Puissant (ISSN print: 2719-0153; ISSN online: 2719-0161)
Vol. 5, pp. 1171-1185
https://puissant.stepacademic.net

Short Paper

Challenges and Coping Strategies of Post-Stroke Patients

Gerly Perez Patawaran
Institute of Graduate and Advanced Studies, Urdaneta City University, Philippines
vgpphysicaltherapy@gmail.com

Date received: September 26, 2022
Date received in revised form: October 31, 2022
Date accepted: November 3, 2022

Recommended citation:

Patawaran, G. P. (2024). Challenges and coping strategies of post-stroke patients. *Puissant, 5,* 1171-1185.

Abstract

This study explored the challenges and coping strategies of post-stroke patients. Likewise, it analyzed the relevant conditions and experiences two weeks after the stroke diagnosis and subsequently sought rehabilitation through physical therapy. This study aims to identify the demographic profile of stroke patients, the challenges encountered by post-stroke patients, and the coping strategies for these challenges, and to suggest a program of care that would guide the post-stroke patients through their challenges and enhance their coping strategies. The study employed a qualitative approach. The researcher conducted a thematic analysis after placing the data in domains and constructing core ideas for each case. Various instruments, such as interview guides, focus group discussions, and observation, were used for data collection and triangulation. Moreover, this study used purposive sampling in selecting participants that would fit the criteria needed for the success of this research. The study locale is the VGP Physical Therapy Clinic, Pangasinan. Most post-stroke patients in this study have demonstrated immobility, hemiparesis, ataxic gait, and poor grip as their major physical challenges. The challenges were addressed by attending physical therapy sessions and increasing their daily activities. They also expressed a feeling of hopelessness, anxiety, heightened emotional distress, sleep deprivation, and depression as their emotional challenges. Their coping behaviors include strong willpower and family involvement. Additionally, they stated that social isolation, communication barriers, and hopelessness are their psychosocial challenges in dealing with social engagement and family involvement. Lastly, the spiritual challenges that they have encountered are church withdrawal and lack of faith. However, they hurdled their spiritual challenges through intense devotion and family involvement.

Keywords – post-stroke patients, challenges, coping strategies

INTRODUCTION

Stroke is the leading cause of morbidity and mortality worldwide, accounting for nearly 6.5 million deaths yearly (Chen et al., 2020). Around 13.7 million individuals suffered their first stroke in 2016. Furthermore, approximately 2.7 million people died from ischemic stroke in 2016, while 2.8 million died directly from an acute stroke (Johnson et al., 2019). Despite advancements in clinical therapy, the fatality rate is rising (Suwanwela, 2014).

Furthermore, 15 million people worldwide have a stroke; 10 million survive, but 5 million are left with varying degrees of long-term disability (WHF, 2015). Yearly, around 795,000 people in the United States suffer their first or subsequent stroke. Approximately 10% of stroke patients recovered adequately, 25% survived with minor disabilities, and 40% required specialized care (NSA, 2016).

Researchers hypothesized that coping methods relate to psychological well-being, general well-being, self-esteem, and acceptability of disabilities (Miller, Smedema, Catalano, & Ebener, 2010). Along with addressing their pre-existing medical conditions, those with chronic diseases and impairments may find it more difficult to cope with the challenges.

Stroke is a significant cause of disability. Chronic symptoms include limb weakness, inattention, and memory loss, and they can affect even minor stroke survivors. Because of their doubts about their ability to recover or avoid recurrent strokes, some stroke survivors may feel frustrated, anxious, or even depressed.

The difficulty of regaining complete independence after a stroke is frequently mentioned. These post-stroke physical and mental difficulties can be exacerbated by age or other concurrent illnesses, such as diabetes, significantly lowering survivors' health-related quality of life reported more than two years after stroke.

Recovery from a stroke often lasts long after the patient is discharged from the hospital. As a result, stroke patients frequently require ongoing assistance to deal with day-to-day challenges once they return home. "Efficient, open, equitable communication" and "collaboration and coordination" between stroke survivors/caregivers and healthcare professionals as key mechanisms for effective stroke rehabilitation (Hewitt et al., 2015).

The ability to control changes brought on by a stroke, such as symptoms, treatment, and physical and psychological difficulties, is referred to as "stroke self-

management." Self-management programs for people with a stroke can include specific education about stroke and its likely effects, but essentially, they also focus on skills training to encourage people to take an active part in their management. Problem-solving, goal-setting, decision-making, and coping skills can all be taught (Fryer et al., 2016).

Stroke survivors must develop fundamental self-management skills such as goal setting, action planning, problem-solving, decision-making, speaking with healthcare professionals, and utilizing local resources in order to effectively manage their condition. Survivors' acceptance of responsibility for self-management behaviors such as exercise and psychological distress serves as the foundation for these skills.

LITERATURE REVIEW

Increased difficulties have been linked to worse health conditions, lower health and well-being, and higher levels of worry, anxiety, stress, and practical limitations in people with disabilities (Bishop-Fitzpatrick et al., 2018). Furthermore, researchers hypothesized that coping methods are related to psychological well-being, general well-being, self-esteem, and the acceptability of disabilities (Miller Smedema, Catalano, & Ebener, 2010). Those with chronic diseases and impairments may find it more difficult to cope with the challenges in addition to addressing their pre-existing medical conditions.

A stroke could affect half a million Filipinos, costing anywhere from P350 million to P1.2 billion in medical treatment. However, funding health care services for stroke patients remains a barrier to proper diagnosis and treatment, as expenses for its treatment and rehabilitation are primarily out-of-pocket, in addition to health care's increasingly commercialized nature (Navarro et al., 2021).

The Transactional Model of Stress and Coping theory is a conceptual framework that emphasizes the importance of an assessment process to evaluate harm, threat, and problems associated with coping with stressful experiences (Lazarus, 1966; Lazarus & Folkman, 1984). The extent to which stress manifests itself in the types of viewpoints, emotional reactions, feelings, and actions that result from environmental stressors is determined by assessments of the set of circumstances, which include determining whether direct or indirect demands exceed resources and the capacity to cope when pressure builds (Lazarus & Folkman, 1984).

This study would be predicated on the notion that various stressors, like medical and psychological issues, elicit coping mechanisms such as beneficial and harmful strategies used by stroke victims. Coping is viewed as a critical factor for limiting, lowering, or sustaining stress (Gustems–Carnicer & Calderón, 2013). Coping refers to individuals' attitudes and behaviors in response to traumatic events' internal and external demands (Folkman, 2010).

Lazarus and Folkman (1984) defined coping as constantly adjusting one's cognitive and behavioral efforts to manage certain external or internal obstacles that are deemed burdensome or exceed the person's resources. Coping techniques are defined as those behavioral and mental efforts that an individual makes to conceal, minimize, or limit stressful events and survive them (Sreeramareddy et al., 2017).

Similarly, Lazarus and Folkman (1984) outlined eight broad coping strategies that individuals can employ in stressful events, such as the distress caused by debilitating experiences of stroke victims. Furthermore, these eight categories of coping techniques are subdivided into emotion-focused and problem-focused coping procedures. Emotion-focused survival tactics include self-criticism, irrational thinking, minding one's affairs, detachment, and stress reduction, problem-focused coping strategies include seeking social assistance (Lazarus, 1993).

METHODOLOGY

The researcher used a qualitative case study design. A qualitative case study approach was employed to investigate complex phenomena in their surroundings. Data was gathered through a variety of methods, including perception surveys, observation, focus group discussions, and interviews. Thematic analysis is a type of qualitative data analysis that involves searching through data to identify, research, and report on repeated patterns (Braun and Clarke 2006). a method of describing data that includes interpretation in the selection of codes and the construction of themes A variety of instruments, including interview guides, focus group discussions, and personal observations, were used for data collection and triangulation. VGP Physical Therapy Clinic in Pangasinan, Philippines, served as the study's location. Overall, the respondents in the study were stroke patients who sought physical therapy services at the clinic.

The researcher used purposive sampling to select study participants. Purposive sampling is a participative technique. The goal of selecting specific participants is to generate the most relevant and plentiful data to assist the researcher in determining stroke patients' challenges and coping strategies. The aforementioned research strategy is deemed appropriate because it determined the necessary linkages between the various data sets to be collected. Furthermore, the researcher intended to provide a qualitative interpretation of the findings in order to allow for a more in-depth examination of the research findings, including the experiences of post-stroke patients.

RESULTS

Theme I: Challenges of Post-Stroke Patients

Sub-theme 1: Physical Distress. Functional mobility, cardiorespiratory fitness, mood, and participation were related to daily steps and not to the time spent in moderately

intense activities. It shows that staying active is crucial for maintaining or enhancing health, not only for general well-being. Therefore, stroke survivors are advised to engage in moderately demanding physical activity to ensure optimal improvement (Baert et al., 2012). General pain, mobility issues, which affect comfort and placement, and specific sexual functioning domains, including desire, arousal, orgasm, and genital pain, can all be physical hindrances to sexual activity. Most studies reveal a direct correlation between the degree of disability and decreased sexual activity following a stroke (Rosenbaum, 2014).

Immobility. Six case participants mentioned immobility as a significant physical challenge they experienced after the stroke diagnosis. Both acute and long-term incapacity may come from brain damage brought on by a stroke. Studies have shown that complications of immobility will result in numerous deleterious consequences, including increased morbidity and mortality, prolonged length of stay, increased hospital cost, and a contribution to the global disease burden (Wu et al., 2018).

Hemiparesis. Hemiparesis is the inability of muscles to move voluntarily. The brain sends signals to the muscles, causing them to contract. When a stroke destroys a portion of the brain, communication between the brain and muscles may not function as it should. Two participants agreed that this is the biggest challenge they face after a stroke diagnosis.

Ataxic Gait and Poor Grip. Ataxia is one of many symptoms that can appear in a variety of neurologic conditions, including stroke. As a result, it is frequently used in clinical and anatomical diagnostics. Smooth and efficient voluntary movement is enabled by a good balance and combination of the agonist, antagonist, synergist, and fixator muscles. When such coordination is lost, ataxia develops, which includes faulty fixation, diminished muscle strength, muscle tension disturbance, or involuntary movements. To put it another way, even though muscle strength is generally maintained, motor dysfunction and improper motor responses prevent appropriate motor functions from being performed (Kim et al., 2011).

Sub-theme 2: *Emotional Distress.* Following a stroke, patients describe a wide range of emotional reactions. While some people struggle significantly with adapting to new circumstances, others manage it effectively.

Hopelessness. These signs of distress have likely gone primarily undiagnosed and untreated for several reasons. First, it is generally accepted that post-stroke depression is a reasonable and unavoidable psychological response to loss or incapacity. Another reason post-stroke depression may not have received much treatment attention is that there hasn't been much direct research into the neural pathways that may underlie emotional reactions following brain injury, despite experts' suggestions to that effect. Neurochemical or neurophysiological information points to a specific problem that may be treated with medication or physical therapy (Bialosky et al., 2013).

Anxiety and Sleep Deprivation. The individuals' conscious and preconscious attempts to react to their sickness experiences are regarded as these responses. It could involve both healthy and unhealthy reactions, some of which might be intended to prevent disconfirmation and encourage the retention of previously held beliefs. Post-stroke insomnia (PSI) has a significant incidence in the acute phase of stroke (Sterr et al., 2018). Up to 70% of patients with acute stroke have sleep disorders, including excessive daytime sleepiness, insomnia, hypersomnia, and fatigue (Pasic et al., 2011).

Heightened Emotional Distress. In rehabilitation settings, it is difficult to predict and comprehend patients' reactions to stroke. While some factors have been linked to post-stroke depression and other forms of heightened emotional distress, a comprehensive model of post-stroke dynamic adjustment has yet to be developed (Taylor, 2011).

Depression. In addition to contributing to or exacerbating cognitive deficiencies, emotional problems can make the transition more challenging. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), depressed feelings, reduction of pleasure in activities (anhedonia), diminished concentration, and fatigue or energy loss are examples of depressive symptoms (De Bekker et al., 2021). The results demonstrate how various neurological and psychological factors can affect poststroke cognitive abnormalities' type, degree, and long-term effects.

Sub-theme 3: Psychosocial Distress. Recovery after a stroke frequently lasts long after the patient is released from the hospital. Stroke patients often need ongoing support to handle their various everyday obstacles once they get home. Survivors may rely on their caretakers or healthcare professionals to maintain their health and may question their chances of recovery. Thus, this can reduce their interest in and motivation for ongoing rehabilitation.

Social Isolation. The majority of the participants experienced social isolation after the diagnosis of stroke. Six (6) of the participants expressed isolation from other people. Social isolation predicts post-stroke outcomes. Self-reported knowledge of knowing fewer than three individuals well enough to visit the house is used to define the variable social isolation. Other indicators of social support in this database are correlated with our concept of social isolation. Through a variety of underlying mechanisms, such as physiological stress brought on by social isolation, depression, and worsening risk factor regulation as a result of factors like decreased medication compliance and reduced participation in health-promoting activities like physical activity and health fair attendance, social isolation may be linked to post-stroke mortality. Because of the lack of immediate help in response to an acute event such as a heart attack or stroke, social isolation increases the likelihood that a first event will be fatal before reaching a hospital (Smith et al., 2021).

Communication Barrier. Communication difficulties following stroke are common, and even minor impairments can significantly affect individuals and those who interact with them. For example, the proportion of patients in an acute stroke unit presenting with one or more mild-to-severe communication-related impairments has been reported as 88% (O'Halloran et al., 2009).

Sub-theme 4: Spiritual Distress. Spirituality is distinguished from all other things—humanism, values, morals, and mental health—by its connection to that which is sacred, the transcendent. A large volume of research shows that more religious and spiritual people have better mental health and adapt more quickly to health problems (Koenig, 2012).

Church Withdrawal and Lack of Faith. Most participants, nine to be exact, experienced an inability to attend church; being immobile is the main reason. In addition, since they assume that they are troublesome to their family members when accompanying them to church, they often withdraw from attending church services. The spiritual self can be informed by any philosophical school or tradition that provides existence with significance beyond the physical, emotional, and cognitive realms. Creating a post-stroke self essentially involves coming to terms with a new self that starts with the familiar and expands one's vision to new possibilities that are very different from what was previously recognized. They can experience life more fully in a constrained physical environment. It is the growth mechanism that underpins how spirituality develops over time.

Theme II: Coping Strategies of Post-stroke Patients

Sub-theme 1: Physical Aspect

Exercise is safe and can improve fitness, walking speed, balance, and overall disability indices. Walking exercise, with or without resistance training, improves walking speed as well as credit indices (Saunders, 2014).

Physical Therapy. They are assisting in the restoration of upper limb motor function and maximize walking ability as soon as possible after a stroke, both of which are generally priorities for stroke patients, their families, and clinicians. A stroke patient's rehabilitation is a lengthy process. The appropriate advanced rehabilitation therapy combined with conventional rehabilitation treatment comprises a training package based on the patient's mobility status and recovery phase. This activity may provide therapists with suggestions for maximizing the improvement of stroke patients within a reasonable timeframe (Chen et al., 2014).

Increased Daily Activity. If the patient recovers from the acute stage of the stroke, it is critical to begin rehabilitation procedures as soon as possible, ideally while the stroke victim is hemiplegic and in need of care. It will assist the patient in regaining mobility. Rehabilitation goals should include preventing deformities, exercising damaged limbs to maintain and improve strength and flexibility, and assisting the patient in achieving independence in daily tasks (Moreira et al., 2013).

Sub-theme 2: Emotional Aspect

Following a stroke, patients describe a wide range of emotional reactions. While some people struggle significantly with adapting to new circumstances, others manage it effectively.

Will Power. Willpower was critical in overcoming the challenges that followed the stroke. Stroke survivors described how they defied predictions and prescriptions from others. "My doctor told me I'd never walk or talk again, so I did the opposite; I was walking again in two weeks." The willpower to overcome adversity appeared to be rooted in the stroke survivors' ethnic pride and historical past (Torregosa et al., 2018).

Family Involvement. The effects of the stroke have a significant impact on the spouse and other family members. The nurse could include spouses in the care planning process and assess their needs, as well as develop nursing interventions to meet those needs. Additionally, married education classes and extended visiting hours may strengthen the spouse's assistance.

Sub-theme 3: Psychosocial Aspect

Recovery after a stroke frequently lasts long after the patient is released from the hospital. Stroke patients often need ongoing support to handle their various everyday obstacles once they get home. Survivors may rely on their caretakers or healthcare professionals to maintain their health and may question their chances of recovery. Thus, this can reduce their interest in and motivation for ongoing rehabilitation.

Social Engagement. Two people mentioned social engagement. Based on the research, they went on to say that they could accurately assess their physical limits and the best strategies for dealing with them in order to pursue specific interests. Participants also stated that it was critical to continue researching and assessing the efficacy of the tactics used in order to successfully facilitate adaptation to post-stroke problems. They were constantly taking in broad suggestions, adapting them in their own ways, and coming up with workable solutions that they felt confident implementing into their routines. Important stroke outcomes such as motor function, quality of life, subjective well-being, and life satisfaction are all associated with social participation. Thus, improving and optimizing social participation is a critical component of successful stroke care (Vincent-Onabajo, 2013).

Sub-theme 4: Spiritual Aspect

Patients typically rely on medical treatment to cure their illnesses. However, without assistance from other sources, it is difficult to recover successfully and efficiently. According to the study, a strong attachment to God was associated with a fighting spirit. In contrast, insecure attachment to God was uniquely linked to hopelessness, implying that security, rather than insecurity, in one's devotion to God may have a positive impact on disease adjustment (Cassibba et al., 2014). As a result, they express more positive emotions and focus on the good things in their lives.

Devotion and Reverence. Greater spirituality played a significant role in ameliorating the association between greater depressive symptoms and poor quality of life (QOL) for survivors, family members, and caregivers' psychological QOL (Pucciarelli et al., 2020). It may be difficult for patients facing uncertain futures to communicate negative feelings about spirituality even when asked about pre-stroke beliefs. However, spirituality is linked to positive physical and mental health outcomes in individuals with disabilities because it is used by many to help them adjust to their impairments and to give new meaning to their lives. The stroke severity had no significant impact on the spiritual sphere. While the more affected physical sphere should be the primary target for restorative therapy, the relatively preserved spiritual globe could help to promote coping (Owolabi, 2011).

DISCUSSION

The researcher learned that most post-stroke patients interviewed were middle-aged adults, married, male, and Roman Catholic. Half of the respondents are degree holders who receive different monthly family incomes. The nuclear type of family structure is the most prevalent; most caregivers are their spouses, which shows Filipinos' solid family ties. The more significant population was diagnosed with hemorrhagic stroke, which may have resulted in challenges for the patient.

This study's first theme was the challenges that post-stroke patients experienced. Post-stroke patients experienced physical, emotional, psychosocial, and spiritual difficulties. The respondents faced many challenges, including immobility, hemiparesis, ataxic gait, poor grip, heightened emotional distress, depression, hopelessness, anxiety, sleep deprivation, social isolation, communication barriers, church withdrawal, and lack of faith. The second theme of this study was the coping strategies used by the patients to overcome the challenges they experienced post-stroke.

Most of the post-stroke patients interviewed were middle-aged adults; married; male; and Roman Catholic. Half of the respondents are degree holders who receive different monthly family incomes. The nuclear type of family structure is the most

prevalent; most caregivers are their spouses, which shows Filipinos' solid family ties. Indeed, this family setup helped these patients cope with their disease. The more significant patient was diagnosed with hemorrhagic stroke, which may have resulted in challenges for the patient.

The post-stroke patients and their family members or relatives who take care of them should become members of a local support group for stroke patients, such as the World Stroke Organization or the Stroke Society of the Philippines. These organizations aim to streamline all the necessary information, from treatment innovations and physical therapy sessions to the availability of medications. Furthermore, it will serve as a support system for the patient and his family.

The data analysis revealed the four categories of challenges post-stroke patients experienced: physical, emotional, psychosocial, and spiritual distress. The data analysis also revealed the coping strategies of post-stroke patients in four aspects: physical, emotional, psychosocial, and spiritual. The research results were in the following key headings: Profile of the Families, Theme 1: Challenges, Theme 2: Coping Strategies, and the Proposed Program to Assist Post-Stroke Patients (Table 1).

Table 1. Generating of Themes

Code/Labels	Sub-theme	Theme
Immobility	Physical Distress	Challenges
Hemiparesis		
Ataxic Gait and Poor Grip		
Hopelessness	Emotional Distress	
Anxiety		
Sleep Deprivation		
Heightened Emotional Distress		
Depression		
Social Isolation	Psychosocial Distress	
Communication Barrier		
Church Withdrawal and Lack of Faith	Spiritual Adjustment	
Increased Daily Activities	Physical Aspect	Coping
Physical Therapy		
Will Power	Emotional Aspect	
Family Involvement		
Social Engagement	Psychosocial Aspect	
Devotion and Reverence	Spiritual Aspect	

CONCLUSIONS AND RECOMMENDATIONS

The researcher concluded that the patient utilized a coping strategy based on their physical, emotional, psychosocial, and spiritual challenges. In addition, they used

physical therapy, increased daily activities, willpower, family involvement, social engagement, devotion, and reverence. Therefore, the researcher concluded that the patients' coping strategies were effective. A proposed intervention program was formulated based on the results to enhance the coping strategies of post-stroke patients.

The researcher recommends constant communication between the patient and family members. Primary caregivers should aid in the patient's physical, emotional, psychosocial, and spiritual affairs to further enhance their well-being. Healthcare workers and primary caregivers should work together to help patients meet their needs through interventions provided by their respective institutions. Furthermore, the patients and relatives should ask for an instructional guide on performing simple exercises, safely mobilizing, and transferring techniques to keep the patient active in between physical therapy sessions.

The researcher also recommends assisting patients and their primary caregivers to continue the coping strategies that they are practicing since they were concluded to be effective on their end. In addition, if deemed necessary, patients and their primary caregivers should attend a psychiatric evaluation to embark upon the emotional and psychosocial issues and concerns. In addition, having a support system such as the World Stroke Organization and Stroke Society of the Philippines is very helpful in the patient's recovery. Furthermore, the researcher recommends that intervention programs be implemented to help post-stroke patients address the challenges they encounter.

IMPLICATIONS

During the disease outbreak, most healthcare facilities appear to be uninterested in assisting stroke victims. The researcher was inspired to conduct this study as a nurse in order to help stroke patients and people with disabilities identify their challenges during the pandemic and the best coping skills, they could use to overcome them.

The findings of this study provide healthcare workers, caregivers, and hospital administration with knowledge and information to help them plan and administer programs more effectively, thereby improving the overall quality of life for stroke patients. Furthermore, it enables nurses to recognize that stroke patients may be able to overcome their limitations with assistance by recognizing and meeting their needs while also providing.

ACKNOWLEDGEMENT

The researcher bids to extend her heartfelt gratitude to the following individuals who assisted in the preparation of this research: for Virgilio U. Manzano, Ph.D., the ever-supportive and beloved Dean of the Graduate School, for being considerate in attending to queries; Alyssa Ashley R. Diego, Ed.D., Research Adviser, sincerely imparts additional

information to follow and complete the research. For her perseverance, directions, and advice, as well as for sharing her time, talent, and commitment, which resulted in this humble piece of work; The researchers would like to thank: Zosima S. Garin, Ed.D., Member-Panel of Evaluators, for her constructive criticism, correction, and suggestions to improve the research; Christopher R. Bañez, Ph.D., Member-Panel of Evaluators, who provided his comments, encouragement, and guidance throughout the process; Freda B. Lopez, Ed.D., Member-Panel of Evaluators, for suggesting improvements and encouraging the researcher; the researcher's husband, Vladimir B. Patawaran, PTRP., for the love and support throughout this study; and the researcher's parents, in-laws, and friends who always support her morally and spiritually. Above all, to the Almighty God, for giving her the guidance, faith, good health, peace of mind, wisdom, knowledge, understanding, talents, and endurance to sustain the effort to pursue the path assigned to him despite the hindrances that came his way.

DECLARATIONS

Conflict of Interest

No conflicts of interest exist between the authors that might be deemed significant to the article's content.

Informed Consent

Informed consent was obtained from all patients involved in the study.

Ethics Approval

Approval to conduct the study was obtained.

REFERENCES

Baert, I., Feys, H., Daly, D., Troosters, T., & Vanlandewijck, Y. (2012). Are patients 1 year post-stroke active enough to improve their physical health? *Disability and Rehabilitation*, *34*(7), 574-580.

Bialosky, J., George, S., Horn, M., Price, D., Staud, R., Robinson, M. (2013). Spinal Manipulative Therapy–Specific Changes in Pain Sensitivity in Individuals With Low Back Pain (NCT01168999)

Bishop-Fitzpatrick, L., Mazefsky, C. A., & Eack, S. M. (2018). The combined impact of social support and perceived stress on quality of life in adults with autism spectrum disorder and without intellectual disability. *Autism,* 22, 703–711. http://dx.doi.org/10.1177/1362361317703090

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Cassibba, R., Papagna, S., Calabrese, M. T., Costantino, E., Paterno, A., & Granqvist, P. (2014). The role of attachment to God in secular and religious/spiritual ways of coping with a serious disease. *Mental Health, Religion & Culture*, *17*(3), 252-261.

Chen, R., Sun, C., Chen, J. J., Jen, H. J., Kang, X. L., Kao, C. C., & Chou, K. R. (2020). A Large-Scale Survey on Trauma, Burnout, and Posttraumatic Growth among Nurses. *International Journal of Mental Health Nursing*, 10.1111/inm.12796. Advanced online publication. https://doi.org/10.1111/inm.12796

Department of Health. Philippine Health Statistics 2020. Retrieved from https://doh.gov.ph/node/24432

de Bekker, A., M. I. Geerlings, I. E. Uitewaal-Poslawsky, and J. M. de Man-van Ginkel. (2021) "Depression in Stroke Survivors: Ten-Year Follow-Up. Determinants of the Natural Course of Depressive Symptoms in Stroke Survivors in the Netherlands: The SMART-Medea Study." *Journal of Stroke and Cerebrovascular Diseases* 31, no. 3: 106272.

Folkman, S. (2010). Stress, coping, and hope. *Psycho-Oncology, 19*(9), 901–908. https://doir.org/10.1002/pon.1836

Fryer, Caroline E., McDonnell, Michelle N., Hillier, Susan L., (2016) Self-management programmes for quality of life in people with stroke

Gustems–Carnicer, J., & Calderón, C. (2013). Coping strategies and psychological wellbeing among teacher education students. *European Journal of Psychology of Education, 28*(4), 1127–1140. https://doi.org/10.1007/s10212-012-0158-x

Hewitt G, Sims S, Greenwood N, Jones F, Ross F, Harris R., (2015) Interprofessional teamwork in stroke care: Is it visible or important to patients and carers?. Journal of interprofessional care, 29(4),331–339. https://doi.org/10.3109/13561820.2014.950727

Johnson CO, Nguyen M, Roth GA, Nichols E, Alam T, Abate D, et al. (2019). Global, regional, and national burden of stroke, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet Neurology, 18*(5), 439-58. https://doi.org/10.1016/S1474-4422(19)30034-1.

Kim, B.-R., Lim, J.-H., Lee, S. A., Park, S., Koh, S.-E., Lee, I.-S., … Lee, J. (2011). Usefulness of the Scale for the Assessment and Rating of Ataxia (SARA) in Ataxic Stroke Patients. *Annals of Rehabilitation Medicine, 35*(6), 772-780. https://doi.org/10.5535/arm.2011.35.6.772

Koenig, H. G. (2012). Religion, spirituality, and health: The research and clinical implications. *International Scholarly Research Notices ISRN Psychiatry, 2012*, Article ID 278730, 33 pages. https://doi.org/ 10.5402/2012/278730

Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York: McGraw Hill.

Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Psychosomatic Medicine, 55*, 234–247. https://doi.org/10.1097/00006842-199305000-00002

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Miller Smedema, S. M., Catalano, D., & Ebener, D. J. (2010). The relationship of coping, self-worth, and subjective well-being: A structural equation model. *Rehabilitation Counseling Bulletin, 53*, 131–142. http://dx.doi.org/10.1177/0034355209358272

Moreira, M. C., de Amorim Lima, A. M., Ferraz, K. M., & Benedetti Rodrigues, M. A. (2013). Use of virtual reality in gait recovery among post-stroke patients–a systematic literature review. *Disability and Rehabilitation: Assistive Technology*, *8*(5), 357-362.

National Stroke Association [NSA]. (2016). *Stroke statistics*. Retrieved from https://www.stroke.org.uk/what-is-stroke/stroke-statistics

Navarro J. C., Escabillas C., Aquino, A. (2021). Stroke units in the Philippines: An observational study. *International Journal of Stroke*, 16(7), 849-854. https://doi.org/10.1177/1747493020981730

Owolabi, M. O. (2011). Impact of stroke on health-related quality of life in diverse cultures: the Berlin-Ibadan multicenter international study. *Health and Quality of Life Outcomes*, *9*(1), 1-11.

O'Halloran, R., Worrall, L. E., & Hickson, L. (2009). The number of patients with communication-related impairments in acute hospital stroke units. *International Journal of Speech-Language Pathology*, *11*(6), 438-449.

Pasic Z, Smajlovic D, Dostovic Z, Kojic B, Selmanovic S (2011). Incidence and types of sleep disorders in patients with stroke. *Medicinski Arhiv*, *65(4)*,225-227.

Pucciarelli, G., Vellone, E., Bolgeo, T., Simeone, S., Alvaro, R., Lee, C. S., & Lyons, K. S. (2020). Role of Spirituality on the Association Between Depression and Quality of Life in Stroke Survivor–Care Partner Dyads. *Circulation: Cardiovascular Quality and Outcomes*, *13*(6), e006129.

Rosenbaum, T., Vadas, D., & Kalichman, L. (2014). Sexual function in post-stroke patients: considerations for rehabilitation. *The Journal of Sexual Medicine*, *11*(1), 15-21.

Saunders, D. H., Greig, C. A., & Mead, G. E. (2014). Physical activity and exercise after stroke: review of multiple meaningful benefits. *Stroke*, *45*(12), 3742-3747.

Smith RW, Barnes I, Green J, Reeves GK, Beral V, Floud S. (2021). Social isolation and risk of heart disease and stroke: analysis of two large UK prospective studies. *Lancet Public Health*, *6*(4), e232–e239.

Sreeramareddy, C. T., Shankar, P. R., Binu, V. S., Mukhopadhyay, C., Ray, B., & Menezes, R. G. (2017). Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal. *BMC Medical Education, 7.* Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/17678553

Sterr, A. , Kuhn, M. , Nissen, C. , Ettine, D. , Funk, S. , Feige, B. , Riemann, D. (2018). Post-stroke insomnia in community-dwelling patients with chronic motor stroke: Physiological evidence and implications for stroke care. *Scientific Reports*, 8, 8409. https://doi.org/10.1038/s41598-018-26630-y

Suwanwela NC. (2014). Stroke epidemiology in Thailand. *Journal of Stroke, 16*(1): 1-7. https://doi.org/10.5853/jos.2014.16.1.1.

Torregosa, M. B., Sada, R., & Perez, I. (2018). Dealing with stroke: Perspectives from stroke survivors and stroke caregivers from an underserved Hispanic community. *Nursing & Health Sciences*, *20*(3), 361-369.

Vincent-Onabajo, G. (2013). Social Participation after Stroke: One-Year Follow-Up of Stroke Survivors in Nigeria. *ISRN Stroke, 2013*, Article ID 532518, 6 pages. http://dx.doi.org/10.1155/2013/532518.

World Heart Federation Organization (2015). Heart Disease and Stroke Statistics—2015 Update. Retrieved from https://www.ahajournals.org/doi/10.1161/cir.0000000000000152

Wu, X., Li, Z., Cao, J., Jiao, J., Wang, Y., Liu, G., & Wan, X. (2018). The association between major complications of immobility during hospitalization and quality of life among bedridden patients: a 3-month prospective multi-center study. *PLoS One*, *13*(10), e0205729.