

# Role of Family in Caring Patient with Post Stroke at Home: A Systematic Review

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**Abstract.** *Stroke is a disease that can cause cognitive impairment or disability. Role and support of family as the closest person is necessary for the post-stroke recovery process. This systematic review aims to identify the effectiveness of the family's role in caring patient with post-stroke at home. There are four steps to define the topic (1) to identify appropriate keywords (post-stroke, community, family, and home), (2) to identify relevant literature based on topic, (3) to identify appropriate inclusion criteria, (4) to analyze the account of various intervention on literature. Search strategy resulted in 849 articles from Scopus, Proquest, Science Direct and SpringerLink with a limit of 2014-2018 and English-language, only 15 journals were eligible for analysis. There are types of family roles to support patient's post-stroke at home: Activity daily life (ADL) assistance and psychosocial support. The role and support of family put effect into the caring patient with stroke at home, including an increase of ADL, life quality, cognitive function, and self-efficacy*

**Keywords:** *Family, Home, and Post Stroke*

## I. Introduction

Stroke is blamed for 9% of deaths global, and the second cause of mortality after heart disease and the first cause of disability in adults. The prevalence of stroke is around 50–100 per 100,000 people [1].

The stroke will cause symptoms after stroke. Stroke become the second cause of cognitive impairment, disability, and even death. This disease occurs when brain cells do not receive oxygen so it will stop working and can cause cell death [2]

If the stroke is treated faster, the recovery rate will be better. Thus, it is known by the term "The golden period" which means the best time for giving stroke patients help. Medical treatment must be done within 3 hours after the stroke attacked to prevent disability if it exceeds the time, the permanent disability will occur or even death [3]

The impact of stroke in each patient can be different. It depends on the injury severity, the affected part of the injury, and health status [4] Functional damage to strokes can cause disability, so patients become

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unproductive. Stroke sufferers will experience the limited activity of daily living (ADL) and require continuous nursing assistance so that the patients can gradually carry out independent self-care.

In addition to physical disability, patients with stroke tend to experience emotional disorders, one of which is depression. Post-stroke depression is closely related to trouble level in functional values in carrying out daily activities. The post-stroke motor restriction will cause dependence on ADL. In addition, changes in psychological conditions will make the patient become slothful so that lack of response toward rehabilitation, tend to be emotional and show behavior change [5]

These various impacts and restriction affect to patients so that they need support from their family. Family assistance and support are necessary to reduce functional damage and to help patients become more independent in doing ADL and other activities even though their motor function is not completely normal.

This is evidenced by the study that result in ADL ability in patients with post-stroke increases. Complications that occur in patients with stroke can also be reduced after the patient's family was given knowledge of post-stroke care compared to those who were not given knowledge [6]. Another study conducted by [7] explained that the psycho-socio-emotional and relational approach of families, especially couples, was very important to improve the quality of life after stroke. Based on the various studies, this article aims to identify the effectiveness of the family's role in caring patient with post-stroke at home

## **II. Methods**

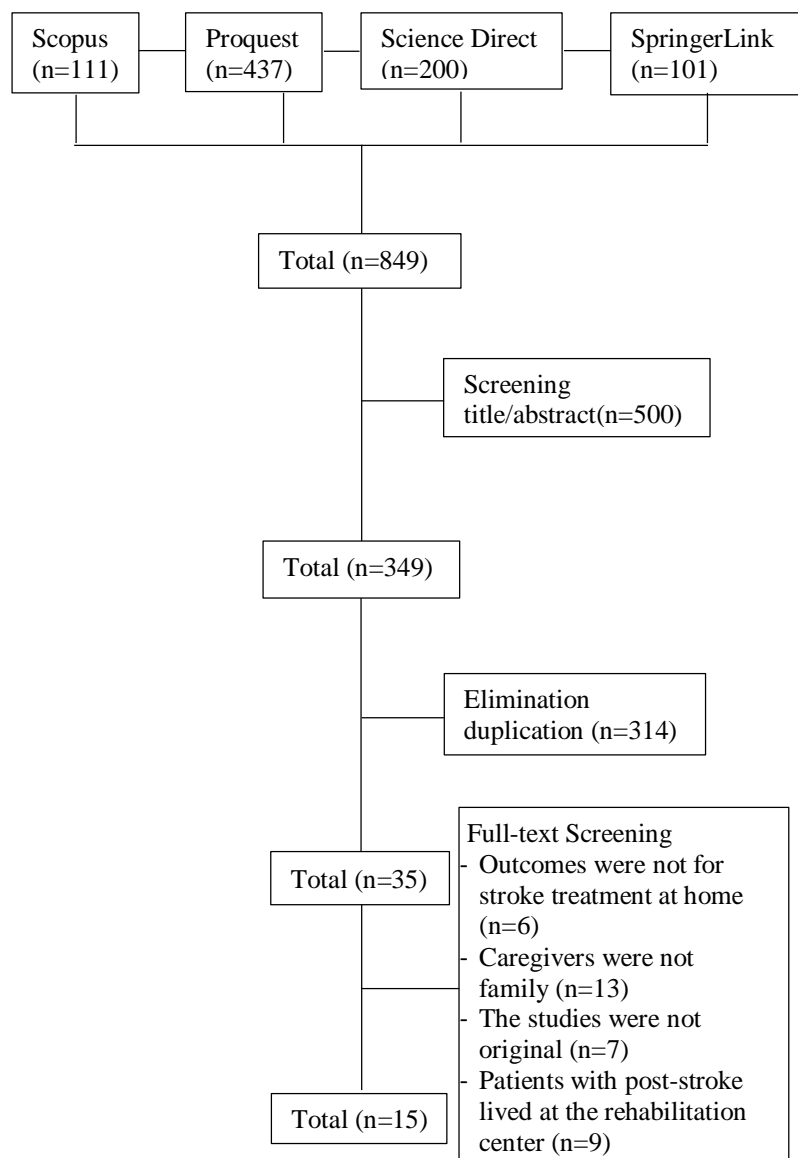
### *2.1 Literature Search Strategy*

The literature search was carried out from August 29 to September 23, 2018, in several scientific publications such as SCOPUS, Springerlink, Proquest, and Science Direct. It was limited to publications in 2014-2018, the scope was post-stroke, community, family, and home. In addition, It was also limited to types of articles in the area of english nursing.

### *2.2 Selection Criteria and Process*

The chosen literature had to relate to the family role both parents, spouse, and siblings in caring patient with post-stroke at home. The specified inclusion criteria were male and female patient with stroke, patients aged  $\geq 18$  years when the stroke first attacked, and having a family. In addition, the chosen study was empirical research (not reviews or articles). The chosen research design was Randomized Controlled Trial Study (RCTs), qualitative study, and protocol study. The literature also had to be published in an accredited journal.

After getting the literature that matched with the keywords, the reviewer would filter the title to find out the duplication of the journal. After journal duplication was deleted, the reviewer would sort the literature according to inclusion criteria and expected results which stated in the abstract. The following action was selecting the journal by reading its full text to ascertain whether the journal met the systematic review requirement (Figure 1).



**Figure 1.** The Process of Journal Selection for systematic review.

### III. Result

The search strategy resulted in 849 articles. After having filtered from editorial titles, 500 articles were eliminated. Then, 314 duplicate articles were eliminated to 35 articles. The 35 articles were read its full text and adjusted to the inclusion criteria to get 15 articles. The total respondents from this systematic review were 1,418.

**Table 1.** Type of Study in the Setting up *Systematic Review*

<b>r</b>	<b>Author</b>	<b>Type of Study</b>	<b>Participants</b>	<b>Intervention</b>	<b>Outcome</b>
[8]		Single-blinded randomized controlled stratified trial	70 Families Caregivers	2 sessions of structured psycho-education on stroke and care skills and 6 sessions of training on how to overcome the coping problem	1. Better conditional change on patients with post stroke
[9]		A randomized controlled trial	70 Females Families Caregivers	Giving Information and social support	1. Decreasing stress and distress the family.
[10]		RCT	144 participants	Through application of <i>F@ce</i> <sup>TM</sup>	1. Having good self-efficacy
[1]		RCT	410 patients	<i>the therapeutic follow-up, a training program and telephone interview,</i>	1. Controlling risk factor and complication on patients with post stroke
[11]		RCT	48 families caregivers	Systematic Follow up done by nurse through home	1. It is Necessary education to decrease caregiver burden

Author	Type of Study	Participants	Participation	Intervention	Outcome
			visit		2. It is necessary to increase patients' quality of life and avoid error 3. Inadequate utilization of health service by stroke sufferers
[12]	RCT	144 participants		<i>Montreal Cognitive Assessment (MOCA)</i>	1. Cognitive function increased on patients with stroke 2. Depression decreased
[13]	Quasi-experiment	40 patients and families		<i>CEP-BAM and RAM</i>	1. Functional capacity and quality of life increased
[6]	Quasi-experiment	62 patients with post-stroke and their family		Giving information, motivation, and behavioral skills toward caregiver and family related to post-stroke treatment	1. Knowledge and treatment skills on the patient with post-stroke increased. 2. ADL ability increased. 3. Complication decreased
[14]	observational behavioral mapping study	47 patients		Teaching physical therapy	1. Activeness of patients with post-stroke increased
[15]	Prospective Cohort Study	183 participants		<i>Measures of Caregiver Strain Index and the Hospital</i>	Caregiver experienced: 1. High boredom

<b>r</b>	<b>Autho</b>	<b>Type</b>	<b>of</b>	<b>Parti</b>	<b>Interve</b>	<b>Outcome</b>
	<b>Study</b>		<b>cipants</b>	<b>ntion</b>		
					<i>Anxiety and Depression Scale.</i>	2. Anxiety 3. Depression.
[7]	Phenomenological-study	Qualitative	people	18	<i>in-depth interviews</i>	1. Quality of life on patients with stroke increased
[16]	A qualitative analysis approach	content	families caregivers	17	<i>in-depth interviews</i>	1. Encouraging functional recovery 2. Mental well-being improved 3. Reinforce community role
[17]	Qualitative study-a theory approach.	grounded-	families caregivers	10	<i>in-depth interviews</i>	1. Physical management increased 2. Mental Health of patients with stroke increased
[18]	Qualitative Study-A theory.	grounded	stroke families caregivers	40	<i>Depth interview</i>	1. Identifying and prioritizing disparity between patients and caregiver's capacity 2. Creating a plan to increase caregivers' readiness
[19]	Qualitative Study-A theory.	grounded	family caregivers	10	<i>Semi-structured in-depth interviews</i>	1. The nurse should give better support to the family in caring incontinence

### 3.1 Domain

#### 3.1.1 Quality of Life

There was one qualitative study explained that family support could improve the quality of life of patients with post-stroke.

#### 3.1.2 Self-Efficacy

There was one study explained that family support via telephone had an effect on improving self-efficacy of patients with post-stroke.

### *3.1.3 Cognitive Function*

There was one study stated that families given education about post-stroke care could affect improvement in the cognitive function of patients with post-stroke.

## *3.2 Type of Family Support*

### *3.2.1 ADL Assistance*

There were three studies about the effect of family support by giving ADL needs fulfillment and all of them showed significant results.

### *3.2.2 Psychosocial Support*

One study examined the effect of family support on reducing depression patients with post-stroke and the results were significant.

## **IV. Discussion**

### *4.1 Discussion*

The results of this systematic review showed that there was a positive influence on family roles on the care of patients with post-stroke at home. There were 3 types of research used in this review i.e. quantitative research with the randomized controlled trial, protocol, and qualitative design. The research method and the form of intervention given to patients with post-stroke in each journal were varied including physical and psychological aspects. The number of samples used in each journal was different, the smallest sample was 18 and the largest was 410 respondents.

The study conducted in Thailand found that there was an increase in family knowledge and ability to treat patients with stroke. Intervention group which consisted of patients with post-stroke had an increased ability to do ADL compared to those in the control group. Other studies also showed family support could reduce tension and improve coping of patients with post-stroke.

Research conducted by [8] stated that the family's ability to care for patients with stroke at home could encourage more positive direction of change. Family-centered care research conducted by [9] showed families play a role in improving the management of physical function and mental health of patients with stroke.

Research with the qualitative design was reviewed using a phenomenology approach, content analysis, and grounded theory. The phenomenological study conducted by [7] emphasized a comprehensive approach consisting of psycho-social, emotional, and relational of married couples to ensure the quality of life for family members who suffered from a stroke. A content analysis conducted by [10] produced a general theme about the promotion of total recovery with 3 main themes: functional recovery, improving psychological health, and strengthening social roles.

Grounded theory research was carried out by [19] and [18]. Tseng observed the family's experience in treating patients with stroke who suffered urinary inconsistencies and getting the main theme of creating a new meaning of life. Meanwhile, Lutz identified the condition of unpreparedness of families cared for stroke patients after returning from rehabilitation. There were 3 things that were necessary to be prepared i.e. examination of family conditions, identification of patient needs, and preparedness plans.

The role of the nurse was very important in giving intervention to the family either before the patient returns home or when the patient at home. [11] explained education given by nurses would reduce family burden, avoid mistakes, and use inadequate health services by stroke patients. [1] said nurses had to involve the closest communities, especially family, to treat and to reduce post-stroke complications. [15] explained that the family felt high boredom, anxiety, and depression. Thus, nurses had to provide encouragement and emphasize the importance of the role of the family in caring them so that they would not be burdened and tired of caring for family members who had a stroke.

#### *4.1.1 Limitation of the systematic review*

The systematic review carried out had several limitations. First, the search strategy only included studies in English, while other languages were ignored even though the topic was related. Second, the heterogeneity of the research method and the type of family support made this systematic review difficult to draw as a whole.

## **V. Conclusion**

The role of the family had a significant effect on the care of patients with stroke. The form of care that could be given by the family to them was varied and affected by various aspects, both physically and quality of life. Nurses played a role in providing family knowledge and abilities in treating patients with post-stroke.

#### *5.1 Implication for Practice*

Family support was an important aspect of caring and recovering patients with post-stroke at home. The family must have good knowledge and abilities to care for them. Therefore, nurses must provide support to the family starting from health education to ongoing assistance. Before patients were sent to their home, nurses had to provide systematic discharge planning and involved the family in the process of caring for patients in the hospital so that when they returned home, the family had been ready to treat them at home. Nurses also had to do a periodic follow-up to ensure the development of the patient's condition.

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