



The Effectiveness Of Educational Intervention Package On Adaptation Response And Quality Of Life For Post Stroke Patients

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Abstract

Disability after a stroke that lasts for a long time can reduce the patient's quality of life that interventions are needed to increase the adaptation response as a way to achieve an optimal quality of life. The study aimed to determine the effectiveness of the post-stroke educational intervention package on adaptive behavior and quality of life. The research design used a quasi-experimental design with pretest-posttest with the control group. The

population was all post-stroke patients in Pekalongan Regency, Indonesia. Thirty-six research subjects were selected by consecutive sampling techniques and divided into two groups (18 subjects in the intervention group (received the educational intervention package) and 18 subjects in the control group. Next, two measurements were taken to determine the progress of the intervention results. The effectiveness of the educational package was measured with paired t-test. The results showed that the educational intervention package was proven to be effective in improving the response of physiological adaptation, psychosocial adaptation and quality of life for post-stroke patients. Post-stroke adaptation intervention package books train patients to be able to control stimuli, use adaptive coping and display adaptive behavior effective immediately after the patient has suffered from a stroke. The adaptive response shown by post-stroke patients is the key to achieving the patient's quality of life.

Keywords: adaptability: disability: educational intervention: response: website: stroke.

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Introduction

The national prevalence of stroke based on diagnosis by health professionals is 7 per mile, and based on symptoms is 12.1 per mile in a population of 15 years and over. Based on the type of area, the national prevalence of stroke in urban areas based on the diagnosis of health workers is 8.2 per mile and in rural areas it is 5.7 per mile (Santoso et al.,2020).

Stroke is also the leading cause of death in urban areas (15.9%) and the second leading cause of death (11.5%) in rural areas from the proportion of causes of death in the 45-54 year age group in Indonesia. Meanwhile, in the 55-64 year age group, stroke is the leading cause of death both in urban areas (28.8%) and in rural areas (17.4%) (Saputra & Rajjani, 2017). Based on this data, post-stroke prevention and rehabilitation programs should be a priority for health efforts in addition to programs for eradicating infectious diseases.

Apart from being the highest cause of death, the recurrence rate of stroke also shows a high rate. The number of patients who experience recurrent stroke attacks one month after the first stroke is around 3-10%, after one year it increases to 5-14%, and after 5 years after stroke it becomes 25-40% .Meanwhile in Indonesia, recurrent stroke attacks after one year occurred in 19.9% of patients after the first stroke, after five years it increased to 24% in women and 42% in men for all age groups (Taufiq et al.,2018).

Various problems experienced by post-stroke patients such as physical disabilities, depression, lack of knowledge about stroke and lack of family support will affect the patient's coping mechanism. Maladaptive patient coping with problems leads to ineffective adaptation responses (Roy & Andrew, 1999; Akhmad et al.,2020).



Lack of post-stroke adaptability results in poor quality of life for patients. On this basis, post-stroke adaptability needs to be improved so that optimal quality of life is achieved. The patient's adaptation response can be optimized by reducing stress and increasing the coping mechanism against stressors. The patient has a disability for a long time, so it requires adequate coping skills to achieve adaptive behavior.

A preliminary study on nursing management in post-stroke patients in Pekalongan district shows that nursing actions in stroke patients still focus on meeting basic needs. The information provided by the nurses did not cover all aspects needed by patients and their families to adapt to post-stroke disabilities at home. This problem phenomenon shows the need for post-stroke educational interventions based on Roy's adaptation theory, so that the main goal of rehabilitation, namely optimal quality of life after stroke can be achieved.

According to Ramie et al., (2019), an effective adaptation response to stressors is the key to the success of a rehabilitation program. The effective adaptation response allows the patient to be able to use all available resources so that they can return to productivity with existing limitations.

Methods

Research was conducted using a design of a quasi-experimental posttest control group. This design is used to determine the effectiveness or effect of the post-stroke adaptation educational intervention package on the adaptation response and quality of life of post-stroke patients after treatment. In the intervention group, patients and families (as caregivers) were given health education about post-stroke patient care in the form of an adaptation educational



intervention package for post-stroke patients and the control group was given conventional intervention as is usually done in a hospital (intervention package was given after the completion of the study). Then measurements were taken during the research process 2 times both the intervention group and the control group (Kot & Rajiani, 2020).

Results and Discussion

Results and Discussion

1. Analysis of differences in physiological adaptation responses before and after the intervention.

Table 1. Differences in Physiological Adaptation Responses Before and After Educational Intervention Packages for Post- Stroke Patients

No	<i>Barthel Index</i>	Treatment	Control
		Average± SD	mean± SD
1.	Before	67.50 ±11.789	65.28 ±11.940
2.	After	13.93375. 00 ±	66.94 ± 10.450
t		4.025	1.683
<i>p-value</i>		<i>0.001</i>	<i>0.111</i>

* test Paired t-test



Based on the above table shows that in the treatment group, the mean value of the *cartel index* before and after giving the education package was a significant difference ($p = 0.001$). Whereas in the control group, there was no difference between before and after with $p\text{-value} = 0.111$. So it can be concluded that there are significant differences between the treatment and control groups in terms of post-stroke physiological adaptation.

2. Analysis of differences in psychosocial adaptation responses before and after the intervention psychosocial adaptation responses before and after stroke.

Table 2. Differences in educational intervention package for patients post- stroke

No	Psychosocial Adaptation	Treatment	Control
		Mean $\pm$ SD	Average $\pm$ SD
1.	Before	39.17 ± 6.828	39.39 ± 4.913
2.	After	42.00 ± 7.776	40.17 ± 4.866
t	2.970	1.303	
p-value	0.009	0.210	

* Paired t-test

Based on the table above shows that the treatment group means the value of psychosocial adaptation response before and after giving the educational package there is a significant difference ($p = 0.009$). Whereas in the control group there was no difference between before and after with $p\text{-value} = 0.210$.



So it can be concluded that there is a significant difference between the treatment group and the control group in terms of the psychosocial adaptation of post-stroke patients.

3. Analysis of differences in quality of life patients post-stroke before and after intervention

Table 3. The difference in the quality of life of patients after stroke Before and After Intervention Packages Patient Education On After Stroke

No	Quality of Life	Treatment	Control
		Mean ± SD	Mean ± SD
1.	Prior to	33.78 ± 3.671	34 . 00 ± 2.635
2.	After	35.83 ± 3.130	33.67± 2.970
t		2.719	0.972
p-value		0.015	0.345

* test Paired t-test

Based on the table showed that the treatment group the mean value of quality of life before and after the educational package there is a difference which is significant ($p = 0.015$). Whereas in the control group there was no difference between before and after with $p\text{-value} = 0.345$.



The results showed that there was a significant difference between the treatment group and the control group in terms of the quality of life of post-stroke patients.

Physiological adaptation responses can be measured based on the value of the cartel index, where the higher the value indicates the better the physiological adaptation response of post-stroke patients. The adaptation response in the treatment group was better than the control group. An excellent physiological adaptation response can be seen from the ability to carry out daily activities independently or with minimal assistance. The better the adaptation response indicates the better the functional capability. Increased adaptation response in the treatment group is a positive effect of routine physical exercise after stroke. Regular physical movement exercises can improve functional abilities and reduce physical limitations. By increasing functional abilities, post-stroke patients can increase their independence in carrying out daily activities.

The adaptation theory explains that humans throughout their life cycle, always get stimuli from the external environment around them and the internal environment within themselves. Humans as adaptive creatures can control in the form of coping with the stimuli they experience. Coping with the external and internal stimuli that the individual has will result in adaptive behavioral responses. The adaptation behavior response is the ultimate goal of the individual adaptation process (Roy & Andrew, 1999).

Roy's adaptation theory is used as the basis for interventions that focus on reducing the stimulus experienced by post-stroke patients, increasing the coping ability of the stimulus and promoting effective post-stroke adaptation. Post-stroke patients, as individuals who can adapt, are facilitated to learn to adapt to various stimuli experienced after a stroke.



In terms of psychosocial adaptation, the results showed that there were significant differences between the treatment group and the control group. The post-stroke patient education intervention package book can increase the psychosocial adaptation response; this can be seen in the treatment respondent showing a better psychosocial adaptation response compared to the control group.

Several psychosocial factors are predicted to cause the disorder, which is generally associated with loss. These psychosocial factors are loss of social role, loss of autonomy, death of friends or relatives, decreased health, increased self-isolation, limitations and decreased function (Triana & Rajiani, 2019). The existence of limitations and decreased function in post-stroke patients can trigger low coping. Another factor that causes a positive psychosocial adaptation response is the use of psychological coping. Post-stroke adaptation educational intervention package books teach patients to use positive psychological coping, such as positive thinking, accepting the situation experienced, not giving up, staying enthusiastic about life and being able to control emotions. Positive thinking makes the patient not ashamed of the current condition, increases motivation to recover as before, has the enthusiasm to heal and can accept all the limitations caused by change. Acceptance of the condition can reduce stress and make it easier for patients to adapt to their differences.

Family support can also improve the patient's coping ability with problems. Families must provide support so that post-stroke patients can carry out daily activities independently and not experience excessive dependence. Families can recognize health development disorders, make the right decisions to take the right actions on patients, provide proper care to sick families, maintain an atmosphere at home that favors health and positive personality development, and



maintains a reciprocal relationship between the family and the institution - existing health institutions (Friedman, 2010; Budiman et al.,2018).

In terms of improving the quality of life of post-stroke patients, the results showed that in the treatment group there was an increase while in the control group there was a decrease in the value of quality of life. In statistical analysis there was also a significant difference between the treatment group and the control group in terms of the quality of life of post-stroke patients. These results indicate that the post-stroke patient education intervention textbook can improve the quality of life of post-stroke patients. The treatment respondents showed a better quality of life than the control group.

Post-stroke adaptation intervention package books train patients to be able to control stimuli, use adaptive coping and display effective adaptive behavior immediately after a patient has had a stroke. The adaptive response shown by patients after stroke is the key to achieving a patient's quality of life. Adaptive behavioral responses in post-stroke patients are shown by the patient being able to use their own resources, both internal and external. Internal resources include the patient's ability to cope with post-stroke problems such as overcoming limb limitations, high motivation to recover and high hopes for recovery as before. Meanwhile, external resources include a support system that can be used by patients for recovery, such as support from those closest to them (family, friends, and environment) and the availability of adequate health services.

The role of nurses in rehabilitation is to help individuals with disabilities or chronic conditions to achieve or maintain maximum functional abilities, optimal health and effective coping with changes in the life of clients / patients (Hoeman, 2008; Hartono et al.,2018). In addition to the



role of nursing care nurses also act as educators providers for patients and families. The role of nurses in particular in the rehabilitation of post-stroke patients includes assisting post-stroke physical recovery, facilitating patient independence in daily activities, reducing the risk of secondary complications and promoting holistic adaptation to post-stroke disabilities (Jester, 2007; Yuswanto et al.,2018).

Conclusion and Recommendation

There were significant differences between the treatment group (who received the post-stroke adaptation educational intervention package) and the control group in terms of physiological adaptation, psychosocial adaptation and post-stroke quality of life.

It is suggested for the hospital that this method can be used as a guideline for nursing care services for post-stroke patients so that the adaptation response and the patient's quality of life can improve optimally. And for post-stroke patients, the intervention textbook can be used as a guide when fulfilling needs and routine exercises to improve the patient's ability, independence and quality of life.

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