

Research Article

Factors Affecting Coping Strategies in Post-Stroke Patients: A Literature Study

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Abstract.

Strokes can cause disability and death. The disability experienced causes post-stroke stress syndrome, which results in maladaptive coping strategies. Coping strategies is important because it affects the patient's outcome and recovery. The purpose of this study was to determine the factors that influence coping strategies in post-stroke patients based on the results of a literature study. Journals from several databases such as Google Scholar (n=8), ProQuest (n=5), Science Direct (n=1), PubMed (n=1), and Springer Link (n=3) were selected. The data search used several keywords and conjunctions (AND and OR). Based on specified criteria such as journals within the last 5 years (2016-2020), in English, research articles, open access, and full text, post-stroke patient population, intervention, and comparison according to research methods, journal findings, and outcomes that discuss coping strategies. Journal findings were tested for quality using the adjusted JBI and analysed using thematic analysis. The results showed that several factors influenced coping strategies in post-stroke patients such as psychological (16%), social support (13%), self-ability (13%), sequelae (10%), spiritual (9%), stroke severity (9%), material (6%), dependence (6%), rehabilitation (6%), care (3%), gender (3%), lack of information (3%), and perception of disease (3%). Coping strategies for post-stroke patients that focus on problems and emotions.

Keywords: Post Stroke, Coping Strategies, Patient

1. INTRODUCTION

Stroke is the leading cause of mortality and morbidity among adults. Globally, stroke is the second leading cause after ischemic heart disease, which causes long-term death and disability (1). WHO (World Health Organization) defines *stroke* as a focal or global brain functional disorder that occurs suddenly and acutely, lasting more than 24 hours of onset (2). Data from the world stroke organization (World Stroke Organization) shows that every year there are about 13.7 million new cases and about 5.5 million deaths due to stroke, approximately 70% of stroke cases and 87% of deaths and disabilities due to stroke occur in high-income countries. Medium to low (3). pproximately 750,000 stroke cases each year in Indonesia, and 200,000 of them are recurrent stroke events (4).

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Stress is closely related to the incidence of recurrent stroke. Several factors related to stress in post-stroke patients are widely reported, but those consistently mentioned in the literature are more in patients with physical disabilities (5,6). The condition of post-stroke patients that causes stress causes patients to experience a decreased quality of life, which will impact the patient's recovery (7,8). Stress is closely related to coping, a transactional process in assessing and managing various stimuli or demands that cause stress (9). The patient's stressors trigger specific coping mechanisms, both adaptively and maladaptively (10).

Lazarus and Folkman (11) define coping strategies as individuals' actions when a stressful situation impacts them physically and psychologically. The ability of coping strategies is essential for patients because it will affect physical and psychological outcomes, which are divided into 2, namely problem-focused and emotional-focused coping (10). Maladaptive coping strategies negatively impact post-stroke patients physically and psychologically. The impact can be a negative self-concept, emotionally sensitive, rejection of disability, loss of purpose in life, and others (12,13). This impact will affect the quality of life of post-stroke patients so that the patient's productivity in carrying out daily activities decreases, thereby increasing the risk of recurrent stroke. Therefore, efforts can be made to improve the quality of life by implementing appropriate and effective coping strategies (14).

Previous studies have examined many related coping strategies in post-stroke patients. However, it is known that there are still few that discuss in detail the factors that influence coping strategies in post-stroke patients based on the results of literature studies. Based on literature studies, the background above motivates researchers to want to see what factors influence coping strategies in post-stroke patients. This research is expected to provide information and facilitate nurses in practical nursing care to reduce the prevalence of stroke recurrence. Therefore, this study was conducted to know the factors that influence coping strategies in post-stroke patients based on the results of a literature study.

2. MATERIALS AND METHODS

2.1. Data search

Research with this literature study method has several stages, so results are recognized for credibility. The stages of the literature study use the flowchart in Figure 1. The data search was carried out on several web portals, such as Proquest, Pubmed, Science

TABLE 1: Data Extraction Table.

Researcher and Year of Publication	Research Place	Study Design	Quality Value	Population	Sample	Research result
Villarroya et al., 2020	Catalonia, Spain	Cohort Study	10/11 (90.9%)	4 study centers in Catalonia, Spain	82	The results showed that problem-focused coping strategies were found to be significantly higher in patients treated with BMT (Best Medical Treatment) at 1 year.
Blessing et al., 2017	Ibadan, Nigeria	Cross Sectional Study	6/8 (75%)	government hospital, Adeoyo, Ibadan	50	The results show that living with a stroke requires a concerted effort from family, financial, emotional and friendly support to help make the changes needed to cope with and adapt to a stroke.
Minshall et al., 2020	Melbourne, Australia	Cohort Study	9/11 (81%)	St Vincent's Hospital, Melbourne	168	The results showed that psychosocial factors had a significant effect on the quality of life of post-stroke patients
Wei et al., 2016	Tianjin, China	Cohort study	9/11 (81%)	Tianjin Medical University General Hospital	989	The results showed that post-stroke depression was significantly related to coping style, while post-stroke fatigue was significantly related to lesion location and coping style.
Kelly et al., 2017	United Kingdom	Cohort study	10/11 (90.9%)	A region in the UK	43	The results of the study explained that post-stroke trauma can be formed, one of which is due to factors such as proactive coping and denial coping which are also related to post-stroke trauma.
Rijsbergen et al., 2018	Maxima, Netherlands	Cross sectional study	6/8 (75%)	Elisabeth-TweeSteden Hospital & Maxima Medical Center, Netherlands.	432	The results showed that interventions aimed at increasing psychological resilience and increasing energy levels could be beneficial in stroke rehabilitation programs by reducing SCC and improving quality of life.
Limansyah et al., 2018	Pontianak, Indonesia	Cross sectional study	6/8 (75%)	domiciled in the city of Pontianak.	58	The results showed that social support was the dominant element of the coping strategy.
Zhang et al., 2019	Shanghai, China	Cohort study	8/11 (72.7%)	two tertiary hospitals in the neurology department	217	The results showed that stroke patients experienced a significant decrease in resilience from hospitalization to 1 month after discharge
Arwert et al., 2016	The Hague, Netherlands	Cross sectional study	8/8 (100%)	Medical Center Haaglanden (MCH) in The Hague, Netherlands	576	The results showed a small proportion of RTW (return to work) patients who worked after a stroke; shorter duration of initial hospitalization was associated with favorable employment outcomes.
Dewilde et al., 2019	Belgium	Cohort study	9/11 (81.8%)	10 hospitals in Belgium	539	Research shows that treatment strategies that target flexible coping styles and reduce dependency on caregivers can lead to improved quality of life
Lee et al., 2017	South Korea	Cross sectional study	7/8 (87.5%)	8 hospitals (Gyeonggi-do, Chungcheong-do, and Geolla-do), 4 rehabilitation hospitals, and six clinics	204	This study shows that the more severe the physical disability, the lower the patient's quality of life, the higher their acceptance of disability and coping strategies

Direct, Google Scholar, and Springer LINK. Data search was conducted using keywords such as factors, predictors, influence, affect, coping strategy, problem-focused coping,

TABLE 1: Data Extraction Table.

Researcher and Year of Publication	Research Place	Study Design	Quality Value	Population	Sample	Research result
Graaf et al., 2020	Dutch	Cohort Study	10/11 (90.9%)	6 Dutch Hospital	369	The results showed that mood problems and less adaptive psychological factors negatively affected the course of participation over time up to four years after stroke.
Mierlo et al., 2017	Amsterdam, Netherlands	Cohort study	9/11 (81.8%)	6 Dutch Hospital	500	The results suggest that patients suffering from stroke may exhibit psychosocial and physical HRQoL trajectories that can be characterized as stable high or low, recovery, or decline.
Persson et al., 2017	Gothenburg, Sweden.	Qualitative study	9/10 (90%)	Sahlgrenska University Hospital in Gothenburg, Sweden	26	Participants reported using several coping strategies to deal with problems, namely practical and emotional support from health workers, community services, employers, and families.
Caletrio et al., 2020	Toledo, Spain	Qualitative study	8/10 (80%)	Small village in Spain	1 family unit	The main caregiver plays an important role in terms of healing, informants, trainers, and support from health workers also affect the patient's recovery.
Vecchia et al., 2019	French	Qualitative study	8/10 (80%)	emergency department or stroke unit in the Rhône area of France	24	Lack of (or inappropriate timing) information from health care providers leads to limited treatment knowledge and perceived low control over stroke recurrence which causes anxiety, fear, and low involvement in coping.
Rosyidah et al., 2018	Makassar, Indonesia	Qualitative study	8/10 (80%)	Stroke Centers in Makassar	7	The spiritual coping of stroke patients must be recognized, realized, and considered in nursing care.
Azar et al., 2020	West Azerbaijan to the north-west, Iran	Qualitative study	8/10 (80%)	neurology clinic of Urmia University of Medical Sciences teaching hospital and physiotherapy center	15	spirituality is an important strategy for coping with problems and motivation for better self-care in stroke survivors to accept their new situation

emotion-focused coping, post, post, after, stroke, CVA, cerebrovascular accident, and conjunctions as AND and OR.

Screening

The screening process is a process that is carried out after searching for data by fulfilling the inclusion criteria set by researchers, such as (1) international journals, (2) published within the last 5 years (2016-2020), (3) journal type: research articles, (4) journals that are open access or can be accessed in full and in full text, (5) the population in related journals is post-stroke patients, (6) interventions and comparisons in journals adjust to the research methods found in journals, and (7) the results in the journal of findings may directly or indirectly discuss coping strategies.

2.2. Quality Rating

Quality assessment is carried out after the screening process using a trusted critical appraisal, namely the JBI Checklist. As for the type of JBI selected, namely analytical cross-sectional study, cohort study, and qualitative study.

2.3. Data Extraction

Journals that have met the requirements are then extracted data to get the results the researchers want by digging up information in the journals that have been found, then compressing the information into the form of a data extraction table in table 1 which is in accordance with the thematic analysis method consisting of researchers and years. publications, research sites, study design, study quality scores, population, samples, research results, and researcher comments.

2.4. Data analysis

After the data extraction process is complete, then it is analyzed using thematic analysis methods, namely the type of inductive analysis of qualitative data which can involve several analytical techniques such as the data collection process and then interpreted into meaningful data and aims to answer the formulation of the research problem.(15,16). There are six important phases in the thematic analysis as described below(17): (1) familiarize with data, (2) generate initial codes, (3) search for themes, (4) review themes, (5) Define and name themes, (6) produce report. The stages of the literature study are presented in Figure 1.

3. RESULTS

The results of the research and data analysis that have been carried out using the literature review method are in the form of data collection from five international web portals, namely Pubmed, Science Direct, ProQuest, Google Scholar, and Springer LINK. The total journals obtained were 140,854 consisting of 34,500 ProQuest, 77,209 from Pubmed, 3193 from Science Direct, 18,800 from Google Scholar, and 7152 from Springer LINK. After passing through several stages of thematic analysis, 18 journals were obtained. They consist of 8 from Google Scholar, 5 from Proquest, 1 from Science Direct, 1 from Pubmed, and Springer LINK, as many as 3 journals.

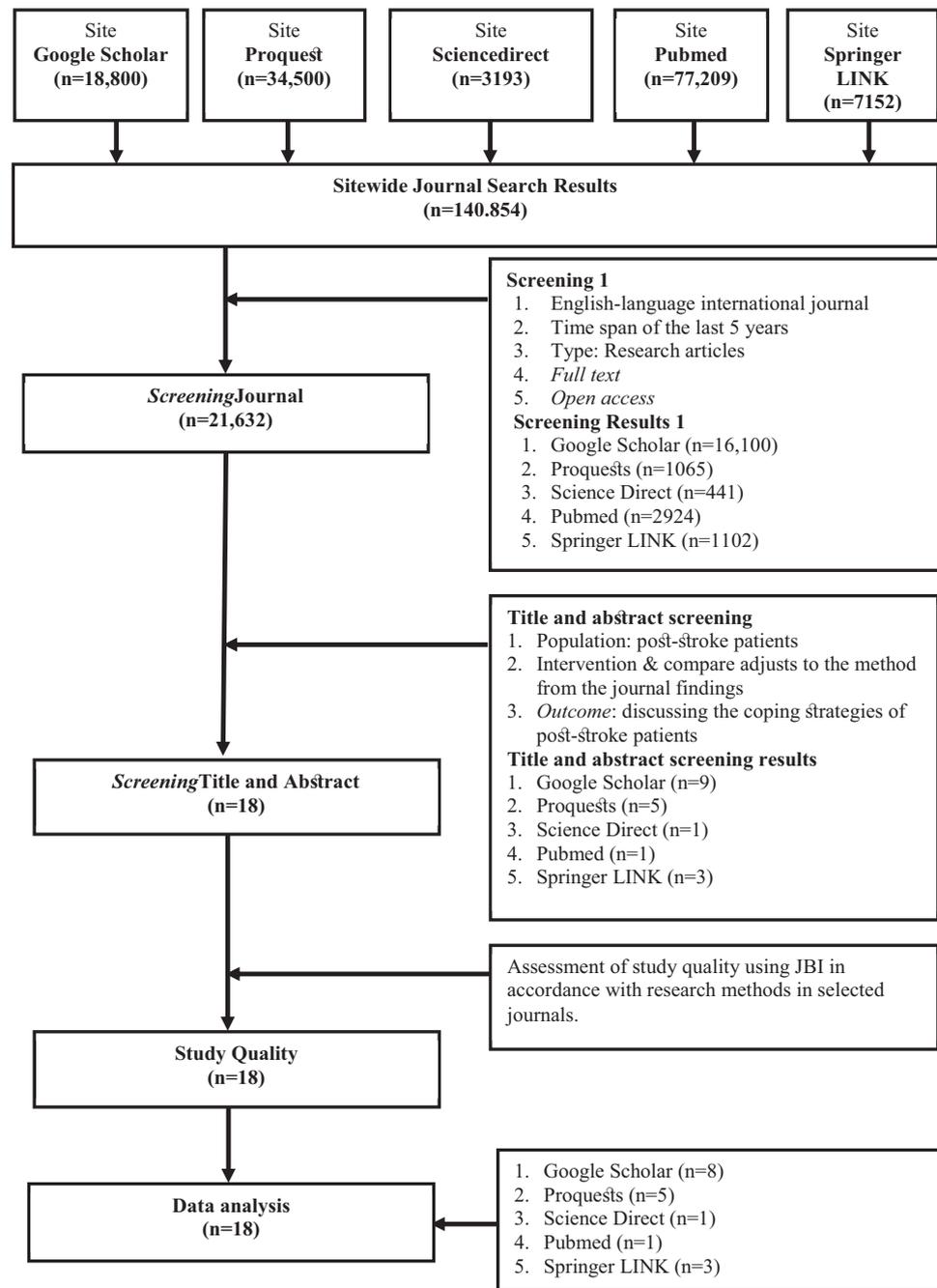


Figure 1: Flowchart of Literature Study Stages.

Journal Demographic Data

Demographic data in the journal contains information about age, gender, type of stroke, education level, marital status, country, and types of coping strategies. Based on the age category, 75% of the participants were elderly, 63% of the participants were male, 94% of the participants were ischemic stroke, the education level was 36% junior high school, 78% married, most of the research locations in the journals located in the Netherlands, and based on the results of the analysis in the category of coping

strategies, 50% of the participants were found, namely problem focused coping and emotional focused coping.

Factors Affecting Coping Strategies in Post-Stroke Patients

Based on the results of the thematic analysis of 18 journals, 13 themes were found that describe the factors that influence coping strategies in post-stroke patients, namely social support, material, sequelae, treatment interventions, psychological disorders, self-ability, spirituality, stroke severity, dependence, type of gender, rehabilitation, lack of information, and perception of disease. As for the results of the analysis, it was found that the psychological disorder factor (16%) was the most influencing factor in coping strategies in post-stroke patients compared to several other factors based on the results of the literature study as described in Figure 2.

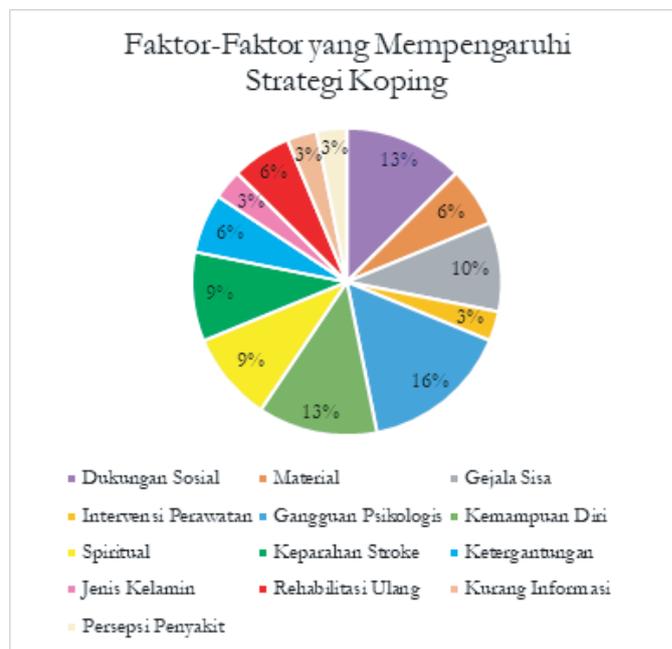


Figure 2: Factors Affecting Coping Strategies in Post-Stroke Patients.

4. DISCUSSION

The discussion related to the research results on the factors that influence coping strategies in post-stroke patients, which consists of 18 journals, is described as follows. Psychological disorders are the most critical factors influencing the coping strategies of post-stroke patients (16%). Stroke patients experience emotional/psychological problems, one of which is depression. Post-stroke depression can cause a patient to depend on daily activities (18). Depression will impact coping strategies that focus on emotions,

resulting in maladaptive coping and affecting the functional outcome and the quality of life of stroke patients (19,20).

The results of the study based on the literature study found that social skills include family support, emotional support, friendship support, and social support. As from several studies such as research by Deyanta et al in 2019 Based on the literature study, the study's results found that social skills include family support, emotional support, friendship support, and social support. Several studies, such as Deyanta et al. in 2019 (21) state that post-stroke patients who receive good social support (78.2%) have reasonably good self-acceptance. Social support, especially from families, makes post-stroke patients adopt adaptive coping strategies by teaching the meaning of positive thinking and how patients must accept their condition sincerely and always be grateful for the situation, increasing their functional capacity (22).

This study also found positive self-efficacy, as Vincent et al (23) suggested that about 73.2% of the 95 post-stroke patients in the two rehabilitation Nigeria were functionally independent. Functionally independent stroke patients have high motivation when undergoing rehabilitation, but occupational therapy is needed to encourage the patient's motivation during recovery ow dependence (independent) on stroke patients can increase their self-esteem. It is helpful in the formation of optimism, self-confidence, an increased sense of responsibility, and open thinking (25).

The disability experienced will result in changes in both appearance, structure, function to have an impact on the body image of stroke sufferers(26). According to Sharma et al in their research on the feelings of stroke patients in the post-stroke period, as many as 41% reported feelings of hopelessness, 39% were helpless, and 8% had thoughts about death.(27). The most common reasons given were feelings of burden on the family, feelings of dependence on others, worry about the prognosis of illness, worry about children, inability to work, feelings of loneliness, possibility of having another stroke in the future, and difficulty in asking for help at home, some the reason arises because of the disability or sequelae they experience during the post-stroke period.

Spiritual factors can affect the coping strategies of post-stroke patients. Previous research by Surayawantie et al in 2019(28)explained that with the spiritual power possessed by patients, they tend to get closer to God, accept sincerely for their illness, think positively, and are optimistic in hoping for healing, some of these things indicate that there is an influence of spirituality on coping strategies.

Research by Nickel and Thomalla(29)explained that the severity of a stroke involving lesions in the frontal area of the brain and basal ganglia will be more prone to making

patients suffer from PSD (Post Stroke Depression) which will determine how patients deal with perceived stress and impact on the coping strategies used. So it can be concluded that the severity of symptoms experienced by post-stroke patients has an effect on the coping strategies used.

Material factors can also affect how someone manages the stress they experience, especially stroke patients. As research by Ganesh et al(30)stated that deteriorating finances as a result of stroke disability make it difficult for a person to reach access to health services, especially stroke rehabilitation care, health professionals, treatment, to get proper nutrition. This has an impact on the patient's mental health which indicates that the coping strategies experienced by the patient tend to be maladaptive.

Addiction can also affect the quality of life used by post-stroke, as the results of research by Van Mierlo et al(31), patients who depend on others for activity daily living (ADL) are reported to have consistently lower quality of life scores up to two years post-stroke compared to independent patients.

In addition, stroke recurrence experienced by patients will have an impact like a stroke in general, namely physical and psychological impacts such as paralysis, slurring of the mouth, slurred lips, dysarthria, dysphagia, anxiety, depression, and so on.(32), which will affect the use of post-stroke patient coping strategies due to poor participation in life situations(33)This causes individuals to tend to be pessimistic and passive coping due to the rehabilitation they are undergoing.

Previous research by Weinstein et al(34)explained that the best medical care in the form of stroke rehabilitation consists of the ongoing and coordinated efforts of a large team, including the patient, family, friends, other caregivers, and all health workers it is important in maximizing the effectiveness and efficiency of rehabilitation and underlies all guidelines which will affect the coping strategies used by post-stroke patients.

Gender can also be one of the factors that influence the use of post-stroke coping strategies. According to Sinha and Latha, women tend to use coping strategies that focus on emotions while men use coping strategies that focus on problems.(35). Gender variations for differences in coping strategies can also be explained by the fact that oxytocin increases tend and befriend behavior or coping which tends to be passive in women while in men there is testosterone as an oxytocin inhibitor so that men tend to show aggressive and challenging behavior (fight or challenge). flight), whereas estrogen increases oxytocin in women(35.36).

In addition to these things, factors such as lack of information and perception of disease can affect the coping strategies used by post-stroke patients. The results of the study by Saengsuwan et al show that the low level of knowledge found in this study

clearly indicates that there is an urgent need to provide a national policy to improve the education system to provide adequate structured information to improve self-management in recurrent stroke patients.(37). Another study by Turana et al explained that stroke patients with mild neurological disorders who had been discharged had more positive perceptions of timeline, personal and treatment control.(38). Cognitive impairment was associated with lower coherence, which underscores the importance of establishing a cognitive baseline before assessing disease perception in post-stroke patients. So it can be concluded that the lack of information and perception of disease can affect coping strategies in post-stroke patients.

5. CONCLUSION

Coping strategies for post-stroke patients include coping and focusing on problems and emotions. Several factors influence the use of post-stroke patient coping strategies, such as psychological disturbance factors, social support, self-efficacy, sequelae, spirituality, stroke severity, material, dependence, rehabilitation, treatment intervention, gender, lack of information, and perception of the disease.

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