

Self-Efficacy and Social Support as Determinants of Resilience in Post-Stroke Patients

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Abstrak

Stroke is a leading cause of long-term disability that profoundly impacts the physical and psychological well-being of survivors. Psychological resilience is a crucial adaptive capacity that facilitates recovery in post-stroke patients. This study aimed to examine the relationships between self-efficacy, social support, and resilience among post-stroke survivors. A cross-sectional study was conducted involving 84 stroke patients attending the Neurology Clinic at a general hospital in Surakarta. Participants were selected using purposive sampling. Data were collected using the Stroke Self-Efficacy Questionnaire (SSEQ), the Multidimensional Scale of Perceived Social Support (MSPSS), and the 10-item Connor-Davidson Resilience Scale (CD-RISC 10). Spearman's correlation analysis was applied to assess the relationships between variables. The results indicated a significant positive correlation between self-efficacy and resilience ($p < 0.01$; $r = 0.572$). Social support was also positively correlated with resilience, though with a smaller effect size ($p < 0.01$; $r = 0.296$). Conclusion both self-efficacy and social support play significant roles in enhancing resilience among post-stroke survivors. Nursing interventions aimed at enhancing self-efficacy and reinforcing social support are essential for improving resilience in post-stroke survivors.

Keywords: Resilience, Self-efficacy, Social support, Stroke

INTRODUCTION

Stroke is a leading cause of long-term disability worldwide, affecting more than 15 million individuals each year and leaving approximately one-third of survivors with permanent motor, cognitive, or emotional impairments that compromise quality of life (Tiwari et al., 2021). Over the past 15 years, 70 percent of the global burden of stroke, and 87 percent of stroke-related deaths and disabilities, have been borne by low- and middle-income countries nations (Agiananda et al., 2023). In Indonesia, the prevalence of stroke rose from 7.0 percent in 2013 to 10.9 percent in 2018 (Indonesian Ministry of Health, 2019). Stroke patients not only experience physical limitations but

also mental illnesses, such as the risk of depression, anxiety, and social isolation, which can further impede rehabilitation outcomes (Liao & Huang, 2025). In the context of post-stroke rehabilitation, resilience-defined as the capacity to adapt positively in the face of adversity-has emerged as a critical determinant of both functional recovery and psychological well-being (Neils-Strunjas et al., 2017). Individuals who exhibit higher levels of resilience have been observed to report a reduced incidence of depressive symptoms and a greater degree of independence in activities of daily living in comparison to those who demonstrate lower resilience (Hopkins et al., 2022). Despite growing

evidence on psychosocial factors in stroke recovery, few studies in Indonesia have investigated how self-efficacy and social support jointly influence resilience.

Psychological resilience is a key factor that can accelerate the physical and mental recovery of stroke patients (Jiang et al., 2025). As individuals adjust to physical changes post-stroke, strong resilience becomes essential (Yan & Lin, 2022). Resilience in post-stroke patients is also influenced by other factors such as social support and self-efficacy (Nahari & Alsaleh, 2024). A stroke patient's self-efficacy is shaped by their belief in their ability to lead a meaningful life in the future, which subsequently affects their willingness to participate in post-stroke rehabilitation (Gangwani et al., 2022a; X. Li et al., 2024a). Low self-efficacy may lead to decreased motivation to access healthcare services and undergo medical rehabilitation (Bandura, 1997; Shorey & Lopez, 2021). In addition, stroke survivors require adequate social support systems to cope and adapt to life after stroke (Drageset, 2021). High levels of social support and self-efficacy can significantly improve both physical and mental health outcomes among stroke survivors (Helitty & Zahalim, 2023; Mohlin et al., 2021). Therefore, efforts to enhance self-efficacy and social support are essential in fostering resilience, which ultimately contributes to a better quality of life in post-stroke patients.

Social support and self-efficacy among patients with chronic illnesses are

two critical factors that can influence their level of resilience (Bhattarai et al., 2021). The greater the perceived social support, the higher the individual's resilience tends to be (Lu, 2024; Zhou et al., 2024). Similar findings have been observed in patients with other chronic conditions, such as those undergoing haemodialysis, where the availability of social support and strong self-belief significantly contribute to changes in resilience (X. Li et al., 2024b; Safi et al., 2024). Stroke survivors who perceive high levels of social support are more likely to engage in adaptive coping strategies, such as seeking help, problem-solving, and maintaining a positive outlook (Choi et al., 2022; Zhou et al., 2024). These behaviors enhance their ability to navigate recovery challenges and rebuild their lives (Yuan et al., 2025). The simultaneous influence of external resources and internal beliefs on adaptive coping across various chronic diseases highlights the need to explore these dynamics in post-stroke populations further.

In Surakarta City, stroke is the second leading cause of death among the productive age group (482 deaths) and the foremost cause among the non-productive age group (416 deaths). Limited access to comprehensive rehabilitation and psychosocial services exacerbates recovery challenges and increases health care costs. The urgency of this research is underscored by the increasing clinical and financial burdens associated with stroke complications. Extended hospital stays,

high readmission rates, and persistent psychological distress among survivors impose significant strain on healthcare systems and caregivers (Gerges et al., 2023). Understanding the intricate relationships among self-efficacy, social support, and resilience is essential for developing effective interventions that promote successful recovery and improve the lives of individuals affected by stroke. In the context of constrained resources and an aging population, optimizing rehabilitation through evidence-based psychosocial strategies is clinically and financially imperative.

To address these challenges, this study employed a cross-sectional design to examine two primary relationships among post-stroke patients: (1) the association between self-efficacy and resilience and (2) the association between social support and resilience.

METHOD

The present study was conducted with a quantitative descriptive cross-sectional design to explore factors associated with resilience in patients with a history of stroke. This approach provided the opportunity to examine self-reported self-efficacy, perceived social support, and levels of resilience at a single point in time and offers a snapshot of these variables and their associations within a post-stroke community sample. A cross-sectional study design was selected due to practicability and capability to obtain initial findings on interrelations between those variables of

interest. This study was carried out from February to May 2025 in the Neurology Clinic of a general hospital in Surakarta.

Eighty-four Participants were recruited through purposive sampling and completed standardized self-report questionnaires from an outpatient neurology clinic at RSUD Ibu Fatmawati Soekarno a general hospital in Surakarta and had to meet the following inclusion criteria: a confirmed stroke diagnosis of at least six months before data collection, an age of over 18 years, being in a stable condition, and having sufficient communicative ability to complete self-report questionnaires. Individuals were excluded if they had experienced a recurrent stroke, suffered from significant comorbid medical or psychiatric conditions, or demonstrated a level of physical or cognitive disability.

All research variables were measured using well-validated, self-report instruments. Self-efficacy was assessed with the Stroke Self-Efficacy Questionnaire to screen levels of confidence of stroke survivors in relation to functional performance and self-management. Each of the 13 items is scored from 0 (not at all confident) to 10 (very confident), To determine if a stroke patient has high or low self-efficacy using the SSEQ (Cronbach's alpha 0,9), the total score is interpreted: higher scores indicate higher self-efficacy, while lower scores indicate lower self-efficacy. Perceived social support was measured by the Multidimensional Scale of Perceived Social Support, which evaluates support received from family, friends, and

significant others. The MSPSS (Cronbach's alpha 0,938), consists of 12 items, each rated on a 7-point scale (1 = very strongly disagree, 7 = very strongly agree). The total score ranges from 12 to 84. A total score ranging from 12 to 35 denotes low social support, scores between 36 and 60 indicate moderate social support, and scores exceeding 60 correspond to high social support. Finally, resilience was evaluated using the 10-item Connor-Davidson Resilience Scale (Cronbach's alpha 0,93), a validated self-report questionnaire that measures an individual's ability to cope with adversity. Patients rate each item on a scale (typically 0–4), reflecting how true each statement is for them over the past month. The total score (0–40) indicates overall resilience, with higher scores representing greater resilience. The total CD-RISC 10 score reflects an individual's overall ability to cope with stress and adversity, with higher values indicating greater resilience.

Data collection was conducted from February to May 2025. Researchers and their assistants gathered information on respondent resilience through a survey. Each question in the questionnaire was explained to the respondents. Data analysis was carried out using SPSS version 25.0. Initially, descriptive statistics such as means, frequencies, and percentages were calculated to provide a summary of the participants' demographics, along with their scores on the SSEQ, MSPSS, and CD-RISC 10 scales. Subsequently, Spearman's rank-

order correlation was utilized to explore the relationships among self-efficacy (SSEQ score), perceived social support (MSPSS score), and resilience (CD-RISC 10 score). All tests were two-tailed, with statistical significance set at an alpha level of $p < 0.05$.

The Ethics Commission (KEPK) of Kusuma Husada Surakarta University's Faculty of Health Science granted this research an ethical certificate, numbered 2782/UKH.L.02/ECIV/2025, with approval on February 15, 2024, and expiration February 15, 2026. At the study's outset, participants completed informed consent forms and provided demographic information. The researchers ensured the confidentiality of each participant's data by assigning codes.

RESULT AND DISCUSSION

Table 1. Shows the demographic characteristics of respondents.

Table 1. Characteristics of Respondents

Characteristics of Respondents	n	%
Age		
30-39	3	3,57
40-49	27	32,14
50-59	36	42,86
>60	18	21,43
Gender		
Male	49	58,33
Female	35	41,67
Education Level		
College	28	33,33
High School	41	48,81
Middle/elementary	15	17,86
Marital Status		
Single	5	5,95
Married	65	77,38
Else (divorced or widowed)	14	16,67
Employment Status		
Unemployed	55	65,84

Employed	29	34,16
Self-efficacy		
High Self-efficacy	51	60,71
Low self-efficacy	33	39,29
Social Support		
High Social Support	48	57,14
Moderate social support	36	42,86
Low social support	0	0
Resilience		
High Resilience	40	47,62
Low Resilience	44	52,38
Total	84	100

This study involved 84 post-stroke patients, with the majority of respondents in the 50-59 age group, reflecting the adult population commonly affected by stroke. The gender composition shows slightly more male respondents. The majority of patients have a high school education background and are mostly married, indicating they likely have a family support system. Interestingly, two-thirds of the patients in this study were not working, which may reflect the impact of stroke on employment status.

Regarding the main variables, most patients showed high levels of self-efficacy, indicating that they felt capable of managing their condition. Similarly, the level of social support perceived by the patients was very positive, with no respondents reporting low social support. However, in terms of resilience, slightly more patients had low levels of resilience compared to high levels.

Overall, this data describes a post-stroke patient population that tends to have good self-efficacy and social support, although there are still challenges in

building high resilience in some of these groups. This suggests that even the supportive factors like self-efficacy and social support are strong, further efforts may be needed to strengthen the resilience of post-stroke patients.

Table 2. Correlation of self-efficacy and social support with resilience of post stroke patient

Self-Efficacy	Resilience of Post Stroke Patient		Total	P-Value	r
	High resilience	Low resilience			
High Self-Efficacy	36	15	51	0.000	0.572
Low Self-Efficacy	4	29	33		
Total	40	44	84		
Social Support	Resilience of Post Stroke Patient		Total	P-Value	r
	High Resilience	Low Resilience			
High Social Support	29	19	48	0.006	0.296
Moderate Social Support	11	25	36		
Low social Support	0	0	0		
Total	40	44	84		

Table 2 summarize that among the 51 patients with high self-efficacy, 36 (70.6%) demonstrated high resilience, whereas 15 (29.4%) exhibited low resilience. In contrast, of the 33 patients with low self-efficacy, only 4 (12.1%) showed high resilience while 29 (87.9%) had low resilience. Based on table 2, it can be observed that there is a significant positive relationship between self-efficacy and resilience among post-stroke patients ($r=0.572$, $p<0.001$). Individuals with high self-efficacy demonstrate a greater likelihood of exhibiting high resilience.

Social support was classified as high, moderate, or low. Notably, no patients fell into the “low social support” category. Of the 48 patients reporting high social support, 29 (60.4%) had high resilience and 19 (39.6%) had low resilience. Among the 36 patients with moderate support, only 11

(30.6%) were highly resilient while 25 (69.4%) exhibited low resilience. Similarly, there is a statistically significant positive correlation between social support and resilience in post-stroke patients, with those reporting high levels of social support tending to exhibit higher resilience.

The results of this study revealed a significant relationship between self-efficacy and social support for resilience among post-stroke patients. Spearman's correlation analysis showed that self-efficacy has a p-value of 0.000, with a correlation ($r = 0.572$), indicating a strong positive relationship. Meanwhile, social support showed a p-value of 0.006 with a correlation ($r = 0.296$), which also indicates a positive relationship, although weaker than self-efficacy. The moderate correlation between social support and resilience suggests that external resources contribute to psychological adaptation. These findings indicate that both high self-efficacy and social support significantly contribute to improving resilience in post-stroke patients. Thus, both factors have been proven to play a crucial role in facilitating the recovery process of patients with stroke.

In this study, when the relationship between self-efficacy and resilience was evaluated, a positive and advanced correlation was determined between self-efficacy and resilience in post-stroke patients. Accordingly, as the level of self-efficacy increased, the level of resilience also increased. This result is in line with the literature that resilience is affected by

individual factors such as self-efficacy. According to (Gangwani et al., 2022b), a person's level of self-efficacy affects their motivation, such as how a person lasts when faced with challenges, and determines individual resilience to failure. When individuals face negative life events or experiences, self-efficacy plays an important role in determining their psychological states (Takil & Okten, 2023). Self-efficacy has been defined as "the beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations." Self-efficacy plays an important role in the self-regulation process, which can increase the patient's ability to cope, and resilience (Bai et al., 2020).

Individuals who are confident in their abilities are more likely to actively engage in rehabilitation and remain optimistic about their future (Fernandes et al., 2023). A study conducted by (Girard et al., 2025) revealed a correlation between increased self-efficacy and improved rehabilitation results. Our research supports these conclusions, showing that among patients with high self-efficacy, 36 out of 51 were categorized as having high resilience. Conversely, those with low self-efficacy experienced a significant drop in resilience, with only 4 out of 33 individuals reporting high resilience. This indicates that enhancing self-efficacy could be a crucial focus for interventions in post-stroke rehabilitation. It implies that boosting self-efficacy could be a pivotal focus for

interventions in the rehabilitation of stroke survivors.

The relationship between social support and resilience was also significant, although with a lower correlation ($r = 0.296$; $p = 0.006$). Patients with strong social support tend to show better resilience. The association between social support and resilience has been investigated in several studies of stroke survivors, and moderate to strong positive correlations have been reported. Meta-analysis studies have shown that when patients perceive greater social support, their psychological resilience increases, which helps them adapt to life changes and the rehabilitation process after stroke (Y. Wang et al., 2024). Social support has a vital role to play as a buffer against stress and strengthening of coping mechanisms, which in turn affect the construction and maintenance of resilience. According to the stress-buffering theory, social support mitigates the negative effects of stress by providing emotional, informational, and tangible resources (Drageset, 2021). In the context of post-stroke recovery, social support can manifest as emotional and physical support from family and friends, practical assistance with daily activities, or informational guidance from healthcare professionals. A supportive social environment provides a sense of security and worth that is crucial for developing psychological resilience (Z. Li & Li, 2024).

Stroke survivors with higher levels of social support reported better psychological well-being and quality of life over time,

indicating greater resilience (Gurková et al., 2025). Resilience refers to the ability to “bounce back” and thrive in the face of adversity. It plays a crucial role in enhancing mental health and serves as an adaptive skill that lessens the effects of negative events when individuals confront illness or require prolonged treatment, such as in the case of stroke. (Kisomi et al., 2024) emphasized that boosting patient resilience is Essential to achieving positive adaptation, especially for those with chronic illnesses who aim to prevent complications and manage their condition. More social support could promote the development of resilience in post-stroke patients. Thus, involving the family, friends, and significant others in the recovery process of a stroke patient is an essential part of a comprehensive approach.

Over half of the participants (52.38%) demonstrated low resilience, highlighting the substantial challenges faced by individuals recovering from a stroke. This result emphasizes the considerable difficulties stroke survivors experience in adjusting to their new situations and maintaining a positive perspective. Low levels of resilience could be due to a number of sociodemographic factors, such as level of education and economic deprivation, that could hinder the respondent from adapting to the life changes that ensued after a stroke. The research indicates that most of the respondents have completed secondary education, which might influence problem-solving skills and access to information,

potentially affecting resilience. Unemployment status could potentially lead to financial stress and reduced access to resources, which may negatively affect resilience. Low resilience can hinder recovery and lead to a long-term reliance on others (Park & Chang, 2025). These factors are vital indicators of successful recovery and should be prioritized in interventions. Interventions that focus on enhancing psychosocial factors, such as cognitive therapy or adaptation training, can significantly improve patients' resilience.

The high proportion of low resilience among stroke survivors could also be related to their self-efficacy and social support. The physical and cognitive impairments caused by a stroke can have a serious impact on self-efficacy, which is an individual's belief and confidence in his/her abilities to accomplish tasks (Olsson et al., 2024). Similarly, the level of support from family and society among stroke survivors may determine their course of recovery and adaptation. Inadequate social support networks or perceived lack of understanding from family and friends may contribute to lower resilience levels (Hou & Chen, 2024). These factors, combined with the physical and emotional burden of stroke recovery, underscore the need for targeted interventions and support systems to enhance resilience among this vulnerable population.

Research indicates that resilience, self-efficacy, and social support are interconnected yet distinct factors in the

recovery process following a stroke. Generally, higher resilience correlates with greater self-efficacy and social support, as these resources facilitate patients' adaptation to challenges and enhance their health management (Liu et al., 2023; Y. Wang et al., 2024). However, some stroke patients with low resilience may still report high self-efficacy and strong social support. This can occur because social support and self-efficacy are influenced by external factors—such as family involvement, community resources, or targeted interventions—that may bolster a patient's confidence and perceived support even if their internal coping capacity (resilience) remains low (Zhang et al., 2025). For example, social support can directly enhance self-efficacy by providing encouragement and practical help, which may not immediately translate into improved resilience if the patient still struggles with stress or emotional adaptation. Additionally, self-efficacy can be situation-specific and may reflect optimism about certain tasks rather than a broader psychological resilience (Liu et al., 2023; Zhang et al., 2025). The relationship is further complicated by mediating and moderating effects: social support can buffer the impact of low resilience on outcomes, and self-efficacy can mediate the effect of social support on resilience, though these pathways do not always align perfectly for every individual (Liu et al., 2023; S. Wang et al., 2024). Consequently, stroke patients with low resilience but high

self-efficacy and social support may benefit from external resources and confidence in specific abilities, even as they continue to encounter challenges in overall psychological adaptation.

While this study offers valuable insights, it is important to acknowledge several limitations. Firstly, the study's cross-sectional design does not allow for the establishment of causal links between self-efficacy, social support, and resilience. To explore the temporal dynamics of these relationships and to ascertain whether shifts in self-efficacy and social support precede changes in resilience over time, longitudinal studies are necessary. Additionally, the study's sample was confined to post-stroke patients from a single rehabilitation center, which may restrict the applicability of the findings to other stroke populations and healthcare environments.

CONCLUSION

This study offers significant insights into the complex interrelationships among self-efficacy, social support, and resilience in individuals recovering from stroke, emphasizing the crucial roles of self-belief and strong social networks in addressing the challenges of post-stroke life. The alignment of our findings with existing literature underscores the importance of these factors in promoting psychological well-being and adaptive coping across various health conditions, highlighting the potential for widespread application of interventions aimed at enhancing self-efficacy and social support. Future research

should aim to replicate these findings in larger, more diverse samples of post-stroke patients, including individuals from different geographic regions, socioeconomic backgrounds, and cultural groups. Nursing interventions aimed at improving self-efficacy and family-based social support are essential to strengthen resilience among stroke survivors. Further longitudinal research is needed to explore causal pathways.

REFERENCES

- Agiananda, F., Nugraeni, T., Diatri, H., Aninditha, T., & Kusumaningrum, P. (2023). Factors Influencing Distress and Coping Strategies Among Patients with Metastatic Spinal Tumor at Cipto Mangunkusumo General Hospital. *Indonesian Journal of Cancer*, 17(4), 272. <https://doi.org/10.33371/ijoc.v17i4.994>
- Bai, W., Liu, Y., Li, M., Hou, Y., & Lei, S. (2020). Relationship Between Social Support and Psychological Resilience of Patients with Convalescent Stroke: Mediating Effect of Self-Efficacy. *International Journal of Clinical and Experimental Medicine Research*, 4(2), 21–27. <https://doi.org/10.26855/ijcemr.2020.04.004>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.
- Bhattarai, M., Jin, Y., Smedema, S. M., Cadel, K. R., & Baniya, M. (2021). The relationships among self-efficacy, social support, resilience, and subjective well-being in persons with spinal cord injuries. *Journal of Advanced Nursing*, 77(1), 221–230. <https://doi.org/10.1111/jan.14573>
- Choi, H., Lim, A., & Song, Y. (2022). Adaptive Behavior in Stroke Survivors: A Concept Analysis. *Asian*

- Nursing Research*, 16(4), 231–240. <https://doi.org/10.1016/J.ANR.2022.07.002>
- Drageset, J. (2021). Social Support. In *Health Promotion in Health Care – Vital Theories and Research* (pp. 137–144). Springer International Publishing. https://doi.org/10.1007/978-3-030-63135-2_11
- Fernandes, J. B., Ferreira, N., Domingos, J., Ferreira, R., Amador, C., Pardal, N., Castro, C., Simões, A., Fernandes, S., Bernardes, C., Vareta, D. A., Peças, D., Ladislau, D., Sousa, N., Duarte, A., & Godinho, C. (2023). Health Professionals' Motivational Strategies to Enhance Adherence in the Rehabilitation of People with Lower Limb Fractures: Scoping Review. *International Journal of Environmental Research and Public Health*, 20(22), 7050. <https://doi.org/10.3390/ijerph20227050>
- Gangwani, R., Cain, A., Collins, A., & Cassidy, J. M. (2022a). Leveraging Factors of Self-Efficacy and Motivation to Optimize Stroke Recovery. *Frontiers in Neurology*, 13, 823202. <https://doi.org/10.3389/FNEUR.2022.823202>
- Gangwani, R., Cain, A., Collins, A., & Cassidy, J. M. (2022b). Leveraging Factors of Self-Efficacy and Motivation to Optimize Stroke Recovery. *Frontiers in Neurology*, 13. <https://doi.org/10.3389/fneur.2022.823202>
- Gerges, S., Hallit, R., & Hallit, S. (2023). Stressors in hospitalized patients and their associations with mental health outcomes: testing perceived social support and spiritual well-being as moderators. *BMC Psychiatry*, 23(1), 323. <https://doi.org/10.1186/s12888-023-04833-6>
- Girard, D. H., Kapa, L. L., & Ackley, K. (2025). Comparing Self-Efficacy, Self-Compassion, and Growth Mindset Among Adults With and Without Traumatic Brain Injury. *American Journal of Speech-Language Pathology*, 1–15. https://doi.org/10.1044/2025_AJSLP-24-00327
- Gurková, E., Bartoníčková, D., Šaňák, D., Šaňáková, Š., Zapletalová, J., & Štůreková, L. (2025). Relationship between social support, functional outcomes and health-related quality of life in working-aged adults at three months after ischemic stroke: results from the FRAILTY study. *Health and Quality of Life Outcomes*, 23(1). <https://doi.org/10.1186/s12955-025-02337-3>
- Heltty, H., & Zahalim, Z. (2023). Resilience after stroke and its correlation with functional independence. *Jurnal Ners*, 18(1), 47–53. <https://doi.org/10.20473/jn.v18i1.41229>
- Hopkins, C. N., Lee, C. A., Lambert, C. C., Vance, D. E., Haase, S. R., Delgadillo, J. D., & Fazeli, P. L. (2022). Psychological resilience is an independent correlate of health-related quality of life in middle-aged and older adults with HIV in the Deep South. *Journal of Health Psychology*, 27(13), 2909–2921. <https://doi.org/10.1177/13591053211072430>
- Hou, C.-H., & Chen, P.-L. (2024). Optimism, Social Support, and Caregiving Burden among the Long-Term Caregivers: The Mediating Effect of Psychological Resilience. *International Journal of Mental Health Promotion*, 26(9), 697–708. <https://doi.org/10.32604/ijmhp.2024.051751>

- Jiang, N., Feng, L., Song, N., Ye, Y., Wei, B., Tian, T., Chen, N., Li, Y., & Jiang, X. (2025). Stroke survivors' patient activation and self-management: The serial mediating role of social support and resilience. *Geriatric Nursing*, *63*, 16–25. <https://doi.org/10.1016/J.GERINURS.E.2025.02.013>
- Kisomi, Z. S., Taherkhani, O., Mollaei, M., Esmaeily, H., Shir Khanloo, G., Hosseinkhani, Z., & Amerzadeh, M. (2024). The moderating role of social support in the relationship between death anxiety and resilience among dialysis patients. *BMC Nephrology*, *25*(1). <https://doi.org/10.1186/s12882-024-03533-x>
- Li, X., He, Y., Wang, D., & Rezaei, M. J. (2024). Stroke rehabilitation: from diagnosis to therapy. *Frontiers in Neurology*, *15*, 1402729. <https://doi.org/10.3389/FNEUR.2024.1402729>
- Li, Z., & Li, Q. (2024). How Social Support Affects Resilience in Disadvantaged Students: The Chain-Mediating Roles of School Belonging and Emotional Experience. *Behavioral Sciences*, *14*(2), 114. <https://doi.org/10.3390/bs14020114>
- Liao, Z., & Huang, J. (2025). Stroke and Anxiety: A Review of Pathophysiological Mechanisms, Clinical Relevance, and Treatment Strategies. *BIO Web of Conferences*, *174*, 02002. <https://doi.org/10.1051/bioconf/202517402002>
- Liu, Q., Jin, Y., Wang, Y., Feng, J., Qiao, X., Ji, L., Si, H., Bian, Y., Wang, W., Yu, J., & Wang, C. (2023). Association between self-efficacy and self-management behaviours among individuals at high risk for stroke: Social support acting as a mediator. *Journal of Clinical Nursing*, *32*(1–2), 71–82. <https://doi.org/10.1111/jocn.16191>
- Lu, Y. (2024). Independent predictors of family resilience in patients with ischemic stroke: A cross-sectional survey. *Heliyon*, *10*(3), e25062. <https://doi.org/10.1016/J.HELIYON.2024.E25062>
- Mohlin, Å., Bendahl, P.-O., Hegardt, C., Richter, C., Hallberg, I. R., & Rydén, L. (2021). Psychological Resilience and Health-Related Quality of Life in 418 Swedish Women with Primary Breast Cancer: Results from a Prospective Longitudinal Study. *Cancers*, *13*(9), 2233. <https://doi.org/10.3390/cancers13092233>
- Nahari, A., & Alsaleh, A. M. (2024). Impact of Social Support and Self-Efficacy on Activity of Daily Living among Post-Stroke Patients in Saudi Arabia: A Cross-Sectional Study. *Healthcare (Switzerland)*, *12*(16), 1564. <https://doi.org/10.3390/HEALTHCARE12161564/S1>
- Neils-Strunjas, J., Paul, D., Clark, A. N., Mudar, R., Duff, M. C., Waldron-Perrine, B., & Bechtold, K. T. (2017). Role of resilience in the rehabilitation of adults with acquired brain injury. *Brain Injury*, *31*(2), 131–139. <https://doi.org/10.1080/02699052.2016.1229032>
- Olsson, C., Arvidsson, P., & Blom Johansson, M. (2024). Self-efficacy and resilience in severe aphasia – an exploratory cross-sectional study of two psychosocial factors and their relation to functional communication. *Disability and Rehabilitation*, *46*(21), 4988–5001. <https://doi.org/10.1080/09638288.2023.2292270>
- Park, G.-E., & Chang, H. (2025). Impact of Stigma, Social Support, and Resilience on Post-traumatic Growth among Patients with Stroke: A Cross-Sectional Study. *Korean Journal of Adult Nursing*, *37*(1), 13.

- <https://doi.org/10.7475/kjan.2025.37.1.13>
- Safi, F., Areshtanab, H. N., Ghafourifard, M., & Ebrahimi, H. (2024). The association between self-efficacy, perceived social support, and family resilience in patients undergoing hemodialysis: a cross-sectional study. *BMC Nephrology*, 25(1), 207. <https://doi.org/10.1186/s12882-024-03629-4>
- Shorey, S., & Lopez, V. (2021). Self-Efficacy in a Nursing Context. *Health Promotion in Health Care - Vital Theories and Research*, 145–158. https://doi.org/10.1007/978-3-030-63135-2_12
- Takil, M., & Okten, C. (2023). The Relationship of Functional Status with Self-Efficacy and Resilience in Stroke Patients. *Archives of Health Science and Research*, 10(2), 101–107. <https://doi.org/10.5152/ArcHealthSciRes.2023.0137>
- Tiwari, S., Joshi, A., Rai, N., & Satpathy, P. (2021). Impact of Stroke on Quality of Life of Stroke Survivors and Their Caregivers: A Qualitative Study from India. *Journal of Neurosciences in Rural Practice*, 12, 680. <https://doi.org/10.1055/s-0041-1735323>
- Wang, S., Lu, Q., Zhang, D., Wang, L., Jin, H., Zhou, Y., & Ma, R. (2024). Mediation effect of self-efficacy on the relationship between perceived social support and resilience in caregivers of patients with first-stroke in China: a cross-sectional survey. *Topics in Stroke Rehabilitation*, 31(6), 595–603. <https://doi.org/10.1080/10749357.2024.2318087>
- Wang, Y., Xie, H., Sun, H., Ren, L., Jiang, H., Chen, M., & Dong, C. (2024). Influencing Factors of Psychological Resilience in Stroke Patients: A Systematic Review and Meta-Analysis. *Archives of Clinical Neuropsychology: The Official Journal of the National Academy of Neuropsychologists*, 39(5), 644–654. <https://doi.org/10.1093/arclin/acad107>
- Yan, H.-Y., & Lin, H.-R. (2022). Resilience in Stroke Patients: A Concept Analysis. *Healthcare*, 10(11), 2281. <https://doi.org/10.3390/healthcare10112281>
- Yuan, W., Ning, J., Huo, M., & Feng, Y. (2025). The relationship between social support and psychological crisis vulnerability among family impoverished undergraduates: the intermediary role of psychological resilience. *Frontiers in Public Health*, 13. <https://doi.org/10.3389/fpubh.2025.1501513>
- Zhang, R., Li, X., Luo, H., Niu, J., & Zhang, H. (2025). Effect of Self-efficacy, Disease Perception, Social Support, Anxiety, and Depression on Self-management in Young Patients With Stroke. *Journal of Neuroscience Nursing*, 57(2), 68–73. <https://doi.org/10.1097/JNN.0000000000000813>
- Zhou, X., Wang, Y., & Zhou, L. (2024). SOCIAL Participation, Resilience, And Coping Tendency In A Sample Of Stroke Survivors: A Multi-Centre Cross-Sectional Study In China. *Journal of Rehabilitation Medicine*, 56, 12448. <https://doi.org/10.2340/JRM.V56.12448>