



Nurses' healthcare guidance for patients at stroke rehabilitation - A literature review

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Abstract

This study is based on a literature review to describe health care guidance for nurses in the rehabilitation of stroke patients. Stroke is an acute disease that requires prolonged rehabilitation that is a global problem and to get a deeper understanding of nurses' healthcare guidance for stroke patients' rehabilitation. Improving stroke services is critical to reducing the global stroke problems. In the United States, Asia and Europe, nurses are under a lot of pressure to care for stroke patients, and they lack adequate nursing guidance to improve patient satisfaction. Therefore, this study hopes to find more results through the literature review and provide nurse health care guidance to help more stroke patients.

The methodology of the literature review is to use critical thinking to research and summarize the literature. Data were collected from the databases of EBSCO, Proquest, Elsevier and Google Scholar. Using these existing databases, peer-reviewed health-related journals and articles related to the topic of this study were searched based on keywords of the paper topic. Using the PRISMA flowchart, this study illustrated the systematic literature search process at each stage. Finally, six articles were selected for content analysis.

Data analysis of the literature identified five categories regarding nurse health learning in stroke rehabilitation, they are (1) Educating for stroke patients. (2) Stroke self-management programme (SSMP). (3) Rehabilitation for falls after stroke. (4) Support and assistance for patients' families. (5) Oral care for stroke patients. Stroke patients lack the knowledge of stroke, nurse can provide education guidance. International evidence-based guidelines recommend self-management support for stroke patients to improve their health outcomes. A nurse-led stroke self-management program (SSMP) has been shown to be satisfying for patients. Nurses need to pay more attention to home environment risk assessments and interventions and need to do more to educate patients about fall prevention. Health care networks must encourage support for family members and make better use of their potential to provide care. All nurses agreed that they had a role in maintaining good oral health among their patients. However, many gaps in care are evident. For suggested future research, it would be beneficial to review the evidence-based nurses' guideline for patients at stroke rehabilitation.

Keywords: stroke, nurses' healthcare guidance, rehabilitation

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1 Introduction

According to National Health Service - NHS (2019) “A stroke is a serious life-threatening medical condition that happens when the blood supply to part of the brain is cut off.” Globally, one four people over age 25 will have a stroke in their lifetime. There are over 101 million people currently living who have experienced stroke. Six and a half-million people die from stroke annually. More than 143 million years of healthy life are lost each year due to stroke-related death and disability. (World Stroke Organization - WSO, 2022)

Nearly half of stroke survivors report feeling abandoned when they leave the hospital. Many patients said that there was a lack of trained staff to help them, which had a negative impact on their long-term recovery. Healthcare staff, such as those working in nursing homes, are not required to complete training on how to care for and support stroke patients. Stroke patients said that there was a need to improve health professionals' knowledge and awareness of the signs of stroke and its impact on survivors. Nurses ignored the stroke patient's immobile hands and let the patient eat on her own. (Stroke Association, 2019)

Nursing is stressful, and caregivers often encounter a variety of interrelated personal, interpersonal, and organizational issues when dealing with stroke-related deficits. (Grant, Hunt and Steadman, 2014). Nurses often have difficulties with using interdisciplinary stroke guidelines for patients with stroke as they have not focus sufficiently on nursing. (Bjartmarz, Jónsdóttir and Hafsteinsdóttir, 2017). Nurses also faced difficulties in coping with the fluctuating emotions and uncooperative behavior of stroke patients. More than half of nurses and nearly half of stroke patients experience difficulties with interpersonal relationships. (Liao et al. 2020).

Nurses' healthcare for stroke patients is a global problem and to get a deeper understanding on the topic, improving stroke services is critical to reducing the global stroke problems. (Owolabi, M. O. et al 2021) The United States, Asia, and the European region account for more than 90% of the new stroke patients added globally each year. (Newsroom, 2022, Narayanaswamy Venketasubramanian, Yoon, Pandian, Navarrod, 2017; Turana et al. 2020; Katan & Luft 2018) Although the lack of adequate stroke rehabilitation is worldwide, the scope of this study was the United States, Asia, and Europe because these regions provided evidence-based studies for the literature review. The broader scope of the setting in the study was chosen to gain a deeper understanding because of the lack of research in this topic. The aim is to identify effective nurses' healthcare guidance at stroke rehabilitation in US, Asia and Europe.

2 Theoretical framework

The key concepts of the study are Stroke rehabilitation and nurses' healthcare guidance.

2.1 Stroke

2.1.1 Definition of stroke

A stroke occurs when something blocks the blood supply to a part of the brain or when a blood vessel in the brain breaks. A stroke can cause damage or death to parts of the brain. Strokes can lead to lasting brain damage, long-term disability, and even death. (CDC, Centers for disease control and prevention, 2022)

2.1.2 Classification of stroke

There are two types of strokes: "Ischemic stroke" and "Haemorrhagic stroke" Most strokes are ischemic strokes. (AHA, Heart Disease and Stroke Statistics, 2022). Ischemic strokes occur when blood clots or other particles block the blood vessels leading to the brain. (CDC, 2022) The symptoms of an ischemic stroke depend on which parts of your brain are affected. They may include sudden numbness or weakness in the face, arms or legs, often on one side of the body, blurred consciousness, problems speaking or understanding others, dizziness, loss of balance or coordination, or difficulty walking, loss of vision or double vision. Sometimes you can get complications. A stroke can damage your brain cells. The more damage you have, the more problems you may have. Complications of ischemic stroke are permanent weakness or numbness or slurred speech, seizures, problems with memory and understanding. (WebMD, 2022)

Ischemic strokes also include something called a "mini-stroke" or TIA (transient ischemic attack). This is a temporary blockage of blood flow to the brain. The symptoms usually last only a few minutes or may go away within 24 hours. The symptoms may be similar to an ischemic stroke. The causes and risk factors for TIA are the same as for ischemic stroke. a TIA is sometimes a warning sign that you will soon have an ischemic stroke. (WebMD, 2022)

Haemorrhagic stroke occurs when an artery in the brain leaks or ruptures (bursts). The leaking blood puts too much pressure on the brain cells, which damages them. (CDC, 2022) There are two types of haemorrhagic stroke. Which kind you have is based on where the bleeding happens. Subarachnoid haemorrhage means it happened in the area between your brain and skull. Intracerebral haemorrhage is bleeding inside the brain. The symptoms of haemorrhagic stroke usually worsen gradually over minutes or hours, although subarachnoid haemorrhage may appear suddenly. The symptoms are intense headache, confusion, nausea or throwing up, sensitivity to light, problems with vision, passing out. A haemorrhagic stroke

can cause complications like seizures, memory and thinking problems, heart problem swallowing problems and trouble eating and drinking, permanent neurologic disability (WebMD, 2022)

Post stroke care is post-stroke rehabilitation, which help stroke patients to relearn skills when their part of brain is damaged. (NIH -National Institute of Neurological Disorders and Stroke, 2022). Stroke rehabilitation is protecting individuals from new medical problems, including pneumonia, urinary tract infections, fall injuries, or large vein thrombosis. Rehabilitation also teaches new ways to compensate for any remaining disabilities to improve the quality of life. For example, a person may need to learn how to bathe and dress with only one hand, or how to use assistive devices to communicate effectively if speech use is impaired. (NIH, 2022)

2.1.3 Stroke statistics

Stroke is a growing public health burden in the United States, with approximately 795,000 new or recurrent strokes in the United States each year, and the economic and medical burden of this growing population of stroke survivors has implications for the health care infrastructure at all levels nationwide. Overall, in 2019 in the United States, there were an estimated 460,000 strokes, 190,000 stroke-related deaths and 3.83 million stroke-disability-adjusted life years. From 1990 to 2019, the change in stroke incidence in the general population increased by about 60%. Incidence, deaths, and disability-adjusted life years also increased by about 20%. However, over the same period, age-standardized rates of stroke incidence, deaths, and disability-adjusted life years declined by 20% to 30%, while the prevalence of stroke remained unchanged. These declines leveled off in the last 10 years of the study period. (Newsroom, 2022)

Asia is the largest and most populous continent in the world. Asians make up more than half of the world's population. Asian countries are highly heterogeneous in terms of size, population, ethnicity, culture and economy. Asian patients account for more than two-thirds of the total incidence of stroke worldwide. Stroke mortality is higher in Asia than in Western Europe, the Americas, or Oceania, except for some countries such as Japan. (Narayanawamy Venketasubramanian, Yoon, Pandian, Navarrod, 2017; Turana et al. 2020)

In the European Union there were 1.12 million incident strokes in 2017, 9.53 million stroke survivors, 0.46 million deaths, and 7.06 million disability-adjusted life years lost because of stroke. Wafa et al (2020) estimated by 2047, an additional 40 000 incident strokes (+3%) and 2.58 million prevalent cases (+27%). Stroke is the second leading cause of death worldwide and the leading cause of disability. Its incidence is increasing because the age of the population. (Katan & Luft 2018). In Finland alone, there are 20,000 cases of stroke each year. Thus, an average of 55 people has a stroke every day in Finland, and one third of these

people are still of working age. Twenty-five percent of these people recover normally, but 15 percent require permanent and continuous care. (Haltian, 2022)

There are more than 7.6 million new ischemic strokes each year. (World Stroke Organization - WSO, 2022) Globally, more than 62% of all strokes that occur are ischemic strokes. Globally, more than 77 million people currently experience ischemic stroke. 3.3 million people die each year from ischemic stroke. More than 63 million years of healthy life are lost each year due to ischemic stroke-related death and disability. There are more than 3.4 million new cases of intracerebral hemorrhage each year. More than 28% of stroke events are intracerebral hemorrhages. Nearly 21 million people have experienced an intracerebral hemorrhage. People who have experienced an intracerebral hemorrhage. Almost 3 million people die from intracerebral haemorrhage annually. Nearly 69 million years of healthy life are lost each year due to intracerebral hemorrhage. Globally approximately 1.2 million new subarachnoid hemorrhages occur each year. Nearly 8.4 million people currently experience a subarachnoid hemorrhage. (World Stroke Organization - WSO, 2022)

2.1.4 Consequences of Stroke

Stroke will damage the brain of a post-stroke patient, causing long-term effects on health or quality of life. Although stroke is an acute disease, it takes a long time to recover. For this reason, strokes are also known as chronic illnesses. Most patients require long-term rehabilitation to return to their former independent lives, and many people never fully recover after a stroke and need ongoing support. (NHS, 2019). Strokes occur unexpectedly and suddenly and usually include some of the following symptoms: numbness in the arms, face or legs, especially on one side of the body; difficulty speaking or seeing; blurred consciousness; dizziness, difficulty walking, loss of balance or coordination; unexplained severe headache; and loss of consciousness or fainting. (Caplan, 2006; Langhorne, Bernhardt and Kwakkel. 2011).

The consequences of a sudden stroke are multifaceted and vary from person to person. Complications of ischemic stroke are permanent weakness or numbness or slurred speech, seizures, problems with memory and understanding. A haemorrhagic stroke can cause complications like seizures, memory and thinking problems, heart problem swallowing problems and trouble eating and drinking, permanent neurologic disability. Many patients experience long-term cognitive and functional impairment, but others may recover fully and be discharged quickly. (Sacco et al. 2013; Virani et al.2020; WebMD, 2022).

Predictors of long-term recovery include early diagnosis of stroke symptoms and access to possible thrombolytic therapy and acute care, including early recovery in a multidisciplinary stroke unit. (Langhorne and Ramachandra, 2020; Wright et al., 2012). In the long term, patients may experience difficulties in daily activities due to complications related to motor

impairment and cognitive deficits, among others. As a result, the consequences of a stroke can affect daily life, causing difficulties in communication, walking and eating. (Langhorne, Bernhardt and Kwakkel. 2011; Wright et al., 2012) Many survivors of post-stroke experience physical impairments also cognitive and emotional changes. (Hoffman, 2019) About one-third of all stroke survivors will experience emotional challenges, and others may have personality changes or inappropriate behaviors, such as depression, unusual behavior, impulsive and inappropriate behavior, Impulsive and inappropriate behavior, etc. (Rehab, 2021).

2.1.5 Stroke rehabilitation

Stroke rehabilitation is a program of different therapies designed to help you relearn the skills you have lost after a stroke. Depending on where in your brain was affected by the stroke, rehabilitation can help you master motor, speech, strength and daily living skills. Stroke rehabilitation can help you regain your independence and improve your quality of life. (MAYO CLINIC, 2022) The World Health Organization hosted the Asia-Pacific Consensus Forum on Stroke Management in Melbourne, Australia, in October 1997. Representatives from the European Stroke Council, the American Heart Association, the Canadian Heart Association, the Australasian Stroke Association, and the Southeast Asian Stroke Association, as well as other representatives from Southeast Asia, Asia, North America, Europe, the Middle East, South Africa, and the subcontinent, participated in the meeting. At the meeting, representatives from the above countries reached a consensus that all stroke patients should have access to appropriate rehabilitation services aimed at achieving optimal function, independence and quality of life for patients through restorative care. (Stroke, 1998)

Stroke is an emergency, and the faster a patient receives treatment, the better. In the caregiver's burden and the improvement of their quality of life, weeks and months following a stroke, the process can be slow and uncertain, and different people will recover in a variety of ways. (Health, 2022)

Initial Treatment, if patients experience a stroke, may initially be taken to the emergency room to stabilize your condition and determine the type of stroke. If it is caused by a blood clot (ischemic stroke), clot-busting medications can help reduce the long-term effects if treated promptly. It is critical to begin rehabilitation as soon as possible after the cause of the stroke has been treated for stroke recovery, which begins about 24 hours after the stroke. (Health, 2022)

First few weeks after a stroke, the typical length of a hospital stay after a stroke is five to seven days. During this time, the stroke care team will evaluate the effects of the stroke, which will determine the rehabilitation plan. The long-term effects of stroke – which vary from person to person, depending on the stroke's severity and the area of the brain affected – may include Cognitive, Physical, Emotional symptoms and Heavy fatigue and trouble sleeping. (Health, 2022)

Stroke Rehabilitation Priorities, Activities of daily living (ADLs) become the focus of post-stroke recovery. ADLs often include tasks such as bathing or preparing food. However, patients should also discuss with their care team the activities that are important to them, such as performing work-related skills or hobbies, to help stroke patients set recovery goals. While therapy is vital, it is equally important to practice on your own. (Health, 2022)

1-3 Months Post-Stroke, the first three months after a stroke are the most important for recovery and when patients will see the most improvement. During this time, most patients will enter and complete an inpatient rehabilitation program or make progress in outpatient treatment. The goal of rehabilitation is to restore function to the pre-stroke level as much as possible or to develop compensatory strategies to address functional impairment. (Health, 2022)

The 6-Month Mark and Beyond, after six months, improvement is possible, but it will be much slower. Most people who have had a stroke reach a relatively stable state at this point. For some people, this means full recovery. Others will have ongoing impairment, also known as chronic stroke disease. Whether a full recovery is possible depends on a variety of factors, including the severity of the stroke, the speed at which initial treatment is provided, and the type and intensity of recovery. (Health, 2022)

2.2 Nurses' healthcare guidance

2.2.1 Definition of nursing guidance

Nursing guidance is a document that synthesizes current evidence and recommendations for nursing professionals regarding patient care in specific conditions. It uses prevention, diagnosis, treatment, and rehabilitation activities in evidence-based medicine and nursing patient management. Nursing guidance is systematically developed statements of recommended best practices in specific clinical areas designed to provide direction for the practice of nursing professionals. (MID, 2020) Nursing clinical guidelines are statements that include recommendations designed to optimize patient care. These statements are derived from a systematic review of the evidence and an evaluation of the benefits and costs of alternative care options. (California State University Fullerton, 2022)

2.2.2 Nurses' responsibilities in health care guidance

Nurses serve the community in many ways and play an important role in health care. Nurses promote healthy lifestyles, advocate for patients, provide health education, and directly care for many patients. The specific functions of nurses have evolved somewhat over the years. However, their importance in health care is still evident. (Paharia, 2022) Nurses make an important contribution to the promotion of health, health protection and the prevention of ill health. They do this by empowering people, communities and populations to exercise choice,

take control of their own health decisions and behaviours, and by supporting people to manage their own care where possible. Nurses play an important role in providing, leading and coordinating compassionate, evidence-based and person-centered care. They are accountable for their own actions and must be able to work autonomously or as equal partners with a range of other professionals and in interdisciplinary teams. (NMC, Nursing & Midwifery Council, 2022)

2.3 Nurses' health care guidance for stroke patients

2.3.1 Nurses' guidance for stroke patient in USA, Europe and Asia

This study focuses on registered nurses' guidance in the care of stroke patients in the United States, Asian and European countries.

Registered nurses in USA must have a nursing license issued by the state in which they work. To be licensed, nurses must graduate from an approved nursing program and pass the National Council Licensure Examination (NCLEX-RN). Other requirements for licensing, such as passing a criminal background check, vary from state to state. (Nurse.org, 2022) In most Asian countries, such as Japan, registered nurses earn a bachelor's degree by taking a four-year nursing program at a university. It is also possible to attend a three-year junior college nursing program or a three-year professional nursing school. Complete any of these programs by attending and passing the national exam to become a registered nurse. (Chiang-Hanisko, Ross, Boonyanurak, Ozawa, Chiang, 2008) Nursing is a licensed profession in Europe and Finland. Only licensed professionals are allowed to practice the profession in question. (Suomi.fi, 2021) Registered nurses have a broader scope of practice than practice nurses because they can perform diagnostic tests, administer medications, and educate patients on how to manage their health after treatment. RNs also supervise LPNs, certified nursing assistants and home health aides. (Goodwin University, 2019)

American Heart Association Scientific stated three scientific statements provide newer, evidence-based suggestions for practices and assessment tools that offer guidance for nurses to provide comprehensive care for patients with acute ischemic stroke. Close monitoring of patients with acute ischemic stroke by nurses before, during and after procedures to dissolve or remove blood clots is indicated to achieve optimal patient outcomes. The assessment of vital signs, hypoglycemia, swallowing dysfunction, and neurological function provided by nurses is critical throughout the hospitalization of patients with ischemic stroke. Services for nurses, such as education programs for high-risk populations, mobile medical units and stroke care units, and ongoing education and research around the role of nurses are critical to improving patient prognosis. (AHA, 2021)

SIGN - Scottish Intercollegiate Guidelines Network claimed the nurses' care guidance for stroke patient. Stroke nursing focuses on the holistic needs of the patient and family, involving physical, psychological, cognitive, emotional, spiritual and social care. The impact of these aspects is different and unique to each patient and family. Nurses consider individual needs and work in partnership with patients and their families to engage them in a meaningful way in decision-making and recovery. Stroke care is delivered in the context of multidisciplinary work that allows for sharing and integration of clinical practice. Stroke nursing is a continuous, 24-hour process that occurs throughout the patient's care, regardless of the setting. Caring for stroke patients requires nurses with the knowledge, clinical skills, confidence and interest to provide effective treatment. and interest to provide effective therapeutic care and rehabilitation. Nurses need to be educated. Training and practice development. (SIGN, 2010)

Asia research showed the application of integrated medical care and continuous 4C care model for acute stroke patients is beneficial to improve the degree of neurological impairment, improve activities of daily living and motor function, and promote the quality of life of patients with stroke. Four "C": comprehensiveness, cooperation, coordination, and continuity of the nursing service process. Comprehensiveness refers to the assessment of physical, psychological, health behavior, and social environmental health problems when patients are discharged from the hospital and enter their daily life activities and foresee their health needs [10]. Cooperation means strengthening cooperation between patients and health care workers. Coordination means multidisciplinary docking and coordination. Continuity refers to the continuous and regular provision of nursing follow-up services after discharge. (Zhang et al 2022) Falls prevention in stroke survivors has received attention and is seen as an indirect goal of stroke rehabilitation in Southeast Asia. More innovative research needs to be adopted from falls research in older adults to advance falls prevention and intervention practices for stroke survivors. (Ainuddin, H.A., Romli, M. H., Hamid, T. A., Salim, M. S. F., Mackenzie, L., 2021)

2.3.2 Challenges for nurses when provided healthcare guidance

Despite innovations in stroke treatment because population growth, improved survival rates and the ageing of populations are increasing stroke prevalence (Virani et al.2020; Wafa et al. 2020). This creates challenges for healthcare staff because the demand for treatment, rehabilitation and support services for stroke patients is rising (GBD Neurological Disorders Collaborator Group Global, 2019.). The stroke care pathway involves multiple settings and health care disciplines, and it includes several aspects of care, including the acute care phase, treatment of medical complications. (Wang et al. 2016). Patient counseling and secondary prevention, as well as long-term follow-up and rehabilitation. (Oikarinen, Engblom, Kyngäs and Kääriäinen, 2018; Smith et al. 2014). Healthcare professionals working in this pathway must demonstrate diverse competencies because stroke is multidimensional; stroke

patients may require rehabilitation to address a range of physical, cognitive, and behavioral issues. Therefore, healthcare professionals working in all phases of this pathway must have specific competencies, be highly engaged and adopt a multidisciplinary approach. (Kirkevold, 2010; Clarke, 2014). In addition, healthcare professionals involved in stroke care need up-to-date knowledge and evidence-based clinical competencies. (Baatiema et al, 2017). The important role of healthcare professionals in supporting stroke patients and their families has been noted, with particular emphasis on the ability to understand the needs and priorities of those being supported. (Aadal, Angel, Langhorn, Pedersen and Dreyer, 2018; Theadom, Rutherford, Kent, McPherson and ARCOS IV Group, 2018). At times, nurse found it difficult to let patients struggle to complete their activities of daily living. The nurses felt that lack of resources, including time, contributed to stroke survivors being short-changed in their rehabilitation nursing care. (Barreca, Wilkins, 2008).

It is well known that nursing is a stressful profession, and this issue is often mentioned in the literature. (Saramago, I., Timmons, S., Gallagher, P., Fox, S., 2020) Several European and international studies have acknowledged that the increased demands of the nursing profession have led to intentional resignations and high turnover rates. Most available studies indicate that nurses have increased stress levels compared to other health care workers. Irish researchers found that nurses interviewed reported work-related stress. Nurses frequently described feeling "frustrated," "overwhelmed," "disappointed," "anxious," "nervous," "worried," and "restless" at work Nurses also felt they could not cope with their workload, and these feelings could lead to increased job responsibilities. Most nurses also felt that factors that increased their stress levels included, family involvement, the need for regular communication with the health care team and the work environment and job performance. In fact, there is a large literature on the impact of stress on informal caregivers and less on nurses caring for stroke patients. (Saramago, I., Timmons, S., Gallagher, P., Fox, S., 2020)

Nurses in China generally admitted that they lacked sufficient time or professional knowledge to perform their ideal nursing role, and so focused instead on what is strictly necessary. Currently, nurses' time was taken up with treatment-related tasks and paperwork, so they spent relatively little time at the patients' bedside. While some stroke patients may recover well, bringing nurses a sense of worth, other older stroke patients may lie in the bed for a long time, making little progress. In these cases, the nurses may become low spirited and feel worthless. Watching older people who are bed-ridden due to a stroke make little progress, the nurses often consider their own health and future life and career. They are scared of being in a similar condition when they are old and expressed a sense of uncertainty about the future. (Cheng. W., Tu. J., Shen. XY., 2021)

Nurses like to provide this type of care and feel that their role is critical to the recovery process in America. Sometimes, they find it difficult to allow patients to struggle to complete their activities of daily living. Nurses felt that a lack of resources, including time, led to

stroke patients being short changed in their rehabilitation care. The nurses remained positive despite their strong belief that others devalued their role on the stroke team. (Gibbon, B., 1991)

2.3.3 Difficulties encountered by patients in receiving health care guidance from nurses

Stroke patients believe that there are important non-physical issues in their recovery that are not receiving adequate attention. Lack of emotional care, poor continuity of care and lack of staff knowledge and skills were not identified as problems of nurses. (Morris, R., Payne, O., Lambert., A, 2007) Stroke patients may feel abandoned because they have difficulty accessing appropriate health services, leading to marginalization. (Research, 2018) Patients perceive that nurses often talk to them in a functional manner, using minimal social or emotional communication. Few studies have been conducted on the care of patients with communication difficulties. (Gordon, C., Ellis-Hil, C., I, Ashburn, A., 2009)

Stroke remains the leading cause of long-term disability in the United States. As a result, stroke survivors are often in poor physical condition and are prone to a sedentary lifestyle that limits activities of daily living, increases the risk of falls, and may lead to an increased risk of stroke and cardiovascular disease recurrence. Clearly, stroke survivors can benefit from counselling on participation in physical activity and exercise training. However, most health care professionals have limited experience and guidance in developing exercise programs for this diverse and growing patient population. (Gordon et al 2004) Aphasia is a language disorder caused by damage to specific areas of the brain that control the expression and comprehension of language. (Johns Hopkins, 2022) The prevalence of post-stroke aphasia ranges from 18% to 38% in the U.S. In 2011-2012, aphasia ranged from 14.3% to 24.9% in eight U.S. states. Whites had the highest rate of aphasia compared to blacks, Hispanics, and other ethnicities. (Ellis, C., Hardy, R. Y., Lindrooth, R. C., Peach, R. K., 2017) Compared to Whites, Blacks, Alaska Natives, and Hispanics more frequently reported worsening confusion or memory loss that interfered with day-to-day activities and the ability to work, volunteer, and engage in social activities outside of the home. (Burns, S. P., Mueller, M., Magwood, G., White, B. M., Lackland, D., Ellis, C., 2018)

Wit et al (2016) claimed the impact of stroke on health-related quality of life of five-year survivors in four different European countries, the higher the level of patient depression, anxiety and disability. Simeone et al (2015) interviewed stroke patients from rehabilitation hospitals in Rome and Naples. The patients realized that their stroke had changed their physical and psychological lives forever. The aftermath of the stroke had changed their life patterns: life now seemed more insecure and unstable. The stroke slowed down their lives and the patient did almost everything they had done before the stroke, but at a slow pace. Walking was a little slower, talking was slower, and patients wanted words, but they were spoken slowly. The stroke patients interviewed felt a sense of burden on family members.

The fact that the patient is aware of and feels guilty for the discomfort they are causing their family. (Simeone, 2015)

Stroke is the leading cause of disability worldwide. Over the past decade, stroke severity has increased while hospital stays have decreased. Nearly 50% of stroke patients experience long-term effects, including limitations in daily, social, and leisure activities. Post-stroke mental health challenges are also common, including depression, generalized anxiety disorder, post-traumatic stress, and disorders of involuntary emotional expression. Up to 59% of people with stroke in the South Asian community reported unmet post-stroke needs (defined as "needing someone's help or unmet help"), and post-stroke experiences and needs are often overlooked. (Kokorelias, 2022) As in the United States, the rate of falls during recovery is significant among stroke patients in China but is lower than the rate reported in Western stroke populations. (Sze. K. h., Wong. E., Leung H.Y., Woo, J., 2001) Like stroke patients in South Asia, stroke patients in China face difficulties with unmet needs. The difference, however, is that the most frequently cited but largely unmet need in China is the need for information, particularly about the causes of stroke and activities to promote recovery. In acute and rehabilitation settings, stroke patients need to be treated with respect for the individual, referred to by name, and have their privacy protected. Patients mention that nurses do not always relate the level of functional capacity to the assistance needed for physical work. Nurses also did not recognize the relationship between physical and psychological needs and the equal importance of both in stroke rehabilitation. (Lui, 2001)

3 Purpose and aim

To learn nurses' effective healthcare guidance at stroke patient by literature reviewing. The purpose of this study is to review nurses' healthcare guidance at stroke patients' rehabilitation. The aim of this study to identify how nurses' healthcare guidance at stroke rehabilitation.

4 Methodology

The question about topic is answered with a descriptive literature review. The study applies a literature review and utilises descriptive methods to analyse and interpret the data.

4.1 Descriptive literature review

Aveyard (2010) stated "a literature review is the comprehensive study and interpretation of literature that relates to a particular topic." According to Eisenberg and Berkowitz (1990), doing a review article involves six generic steps: defining the topic, developing a strategy,

locating the information, using and evaluating the information, synthesizing, evaluating the work. According to The University of Arizona (2021), A literature review is an overview of what researchers and authors have said about a topic. The purpose of a literature review is to convey to your reader what ideas have been established on your topic, and what gaps there are in the existing literature.

4.2 Data search and selection

Data collection is a systematic approach which including, collecting, gathering, or collating of information, observation, or measurements either qualitative or quantitative or both and use same as evidence in answering the research question (Bhandari, 2020). The data for this study was searched using databases. access to these databases, EBSCO, PubMed and ScienceDirect (Elsevier), was provided by Laurea University of Applied Sciences, which allowed the authors to access full-text articles or journals. Google Scholar was also one of the database sources. To improve accuracy, certain specific inclusion and exclusion criteria were developed in order to select appropriate studies for the literature review. The articles, were written in English, published in the last 10 years, and had keywords that were identical or closely matched to the titles of this study. Other inclusion and exclusion criteria can be found in Table 1.

Inclusion	Exclusion
Registered nurses' healthcare guidance	Experiences of nurses not related to stroke rehabilitation, experiences or views or challenges of patients/family on stroke rehabilitation Experiences of doctors or physiotherapists to stroke rehabilitation
Stroke	Conditions that do not include stroke
Stroke rehabilitation	Conditions that do not include post stroke rehabilitation, acute treatment
Full text	Abstracts
Literature found from university online database	Blogs or non-academic websites
Qualitative study or research	News editorials, opinion pieces, commentaries, reviews with unsystematic methods
Within 10 years	Older than 10 years
Languages: English	Other languages than English
Academic articles and research	Non-academic articles

Table 1. Inclusion and Exclusion criteria

The research questions were broken down into two main concepts: "Nurse health guidance" and "stroke rehabilitation" to assist in literature search. EBSCO, PubMed, ScienceDirect (Elsevier), and Google Scholar were used in the literature study. Using these existing databases, peer-reviewed health journals and articles related to the topic of this study were searched based on the keywords of the paper topic. The following is a PRISMA flowchart illustrating the systematic literature search process at each stage. PRISMA flowchart, reporting system review. (BetterEvaluation, 2020).

In the first step, 154,661 articles were retrieved from the databases based on keywords, then about 154,476 articles were removed. This is only the first step of article filtering, where the authors exclude articles that do not contain keywords, or articles that only partially contain keywords in their titles and remove duplicate records. The second step was the screening phase, where the title and abstract of each article were reviewed. Articles without full text were excluded, and titles that were not directly related to the aims and objectives of the paper were excluded. Abstracts that had no relationship to the aim and purpose of the paper and the research question were excluded. Finally, the authors reviewed 27 full-text articles and then excluded articles that lacked specific stroke rehabilitation recommendations, focused on nursing management, and did not present actionable guidance for nurses. Finally, six selected articles that met the requirements. Figure 1 clearly shows how the articles were filtered step by step, with each step strictly following the inclusion and exclusion criteria. Finally, six articles were selected.

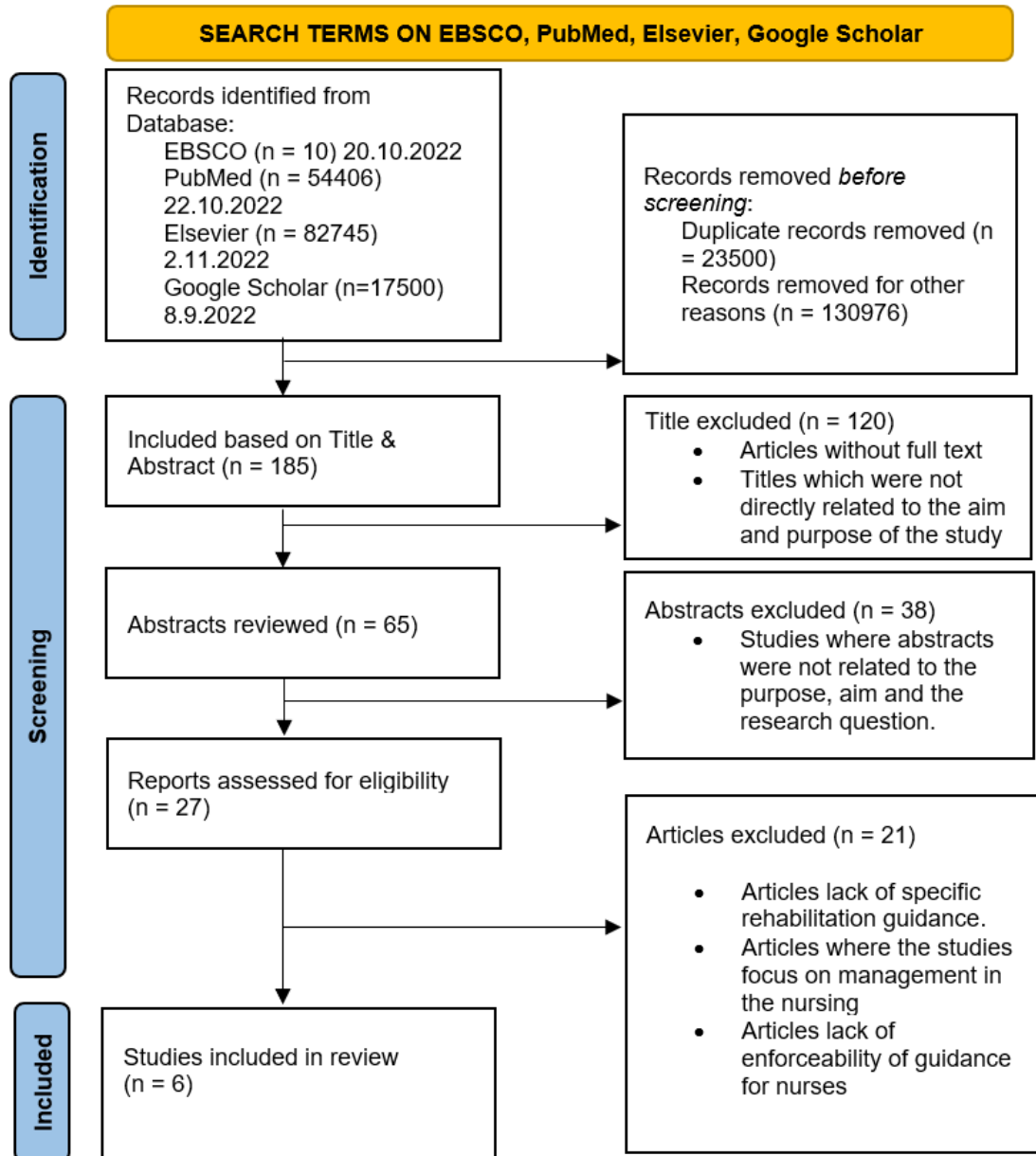


Figure 1: Data selection flow chart - Modified version of PRISMA flow diagram (2020) (BetterEvaluation, 2020).

4.3 Content analysis

According to PHM, Population Health Methods (2022) “Content analysis is a research tool used to identify certain words, themes, or concepts present in certain specific qualitative data (i.e., text).” Inductive content analysis (ICA), or qualitative content analysis, is a method of qualitative. Data analysis is well suited for health-related research, especially relatively small, non-complex studies conducted by health professionals working in research. (Busetto, Wick & Gumbinger, 2020) Inductive content analysis is suitable for studies where the current body of knowledge is not substantial and where meaning emerges from patterns in the data. (Labrague, et al 2016) There are fewer studies in the United States, Asia, and Europe that

provide specific nurse guidance for the rehabilitation of stroke patients. An inductive content analysis is appropriate for this study.

Cited by Luo (2022), there are several steps of conduct content analysis. (1) Select the content you will analyze. Articles collected to this study were six articles, which all were peer-reviewed from academic journals and selected from nursing databases. (2) Units and categories were analyzed. The units of meaning that will be coded. Read the 5 articles and the different health care guidelines that nurses can use. (3) A set of coding rules was developed. Inductive content analysis was used in the analysis phase. Articles were read and responses of different stroke patients to the rehabilitation instructions were collected. These responses were noted down as raw phrases. The collected data was read again, and the collected data was read carefully and summarized by arranging each similar categorization was done to create subcategories. The subcategories are partially further main categories where similar data are further summarized and together for the main classification. This is called by (4) Code the text according to the rules. (Luo, 2022).

Original phrase	Subcategory	Main Category
<p>“Stroke may have originated from our thoughts, we are too stressful and tend to overthink...The doctor never told and I’m also not sure.”</p> <p>“I’m not sure the cause of stroke...My mother in law had stroke attack although she doesn’t have any underlying problem.”</p>	Patient misconceptions	Educating patients about stroke
<p>“I’m not sure regarding the cause of stroke. We had tried to ask the doctor regarding the cause of stroke during admission. At that time, my blood cholesterol level was only 5.8. When we discussed with my friends, 5.8 was not considered high.”</p> <p>“The doctor told me that my stroke was due to high blood pressure and uncontrolled diabetes... But my blood pressure at that time was not extremely high (only at 150)... My blood glucose level was also not very high... at 17 only. You will get stroke no matter what readings you have.”</p>	Patient suspicion and disapproval of stroke	

<p>"I don't know. If it happens again, just let it be. It feels like fate. I can't do anything..."</p> <p>"If you have stroke at your left side, the weaknesses are usually permanent, and you are less likely to get repeated stroke. My families were shocked when they found out that I had repeated stroke this time."</p> <p>"will I have to stay like this forever? Like this? Depending on others?"</p>	<p>Patients lack knowledge and awareness about stroke</p>	
<p>"I did not really know what self-management was . . . I attended exercise programs though . . . but my wife said every program must be helpful in some way, so I joined."</p> <p>"I found it hard and was demotivated to do exercise . . . when seeing no improvement, I was even more annoyed and hated my [affected] leg . . . Setting a goal drives me to do it, at least I am happy to see myself keep going."</p>	<p>Patients have different perceptions of self-management</p>	
<p>"I enjoy viewing these videos (other survivors' sharing of poststroke survival experiences) . . . I know that I'm not alone. I am just like others. Knowing that they can do it, I feel that I can also do it!"</p> <p>"I cannot remember all of them in the videos . . . but I remember that one patient said 'Be confident in yourself! How you think determines the level of your attainment'. It became my motto. One statement like that is enough."</p>	<p>Most patients enhanced confidence in self-management</p>	<p>Stroke self-management program</p>
<p>"More sessions and longer duration would be better. I want to see the nurse more so she [nurse] can keep assessing my condition . . . If I know the nurse will visit me, I will have the energy to do more exercise."</p> <p>"This program is about self-management . . . I know it is important, but I still need to know how to manage, for example, what food to eat, where and who to seek help from."</p>	<p>Patients suggested to enhance positive experiences of self-management</p>	

<p>“I had many falls after his stroke, I think it was more than 50 falls.”</p> <p>“For me, the risk of falls is the number one important thing after stroke, although I have not had a fall.”</p>	<p>Perceived factors and consequences of falls after stroke</p>	
<p>“(We also conduct) group exercises. For example a balance training which throwing a ball to each other in a standing position so that we will have to maintain our balance.”</p> <p>"We also do functional activities, such as gardening and family activities. For example, pouring water into a cup or when I do this activity standing up, I can work on my balance."</p>	<p>Physical-based interventions predominate in rehabilitation for falls after stroke</p>	<p>Rehabilitation for falls after stroke</p>
<p>“(Home assessment and modifications are) not necessary, you are just paying money to get a professional to come to your house and it would cost you a few hundred thousand of ringgit.”</p> <p>“When they put in a grab rail around the house, it will become a hospital and I do not want my house to look like a hospital.”</p>	<p>The role of home hazards in fall prevention is taken for granted</p>	
<p>“I think my family takes good care of me regarding eating...They help me to prepare food. They have changed the recipe for the whole family.”</p> <p>“My sister assists me to do exercises every night. She helps me a lot and support me to do exercise.”</p>	<p>Recovery requires the support of family and friends</p>	<p>Support and assistance for patients' families</p>

<p>"I had tried to with hold the urge to smoke initially.... but eventually gave in since I smell the cigarette smoke too often (son smokes at home every day)."</p> <p>"My wife is busy and unable to monitor me. Without supervision, I will just fall asleep... I think I need some assistance while doing exercise."</p> <p>"I fall asleep most of the time when at home. Motivation to do exercise at home is less. When I'm at home...if I exercise, my wife never comes to watch, she has a lot of work to do (in the kitchen), so I have to exercise alone."</p>	<p>Rehabilitation barriers from family members.t</p>	
<p>"Family members do my laundry, bathe me, dress me and feed me. [...] Everything I eat has to be well cooked, well mashed, because if there is any bran in my mouth, it doesn't go down! [...]"</p> <p>"Most of the information was obtained from doctors or family members only. I never go to search for information by myself."</p>	<p>Support for family members is necessary</p>	
<p>"stroke victims will often have a problem with swallowing' and therefore poor oral hygiene could increase risk of aspiration pneumonia as ' . . .they might aspirate [pooling saliva]. . .that will cause pneumonia.'</p> <p>"We're not going to change life long habits"</p> <p>"They agreed that nursing staff were responsible for oral hygiene assistance, and that this fits well with their existing practices."</p>	<p>Oral health knowledge and practices</p>	<p>Oral care for stroke patient</p>
<p>"A lot of patients from very poor socio-economic backgrounds,. . .and oral care is not something they put high on their agendas, unfortunately"</p> <p>". . .language barrier or communication. . ."</p>	<p>Challenge in oral care</p>	

<p>“a matter of determining what they (patients) prefer.”</p> <p>“...especially if we doing rehab, ...[nurses should be] reassuring us that...we will get better, ...that way we will change”</p>	<p>The need for patient-centred care</p>	
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Figure 2: Inductive Content Analysis Process Illustration

5 Findings

5.1 Educating patients about stroke

Stroke patients lack the knowledge of stroke, nurse can provide education guidance. According to Wong, Harith, Lua and Ibrahim (2021) many patients didn't know the mechanism of stroke, they tended to associate stroke with brain, blood vessel and underlying disease. Patients had difficulties to explain the cause of stroke. Without this knowledge, it is uncertain whether stroke survivors will realize the importance of making lifestyle changes to modify potential risk factors. Most patients are aware of the risk of recurrent stroke. However, their susceptibility to recurrent stroke varies widely, and this influence their decisions to make behavior changes. (Wong, Harith, Lua, Ibrahim, 2021) Food taboos is a common practice among stroke patients. Nurses should adequately address this issue in health education as it appears to further limit participants' food choices and discourage them from choosing healthy food groups (i.e., vegetables, fruits, and fish) (Wong, Harith, Lua, Ibrahim, 2021)

There is need for proper public awareness of the signs and symptoms of stroke to prevent strokes. In addition, there is an observed need for universal education to recognize the signs and symptoms of stroke early and to seek medical care immediately, as inadequate knowledge hinders prior access to available medical care. Many people tend to underestimate the first signs and symptoms of serious illness, which interferes with their seeking medical care. Late recognition of these signs and symptoms affects the chances of saving lives and, in the case of surviving a stroke, minimizing the disability caused by this disease. (Silva, J.Kd., Vila, Vd. S. C., Ribeiro, M. F. M., Vandenberghe. L., 2016)

5.2 Stroke self-management programme (SSMP)

After hospital treatment for stroke, most participants returned home with clinical changes, such as hemiparesis or hemiplegia, and became dependent on others for activities of daily living. Participants expressed fear and concern about being dependent on others for simple activities of daily living (e.g., feeding), as well as other health complications, such as death.

These feelings created a sense of hopelessness among the participants due to the disability associated with the disease. (Silva, J.Kd., Vila, Vd. S. C., Ribeiro, M. F. M., Vandenberghe. L., 2016) “At night, I use a diaper because I don't sit! I don't want to wake anyone up at night to catch me, and urine is leaking all the time! [...]” (Silva, J.Kd., Vila, Vd. S. C., Ribeiro, M. F. M., Vandenberghe. L., 2016).

International evidence-based guidelines recommend self-management support for stroke patients to improve their health outcomes. The study of a 4-week nurse-led stroke self-management programme (SSMP) found that patients were generally satisfied with the SSMP. Stroke patients improved their understanding of self-management and recognised its importance after joining the programme. The multifaceted strategies adopted in the SSMP were helpful in enhancing participants' self-efficacy. Enhancement in the programme format and accessibility would be worthwhile to promote stroke patients' self-management and hence, recovery. (Lo, Chau, 2021)

5.2.1 SSMP Improved understanding of self-management and its importance to recovery

Through the SSMP program, patients learn core self-management skills such as setting goals and action plans that enable them to address their daily health needs in a more systematic way. Patients also attribute their persistence in maintaining the hard work of recovery to the goals and action plans they set. Goals and action plans set during the SSMP. (Lo, Chau, 2021)

5.2.2 Enhanced confidence in self-management through multifaceted strategies

The strategies used in the SSMP, including videos, home visits by nurses, and group sessions at the community centre boosted patient confidence. The SSMP boosts stroke patients' confidence, which is important to facilitate their recovery. Patients also appreciated the opportunity to watch videos of other patients sharing their experiences of surviving a stroke and learning from them. Patients found these videos to be the most helpful part of the SSMP to increase their confidence in managing their stroke. Patients are frustrated with their prognosis after a stroke and feel that they have lost control of their lives. While patients are unsure of their level of recovery, watching the video gives them the confidence to do well in their daily life roles and activities. In addition, some patients expressed appreciation for parts of the video. The encouraging words of the stroke patients in the video helped counteract the depressing voices in the patients' own heads of "I can't do this" and "I don't see any hope for progress. Instilling in them the energy to continue their recovery. In addition to the video, most patients welcomed the home visits. They appreciated the opportunity to discuss their personal care plan with the nurse, which is often not available to survivors, especially those with mild strokes. The home visit nurses not only clarified the patients' questions about stroke care, but also encouraged them to vent their feelings and thoughts and reinforced their progressive achievements. This provided them with a sense of support

and increased their confidence in managing their condition during the transition to home. Most patients found the community centre groups to be a rewarding experience. It allowed them to meet, interact and share with group participants which had the same conditions. Patients felt that it allowed them to learn more about other people's experiences, difficulties or concerns when they went home. This is often not the case in routine stroke care after discharge from hospital. (Lo, Chau, 2021)

5.2.3 Suggestion to enhance positive experiences of self-management

Some patients suggested that attendance of the group session could be optional. It is because they feel embarrassed when others see their "deformed" arms and legs after a stroke. They also do not have the confidence to talk to or share with people they do not know well. In addition, some patients revealed that they doubted their ability to recover after watching videos of other survivors. Furthermore, some patients appreciated the flexibility of the follow-up phone calls. They helped save time and money needed to travel to a venue for consultation. Overall, regarding the workbook, patients found its readability was good. Some patients suggested providing more examples involving home-based exercise, management of depressed mood, and community resources to make the necessary information more readily available. (Lo, Chau, 2021)

5.3 Rehabilitation for falls after stroke

Research on falls rehabilitation after stroke remains limited, although its implications are far-reaching. This situation justifies a deeper understanding of why falls in stroke rehabilitation have received less attention. Current investigations of falls and stroke perception have also proven to be inadequate. Nurses need to pay more attention to home environment risk assessment and interventions and need to do more to educate patients. While other stroke interventions may also benefit stroke patients, fall prevention should be a core component of stroke rehabilitation. (Ainuddin, H. A., Romli, M. H., Hamid, T. A., Salim, M. SF., Mackenzie, L., 2021)

5.3.1 Perceived factors and consequences of falls after stroke

Because of the difficulties associated with the disease, participants relied on family members for support to help them with the activities of daily living. This experience evoked feelings such as "fear of falling and not being able to heal," "anxiety," "dependence on others," "loss of freedom," and "sadness" (Silva, J.Kd., Vila, Vd. S. C., Ribeiro, M. F. M., Vandenberghe. L., 2016) Most stroke patients, including spousal caregivers, admitted that they and their spouses experienced multiple recurrent falls after their strokes. However, there were also stroke patients who were discharged from the hospital without any falls. In terms of the diversity of fall locations, falls are evenly likely to occur indoors and outdoors. physical and psychological

barriers such as fear of fall, pain and fatigue as strong barriers towards participating in a more active lifestyle. (Wong, Harith, Lua, Ibrahim, 2021) Patients recognize that physical, cognitive, and sensory processing deficits play a role in falls. In addition, familiarity with the environment is sometimes considered to be a protective factor for falls. However, unfamiliar surroundings, such as nearby hazards, may go unnoticed and increase the risk of falls. Patients shared the same concerns about falls after stroke, but not all agreed on the urgency of managing falls. Patients acknowledged that any fall event would also increase fear of falling. One stroke patient also responded that his main concern after a stroke was the risk of falling after a near miss. Patient family members were also more aware of falls and emphasized that they would not allow their spouse to perform daily activities alone to avoid a fall. (Ainuddin, H. A., Romli, M. H., Hamid, T. A., Salim, M. SF., Mackenzie, L., 2021)

5.3.2 Physical-based interventions predominate in rehabilitation for falls after stroke

All stroke patients who participated in the study agreed that stroke rehabilitation was primarily directed at improving physical impairment. Cognitive, psychosocial, and environmental interventions were infrequently used, often overlooked, and often not regularly assessed after stroke, with the primary focus of management being on restoring physical function. Most of the interventions mentioned by the patients were related to the improvement of physical impairment. In addition, functional activities to improve physical impairment were performed as one of the main components of the interventions. All participating patients indicated that more research is needed to investigate the role of other aspects of stroke rehabilitation, including psychosocial, communication, and cognitive issues, as falls are multidimensional. (Ainuddin, H. A., Romli, M. H., Hamid, T. A., Salim, M. SF., Mackenzie, L., 2021)

5.3.3 The role of home hazards in fall prevention is taken for granted

Patients participating in the study mentioned the environment as a factor in preventing falls. However, research has found that the role of environment is not a central focus of falls prevention for stroke patients. Nurses are concerned about the urgent need for home visits and modifications, but they have not been able to do so effectively due to limited staffing, lack of knowledge, cost and time constraints, and the inconvenience of traditional home visits. Nurse found home assessments and modifications to be beneficial. However, some patient participants felt that home visits and modifications were unnecessary and expensive. In some cases, it is possible to use digital technology as an alternative, such as taking photos and videos of a home and sending them to a healthcare practitioner for advice. (Ainuddin, H. A., Romli, M. H., Hamid, T. A., Salim, M. SF., Mackenzie, L., 2021)

5.4 Support and assistance for patients' families

5.4.1 Contributing factors of stroke rehabilitation

Patients were more successful in making dietary changes if other family members or health professionals provided encouragement to make dietary changes. “I think my family takes good care of me regarding eating...They help me to prepare food. They have changed the recipe for the whole family.” “My wife plays an important role in helping me making dietary changes. Initially I always argue with my wife regarding food choices. She helps me a lot in cooking and I have become more conscious in what I eat now. Discipline is also important.” (Wong, Harith, Lua, Ibrahim, 2021)

Stroke patients find it necessary and important to get help in establishing and achieving their exercise program at home. (Wong, Harith, Lua, Ibrahim, 2021) “My sister assists me to do exercises every night. She helps me a lot and support me to do exercise.” “I wake up early in the morning, and my husband always ask me to go for a walk first... Family members keep me accompany and bring chair for me to sit whenever I practice walking. Previously I was afraid to fall down but now I’m getting better at walking.” (Wong, Harith, Lua, Ibrahim, 2021).

Some patients follow the advice of their doctors or friends to quit smoking. The advice of doctors and friends is an important social factor in changing the smoking habit (Wong, Harith, Lua, Ibrahim, 2021). “To be honest, the doctor told me that cigarette smoking is associated with many diseases and advised me to quit. I took the advice and quit smoking immediately.” “I heard people (friends) said that we must quit smoking and alcohol. I had quit smoking ever since.” (Wong, Harith, Lua, Ibrahim, 2021)

5.4.2 Obstacles of stroke rehabilitation

Although family members are helpful in making healthy food choices. (Wong, Harith, Lua, Ibrahim (2021) showed some participants expressed their concern regarding negative influences from family members: “Family members often buy delicious and unhealthy foods that triggers my urge to eat together. They are acting like “double-edged sword.” “Foods prepared by my wife are delicious and it is a waste if I’m not taking it... By having children around at home, it is difficult to ask them to follow me to take soup-based foods (low fat) every day.” (Wong, Harith, Lua, Ibrahim, 2021)

According to Wong, Harith, Lua, Ibrahim (2021) Some participants identified the lack of family supervision and companionship while exercising as a strong social barrier to non-participation. “I fall asleep most of the time when at home. Motivation to do exercise at home is less. When I’m at home...if I exercise, my wife never comes to watch, she has a lot of work to do (in the kitchen), so I have to exercise alone.” “My wife is busy and unable to monitor me. Without supervision, I will just fall asleep... I think I need some assistance while doing exercise.” (Wong, Harith, Lua, Ibrahim, 2021)

According to Wong, Harith, Lua, Ibrahim (2021), Some participants had difficulty overcoming their smoking addiction due to the constant stimulation from surrounding smokers. “I have resume smoking within these two months, just take a few cigarettes in a day. When other people smoke, I can’t stand the smell... I had tried to withhold the urge to smoke initially... but eventually gave in since I smell the cigarette smoke too often (son smokes at home every day).” “I’m afraid that I will resume smoking in future since I’m a hardcore smoker.... I can’t give promise (to quit smoking) I haven’t mix around with friends who smoke.” (Wong, Harith, Lua, Ibrahim, 2021)

5.4.3 Support for family members is involved in health care

In both positive and negative contexts, the family of a stroke patient strongly influences the beliefs and behaviors of each participant. Therefore, many studies have advocated the use of a family-centered approach to increase the effectiveness of secondary lifestyle interventions.” (Wong, Harith, Lua, Ibrahim, 2021) Stroke clinicians and nurses also recommend involving the families of stroke patients in oral care. (Ferguson, et al 2019). Families are critical to accessing health care services and ensuring that care is maintained. However, this care is delivered in an isolated manner. Therefore, health care networks must encourage support for family members and make better use of their potential to provide care. And reorganize the care flow chart to ensure effective action of health care services to the population. (Silva, J.Kd., Vila, Vd. S. C., Ribeiro, M. F. M., Vandenberghe. L., 2016) Family caregivers face difficulties related to instrumental, emotional, and financial support, and lack the knowledge and skills to perform caregiving activities. Post-discharge support programs for caregivers have shown beneficial effects in training interventions for family caregivers, enabling stroke survivors to be at home receive appropriate care at home. These interventions are associated with reduced caregiver burden and improved quality of life for them. (Day, et al 2018)

Nurses should instruct family caregivers to assist stroke survivors with daily living and use of health services at home; to teach family caregivers about oral or nasal feeding, personal hygiene, bathing, diaper changing, dressing and undressing, transferring, positioning, medication care, and handling equipment, such as blisters and stomas, if necessary to provide instruction related to stroke, the causes and consequences of the disease, how to prevent new strokes, what resources the care network provides, and how to access them; To provide emotional support for family caregivers and stroke survivors, and to provide educational materials. (Day, et al 2018)

5.5 Oral care for stroke patients

5.5.1 Oral health knowledge and practices

All nursing agreed that they all had a role in maintaining good oral health among their patients. However, many gaps in care are evident. There are many barriers to providing quality oral care. Nurses report poor oral hygiene in their patients. Oral care was sometimes not sufficiently implemented into routine practice, with nurse commenting that there was no formal process for them to follow in the provision of oral care. (Ferguson, et al 2019)

5.5.2 Challenge in oral care

Nursing reflected on challenges stroke patients may experience in performing their own oral care. These included the physical changes patients may experience post stroke, potentially affecting their ability to care for their oral health. In addition, it was reported that patients from culturally and linguistically diverse backgrounds may have difficulties due to language barrier or communication. (Ferguson, et al 2019) Patients often make healthy lifestyle choices based on their understanding or common sense, although poor knowledge and misconceptions have been reported in some studies. In addition to this, stroke-related impairments (physical, cognitive, and emotional conditions) further limit the ability of patients to make lifestyle modifications. (Wong, Harith, Lua, Ibrahim, 2021)

Nurses also claimed several challenges when providing oral care to stroke patients. They had limited time and resources for the oral care of patients. Some nurses cited a lack of prioritization of oral care, particularly in the acute setting. Even when nurses prioritize care, it has been reported that patients do not always cooperate with recommended oral care for a variety of reasons, including cognitive ability, desire for self-care and dislike of oral care, desire to take care of themselves and dislike of oral care techniques or products. Finally, nurses highlighted their lack of knowledge and formal training regarding oral health, particularly surrounding referral options. (Ferguson, et al 2019)

5.5.3 The need for patient-centered care

This model of care needs to incorporate the principles of patient-centered care to consider the needs and preferences of the patient. In addition, the importance of encouraging patients as they regain their ability to care for themselves is emphasized. Stroke clinicians and nurses also recommend involving the families of stroke patients in oral care. (Ferguson, et al 2019) It may be very simple for the nurse to identify the reasons why the patient refuses oral care, which helps to increase the patient's cooperation in care, since oral care is a matter of deciding what the patient prefers. In addition, the importance of encouraging patients as they regain their ability to care for themselves was emphasized. Especially when the patient

is doing rehabilitation, the nurse should let reassure the patient and encourage them that they will get better so that the patient will change. (Ferguson, et al 2019)

6 Discussion, conclusion and limitation

The purpose of this study was to describe effective nurses' health care guidance for the rehabilitation of stroke patients in the United States, Asia, and Europe. The findings of this study were able to fill a research gap by describing the high level of stress nurses experience in caring for stroke patients and their lack of adequate nursing guidance to improve patient satisfaction.

Many stroke patients were lack of proper knowledge or misunderstanding of stroke. It affected the quality of the patient's post-stroke recovery. Therefore, it is necessary for nurses to provide education to stroke patients. (Silva, J.Kd., Vila, Vd. S. C., Ribeiro, M. F. M., Vandenberghe. L., 2016) Of course, it is preferred that nurses should have and understand this correct knowledge to make the right education for their patients. As a result, nursing students should begin preparing while still in school. Learning and acquiring the correct theoretical knowledge of stroke, including the causes, symptoms and proper responses to stroke. It is assumed that nursing students participate in practical activities for public education while still in school. Reinforcing the knowledge while enhancing public education.

International evidence-based guidelines recommend self-management support for stroke patients to improve their health outcomes. A nurse-led stroke self-management program (SSMP) has been shown to be satisfying for patients. SSMP increased the understanding of self-management and its importance to recovery. It also increased patient confidence in recovery. (Lo, Chau, 2021) The research of SSMP included many effective nurse guides for reference. For example "home visit nurse" "patients sharing their experiences" "workbook" and "follow up phone calls" which can provide nurses with specific, actionable healthcare guidance for stroke patients.

A study of fall prevention in older Southeast Asian stroke survivors showed nurses need to pay more attention to home environment risk assessment and interventions and need to do more to educate patients. While other stroke interventions may also benefit stroke patients, fall prevention should be a core component of stroke rehabilitation. Current investigations of falls and stroke perception have also proven to be inadequate. (Ainuddin, H. A., Romli, M. H., Hamid, T. A., Salim, M. SF., Mackenzie, L., 2021) This in-depth study from Southeast Asia examining the concept of falls and fall rehabilitation after stroke helps identify theoretically proactive ideas that are worthwhile for nurses from other countries.

Families are critical to accessing health care services and ensuring that care is maintained. However, this care is delivered in an isolated manner. Therefore, health care networks must encourage support for family members and make better use of their potential to provide care. Nurses should recognize the importance of family members in the process of patient stroke care. However, family members are also under tremendous pressure and need support and guidance from professional caregivers, as well as understanding and psychological support. (Wong, Harith, Lua, Ibrahim, 2021) The author has seen the helplessness and difficulties of family members in caring for stroke patients during their internship in hospitals and suggest that patients' families receive more attention and support.

All nursing agreed that they all had a role in maintaining good oral health among their patients. However, many gaps in care are evident. The importance of encouraging patients as they regain their ability to care for themselves is emphasized. Stroke clinicians and nurses also recommend involving the families of stroke patients in oral care. (Ferguson, et al 2019) This echoes the self-management of stroke patients and the support and guidance of nurses to patients' families, which also applies in oral care.

In this study, as a method of literature review. The study has several limitations. This study was conducted by a single researcher, its reliability suffers from a lack of objectivity. Therefore, the authors attempted to maintain the reliability of this literature review by using objective sources. Only six articles were reviewed, and the content of this topic is limited. This study tried to find the research of nurses' guidance for stroke patient rehabilitation in USA, Asia and Europe, however the resources are relatively limited. The selected 6 study samples and audiences differed. The largest study sample was 128 patients, and the smallest study sample was only 8 patients. Research of resources are built on different cultural contexts "A Qualitative Study Exploring Understanding and Perceptions of Stroke Survivors Regarding Healthy Lifestyle Changes for Secondary Prevention" Asian patients have more food contraindications because they believe in the advice of Chinese medicine. Therefore, research findings are strongly influenced by culture. Nurses should fully consider cultural factors when referring to and using.

In conclusion, stroke patients lack the knowledge of stroke, nurse can provide education guidance. International evidence-based guidelines recommend self-management support for stroke patients to improve their health outcomes. A nurse-led stroke self-management program (SSMP) has been shown to be satisfying for patients. Nurses need to pay more attention to home environment risk assessments and interventions and need to do more to educate patients about fall prevention. Health care networks must encourage support for family members and make better use of their potential to provide care. All nursing agreed that they had a role in maintaining good oral health among their patients. However, many gaps in care are evident. Lack of attention to oral care by patients and lack of professional oral care training by nurses.

For suggested future research, it would be beneficial to review the evidence-based nurses' guideline for patients at stroke rehabilitation.

7 Ethical considerations

In 2009, The Finland National Board on Research Integrity TENK published the first national guidelines on the ethical principles of research in the humanities and social and behavioural sciences and proposals for ethical review in Finland. According to TENK (2009) researchers in all disciplines are guided by the following general ethical principles: The researcher respects the dignity and autonomy of human research participants; The researcher respects material and immaterial cultural heritage and biodiversity; The researcher conducts their research so that the research does not cause significant risks, damage or harm to research participants, communities or other subjects of research. In Finland all scientific research complies with the guidelines on responsible conduct of research (RCR) drawn up by TENK.³² (TENK, 2009) Using Urkund plagiarism detection program to check whether there is any plagiarism in the paper. (Laurea AMK 2019.)

This study used the literature review approach, searching data from databases through Internet search engines only, and then using critical thinking to collect and analyse the data. However, the author did consider ethical aspects when reviewing each article or result. Respecting the dignity and autonomy of human research participants. Conducting the research without significant risk, damage or harm to the research participants, the community or other research subjects. The study also accepts the use of Urkund plagiarism detection program to check for any plagiarism in this paper. Respecting the authors of the data sources and ensures that each citation is properly referenced.

8 Validity and reliability

Validity is defined as the extent to which a concept is accurately measured in a quantitative study. To obtain useful results, the methods research use to collect the data must be valid: the research must be measuring what it claims to measure. Reliability is related to the consistency of measurement. Participants should have approximately the same response each time they complete an instrument designed to measure motivation. Although precise calculations of reliability are not possible, estimates of reliability can be achieved through different measures. (Heale, Twycross, 2015) A good literature review shows signs of synergistic research and understanding of the topic. There should be evidence of strong analytical thinking, which shows in the connections you make between the literature reviewed (Research guides, 2022)

This study was conducted by a single researcher, its reliability suffers from a lack of objectivity. Therefore, this study attempts to maintain the reliability of literature review by using objective sources that have no commercial purpose. The databases are EBSCO, PubMed, ScienceDirect (Elsevier), and Google Scholar were used in the literature study. To make sure the validity of study, author considered that certain academic fields change rapidly, and information can become outdated, the study searched for data within 10 years. Ensure that the most recent findings and highlights are reviewed. In addition, this study used the same keywords and keyword combinations throughout the literature search. Finally, the study ensured that the results of the study met the purpose of this bachelor's study and answered the research questions.

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Table

Table 1. Inclusion and Exclusion criteria

Figure:

Figure 1: Data selection flow chart - Modified version of PRISMA flow diagram (2020)

Figure 2: Inductive Content Analysis Process Illustration

Appendix

Appendix 1: The table of articles

N O	Autor	Ye ar	Title	Aim	Study design & Methods	Sample	Findings/Concl usion
1	Silva, J. Kd., Vila, Vd. S. C., Ribeiro, M. F. M., Vandenberg he. L.	2016	Survivors' perspectiv e of life after stroke.	To understand meanings of the experience of illness from the perspectiv e of eight survivors of stroke.	Using semi- structured interviews and qualitativ e the matic analysis.	3 men and 5 women participat ed in the study, whose mean age was 54 years, most of whom were married and had children.	The family is essential for access to health care services, and to guarantee maintenance of care; however, this care occurs in an isolated manner. Therefore, the health care network must encourage support for family members.

2	Wong, HJ., Harith, S., Lua, PL., Ibrahim, KA.,	202 1	A Qualitative Study Exploring Understan ding and Perception s of Stroke Survivors Regarding Healthy Lifestyle Changes for Secondary Prevention	Aim to study how stroke survivors' understand ing regarding stroke, the perceived facilitators and barriers of healthy lifestyle changes, and provision of secondary prevention education.	Semi- structured interviews were conducted	22 stroke patients (13 males and nine females, aged 34- 80 years) who were attending rehabilitat ion clinics in three Malaysian hospitals.	More efforts to improve knowledge regarding cause of stroke and secondary prevention strategies are needed. Use of appropriate behavioural changes strategies, family-centred approach and continuous health education are necessary to facilitate patients' efforts at making successful lifestyle modification after stroke event.
3	Lo, S. H. S., Chau, J. P. C.,	202 1	Exploring community -dwelling stroke survivors' experience s of receiving a nurse-led theory- based stroke self- manageme	The findings of a nested qualitative study aimed at exploring community -dwelling stroke survivors' experience	A qualitativ e study	A total of 128 participan ts (64 in interventi on and control groups respective ly) were recruited in the randomise	This study found that participants were generally satisfied with the SSMP. They improved their understanding of self- management and recognised its importance after joining

			nt programme - A qualitative study	s of participating in a nurse-led SSMP.		d controlled trial.	the programme. The findings showed that the multifaceted strategies adopted in the SSMP were helpful in enhancing participants' self-efficacy. Enhancement in the programme format and accessibility would be worthwhile to promote stroke survivors' self-management and hence, recovery.
4	Ainuddin, H. A., Romli, M. H., Hamid, T. A., Salim, M. SF., Mackenzie, L.	2021	An Exploratory Qualitative Study With Older Malaysian Stroke Survivors, Caregivers, and Healthcare Practitioners About Falls and Rehabilitation	The aim of the study was to explore perceptions on usability and relevance of the app in order to maximise user engagement and	A qualitative study	A qualitative study of three focus groups with 18 individuals from one community-based stroke rehabilitation center was	There is a need for more attention regarding home environment risk assessment and intervention among healthcare professionals, and more education for clients and caregivers is required.

			ion for Falls After Stroke	sustainabil ity.		conducted .	Although, other stroke interventions may also benefit stroke survivors, falls prevention should be a central component in stroke rehabilitation. As this study focused on a specific population, the findings should be validated with larger populations, and in diverse settings.
5	Day, C. B., Bierhals, C. C. B. K., Santos, N. O. d. S, Mocellin, D., Predebon, M. L., Pizzol, F. L. F. D., Paskulin, L. M. G.	2018	2018, Nursing home care educational intervention for family caregivers of older adults post stroke (SHARE): study protocol for a randomise d trial.	Aim to describe an educationa l interventio n focused on family caregivers of the stroke survivors for the developme nt of care at home (SHARE) in	Study protocol for a randomise d trial.	48 family caregivers of stroke survivors will be recruited and divided into two groups: 24 in the interventi on group and 24 in the control group. T	Nurses can structure and plan the actions aimed at the education of the family caregiver. It is expected that the educational intervention will contribute to reducing caregiver burden and improving their quality of life, as well as avoiding

				the south of Brazil.			readmissions and inadequate use of health services by stroke survivors
6	Ferguson, C., George, A., Villarosa, A. R., Kong, A. C., Sameer Bhole, S., and Ajwani, S.	2019	Exploring nursing and allied health perspectives of quality oral care after stroke: A qualitative study.	To explore the perspectives of nursing and allied health stroke clinicians regarding oral care for stroke patients across acute care and stroke rehabilitation settings.	This study followed an exploratory qualitative design, using a constructivist approach.	21 nurses of staff working in stroke units	This study provided insight into nurses' and allied health stroke clinicians' current knowledge and practices of oral care in various stroke settings. The findings from this study will inform development of a model of care to train stroke nurses in providing oral care.