemispheres. Hackett, et al (2007) found that the quality of life of post-stroke patients was influenced by functional conditions, sexuality and socialization with the environment and family Niemi et al. (1988) found that local hemispheric lesions, pares and coordination disorders were highly correlated decreased quality of life of stroke patients after 4 years of attack.

Quality of life is physically, mentally and socially healthy and regardless of disease (Fayers & Machin, 2000) and according to Hellen (2007) quality of life is the individual's perception of their lives in the context of culture and the value of life to achieve the purpose of life. Quality of life can also be defined as a person's sense of well-being in life, the ability to take a beneficial role and ability to participate Quality of life in health is defined as the value given over life and may change due to impairment of functional, perceptual, social values affected by injury , illness and treatment (Carod et al, 2000). Quality of life is a multidimensional concept covering physical, social, psychological dimensions related to disease and therapy. Many factors affecting a person's quality of life, such as health, economic, environmental, safety and other factors, in the health sector in question are health-related quality of life (Guyatt et al., 1993).

Assessment of the quality of life in the health field especially stroke patients aims to restore physical functioning with an approach focused on the individual's ability to physically function in terms of mobility and daily activities, the restoration of feelings and perceptions and how the patient feels about his health status (Yang & Kong, 2006). Patients after a stroke tend to live long in a state of decline in function, usually they suffer from physical role change, mood disorders, cognitive decline and decreased social interaction (Carod et al, 2000). Jaracz & Kozubski (2003) said from his research that changes in quality of life are very clearly seen in patients after a stroke. This is corroborated by Carod et al (2000) who said that patients after a stroke will have physical changes, mentally impaired

METHODS

This research was conducted in 2 stages: 1) explanative with cross sectional approach, 2) Pre-experiment with One group pre-post test. The population in this study were all stroke patients who came to public health center in Sidoarjo regency, East Java in January to April 2016, with population size 65 people. The sample size was 60 people for the first stage and 50 people for the second stage. The independent variables consist of predisposing factors, reinforcing and enabling factors; the intermediate variable is the behavior of stroke prevention both primary, secondary and tertiary; while the dependent variable is the quality of life of stroke patients. Data were collected using questionnaire then analyzed using Partial Least Square (PLS).

RESULTS

Table 1. The Results of PLS

Variables	Path coefficients	Standart Error	t-statistic	Note
1. Influence predisposing to preventive behavior	0.332	0.15	2.216	Significant
2. The influence of reinforcing on preventive behavior	0.232	0.109	2.130	Significant
3. The effect of enabling on preventive behavior	0.433	0.096	4.521	Significant
4. The influence of preventive behavior on quality of life	0.821	0.028	29.469	Significant

Follow-up of FGD conducted jointly with Sidoarjo District Health Office, Stroke Service Program Holder, Head of Public Health Center from 4 Sub-districts resulted family training with family training prepared by researchers with Health Department. After cadre training the family is expected to be able to motivate, provide education to patients with stroke so as to do the prevention of both primary, secondary and tertiary. The evaluation of this training is the assessment of patient's quality of life by comparing between before and after training. All indicators of Quality of life in stroke patients after training were increased. The result of the analysis using paired t-test which compare before and after training showed α <0,05. This shows that there is a significant difference between before and after training on all indicators of Quality of life in stroke patients.

DISCUSSION

The quality of life in this study consists of 12 indicators: 1) energy, 2) family role, 3) language ability, 4) mobility, 5) mood, 6) personality, 7) self care, 8) social role, 9) , 10) ektremitas, 11) vision and 12) productivity. The application of the Stroke Prevention Module that is taught to patients and families shows a change in the quality of life in stroke patients after patients and families are taught about the application of stroke prevention modules. Stroke implementation module teaches family how to do prevention and how to care for family with stroke so that patient can can move optimally.

This study shows that increasing family knowledge will improve the family's ability to care for families with stroke. By increasing the family's ability to care for family members then the patient will get optimal care, doing prevention and rehabilitation so that the patient's ability will return optimally as before.

This is consistent with the theory that a person's behavior is strongly influenced by his or her level of knowledge. According to Lawrence Green's theory, there are three factors that influence the change of individual behavior that is predisposing factor, enabling factor and reinforcing factor. This research is also in accordance with the theory of Health Promotion model which states that health behavior is influenced by several factors namely perceived benefits factor, perceived treats, perceived barrier, cues to action and also self efficacy which in this study only 2 factors that influence the factor cues to action and self efficacy.

CONCLUSION

Evaluation of the implementation of the module obtained the results that the module has been given able to increase the family's ability in doing prevention. Improved long-term prevention capability improves the quality of life of stroke patients.

REFERENCES

Ahlsio, B., Britton, M., Murray, V., Theorell, T. (1984). Disablement and quality of life after stroke. *Stroke,* 15: 886-890.

Black, M.J., Hawks, H.J. (2005). *Medical-surgical nursing*: c*linical management for positive outcome*. (7 th ed). St.Louis: Elsevier Inc.

Carod, A.J.F., Egido, J.A., Gonzalez, J.L., De Seijas, E.V. (2000). Quality of life among stroke survivors evaluated 1 year after stroke; *Experiences of Stroke Unit. Stroke* 31: 2995-3000

Cella, D. (1998). *Quality of life*. New York: Oxford University Press.

Fayers, M.P., Machin, D. (2000). *Quality of Life Assessment: Analysis, and Interpretation*. John Wiley & Sons, LTD.

Guyatt, G.H., Feeny, D.H., Patrick, D.L. (1993). Measuring health-related quality of life. *Ann Intern Med*. 118:622-629.

Hackett, M.L., Duncan, J.R., Anderson, C.S., Broad, J.B., Bonita, R. (2007). Health related quality of life among long term survivors of stroke, *http://stroke.ahajournale.org*, accessed 27 Februari 2009.

Hellen W. (2007). Altered living: coping, hope and quality of life after stroke. *British Journal of Nursing*, 16(2).

Hickey, V.J. (1997). *The clinical practice of neurological and neurosurgical nursing.* (4 th ed). Philadelphia: Lippincott william & Wilkins.

Jaracz, K., Kozubsky, W. (2003). Quality of life in stroke patients. *Neurol Scand*, 107(5): 324-329.

Niemi, M.L., Laaksonen, R., Kotila, M., Waltimo, O. (1988). Quality of life 4 years after stroke, *http://stroke. ahajournale.org*, accessed 27 Februari 2009

Nugroho, H.S.W. (2014). *Descriptive Data Analysis for Numerical Data (Analisis Data Secara Deskriptif untuk Data Numerik).* Ponorogo: Forum Ilmiah Kesehatan (FORIKES).

Patel, M.D., Mc.Kevitt, C., Lawrence, E., Rudd, A.G. dan Wolfe, C.D.A. (2007). Clinical determinants of long-term quality of life after stroke, *http://ageing.oxfordjournale.org*, accessed 27 Februari 2009

Wig, N. L., Pal, H., Ahuja, V., Mittal, C., Mohan, & Agarwal, S. (2006). The Impact of HIV/AIDS on the Quality of Life: A cross sectional study in North India *http://www.indianjmedsci.org/article.asp?issn=0019-5359;year=2006*; accessed 24 Februari 2009.

Yang, S.Y., Kong, K.H. (2006). Health-related quality of life among chronic stroke survivors attending a rehabilitation clinic. *Singapore Medical Journal*, 47(3): 213.