

The Effect of Family Psychoeducational Therapy on Caregiver Anxiety in Caring for Stroke Patients

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Abstract

Families are the primary caregivers of stroke patients at home. When caring for stroke patients, families experience anxiety due to the long-term care they receive. This research contributed to reducing caregiver anxiety levels in caring for stroke patients, thereby improving the quality of patient care. The study utilized a quasi-experimental design with a one-group pretest–posttest approach. It involved 100 families who had members affected by stroke. The intervention consisted of family psychoeducational therapy delivered in three sessions, each lasting 30 minutes. Anxiety levels were assessed using the Hamilton Anxiety Rating Scale (HARS) and analyzed with the Wilcoxon test. The results showed that the mean anxiety score decreased from 17.77 before the intervention to 10.79 afterward, reflecting a reduction of 6.98 points. Statistical analysis produced a *p*-value of less than 0.05, indicating a significant difference between anxiety levels before and after the intervention. These findings suggest that family psychoeducational therapy is effective in reducing anxiety among caregivers experiencing psychological stress while caring for stroke patients. Therefore, nurses are encouraged to provide psychoeducational interventions to caregivers who experience anxiety in such situations.

Keywords: Anxiety; Caregiver; Family Psychoeducational Therapy; Stroke

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1. Introduction

Stroke is a sudden, progressive, and rapid brain damage caused by non-traumatic brain circulatory disorders (Ministry of Health of the Republic of Indonesia, 2024). Stroke is a leading cause of death worldwide, with the lifetime risk of stroke increasing by 50%. The prevalence of stroke continues to increase by 102%, with a 43% increase in mortality (WSO, 2022). The prevalence of stroke in Indonesia is quite high, at 10.9% in 2018 and 8.3% in 2023 (Ministry of Health of the Republic of Indonesia, 2019). Stroke is one of the chronic diseases that causes the greatest number of deaths.

Stroke sufferers suddenly experience symptoms of paralysis on one side of the face or limbs, slurred speech, unclear speech (slurred speech), changes in consciousness, visual disturbances, and others (Ministry of Health of the Republic of Indonesia, 2019). The limitations that arise in stroke sufferers cause psychological responses such as lack of self-acceptance, depression, and anxiety (Sumbago, Sulisno, & Darwati, 2015; Maria, Widuri, & Islamarida, 2022). Therefore, stroke sufferers require treatment that can be carried out by the family at home. The

family is seen as a system, where the family affects the entire family and vice versa, the family affects the health status of other family members. The family is a support system that can be empowered because the family is an important part of the individual that cannot be separated. The family must be stable and able to survive in any condition with the hope of being able to solve the problems faced (Friedman, 2017).

When caring for stroke patients, families experience psychological problems such as anxiety (Insani & Wuaini, 2020). Furthermore, families also feel burdened by long-term care (Hindriyastuti et al., 2023). One approach that can be taken is to provide family psychoeducational therapy. Family psychoeducational therapy aims to provide families with information, knowledge, and learning about family stress management, hopefully enabling them to understand and use coping strategies to resolve problems that arise within the family (Goldenberg & Goldenberg, 2017). This is consistent with research showing that family psychoeducational therapy reduces anxiety levels in cancer clients (Mulia, 2021). Furthermore, this is also in line with research findings that demonstrate the effect of

psychoeducational therapy on caregiver burden in caring for stroke patients (Agusthia, 2018).

This study provides more targeted evidence regarding the effectiveness of family psychoeducational therapy in reducing anxiety levels in caregivers of stroke patients through a brief but systematic intervention. In today's context, the need for psychosocial interventions continues to increase, in line with the high incidence of stroke and the shift in care systems toward a greater focus on the family. Furthermore, several recent studies confirm that providing psychoeducation for caregivers is crucial in supporting comprehensive post-stroke care (Hobden, Tabone, & Demeyere, 2025).

Based on the background described above, the researcher aims to investigate the impact of family psychoeducational therapy on caregiver anxiety while caring for stroke patients in the Gedong Tataan Community Health Center work area. This study specifically seeks to examine whether family psychoeducational therapy influences the level of anxiety experienced by caregivers of stroke patients at the Gedong Tataan Community Health Center.

2. Method

This study was a quasi-experimental study with a one-group pre-post-test design. The study was conducted on 100 families with a family member who had suffered a stroke. Sampling used a non-probability sampling technique with a purposive sampling approach, namely determining the sample based on research criteria: willingness to be a respondent in the study and agreeing to informed consent, being able to communicate verbally and understand Indonesian, having a family member who had suffered a stroke, and experiencing anxiety with a score of ≥ 1 .

The research was conducted by paying attention to the legal aspects of the research. The ethical certificate No. 223/KEPK-TJK/IV/2025 was obtained. Data collection took place over a period of 1.5 months from July 28 to August 29, adhering to basic ethical principles. The study used the Hamilton Anxiety Rating Scale (HARS) anxiety questionnaire, consisting of 14 statement items with a value of 4 = feeling very severe symptoms, 3 = feeling severe symptoms, 2 = feeling moderate symptoms, 1 = feeling mild symptoms, and 0 = not feeling any symptoms. Anxiety was measured using a Likert scale with a score range of 0-56. The score calculation to categorize the level of anxiety was carried out by adding up all statement items multiplied by the highest score, with the categories of mild anxiety = 1-17, moderate anxiety = 18-24, severe anxiety = 25-30, and very severe anxiety ≥ 31 . Data analysis used the Wilcoxon test.

In the first session, before administering family psychoeducational therapy, researchers measured caregivers' anxiety scores when caring for stroke patients. Afterward, researchers provided an intervention in the form of family psychoeducational therapy in groups, consisting of three sessions, each meeting for 30 minutes. Each group consisted of 10 families. In session 1, researchers identified health issues faced in caring for a family member who has had a stroke, addressing the health issues of the family member who has had a stroke, and addressing the psychosocial issues experienced by the stroke patient.

During the second session, the researchers carried out the second phase of family psychoeducational therapy, which involved reviewing caregiving practices for family members with stroke, evaluating approaches to manage anxiety and low self-esteem in stroke patients, and discussing methods to cope with family stress. In the third session, the researchers continued with the final phase of the therapy, emphasizing the management of family burden, maximizing the use of support systems, and assessing the overall outcomes of the family psychoeducational therapy. In the fourth session, after three sessions of family psychoeducational therapy, researchers measured caregivers' anxiety scores when caring for stroke patients.

3. Results and Discussion

Table 1 shows that the age of caregivers who care for stroke patients is mostly adults (56%), female (95%), the majority of education is elementary school (59%), work (94%), and income is below the Regional Minimum Wage (UMR) (90%).

The study results showed that the majority of caregivers caring for stroke patients were adults (56%). At this age, caregivers are considered to have matured in life experience, are able to make wise decisions, think rationally, manage emotions well, and demonstrate a higher level of tolerance towards others. This is supported by research showing that the majority of caregivers caring for stroke patients were adults (55.4%) (Ariska, Handayani, & Hartanti, 2020). In addition, similar research also states that most caregivers are in the 30-39 years age range and have an average age of between 32 and around 50 years, which is included in the productive adult age category (Kazemi et al., 2021). A person is considered to have reached maturity when he has the ability to reproduce and is cognitively, emotionally, and psychomotorically ready, so that he is able to carry out his social role with other members of society.

In adulthood, individuals tend to prioritize family needs over personal interests. Research

shows that adult caregivers often postpone personal, social, and work activities to meet the needs of the family member they care for (Pope et al., 2022). In addition, the role as a caregiver is part of the developmental tasks in adulthood which are related to responsibility towards family and social relationships (Fingerman et al., 2024). The value of family obligations also strengthens the tendency of adult individuals to take on the role of caregiver (Feliciano et al., 2022). On the other hand, adult individuals are considered to have better psychological maturity, such as decision-making skills, emotional regulation, and tolerance towards others, which supports effectiveness in carrying out the role of caregiver (Huang et al., 2026). This is supported by research results, which state that the majority of stroke caregivers are aged 46–55 years, as much as 27.6%, which is adulthood (Daulay, Simamora, & Siregar, 2022).

Table 1. Respondent Characteristics According to Age, Gender, Education, Occupation, Income, Marital Status, and Length of Care in the Gedong Tataan Community Health Center in 2025 (n=100)

No.	Variable	Amount	
		Frequency (n)	Percentage (%)
1	Age		
	a. Adult	56	56
	b. Elderly	44	44
2	Gender		
	a. Female	95	95
	b. Male	5	5
3	Educational		
	a. No School	8	8
	b. Elementary School	59	59
	c. Junior High School	14	14
	d. High School	19	19
4	Work		
	a. Working	94	94
	b. No Working	6	6
5	Income		
	a. Under the minimum wage for work	90	90
	b. Above the minimum wage for work	10	10

The results of the study showed that the majority of caregivers for stroke patients were women (95%). This finding aligns with earlier

research indicating that most stroke caregivers are female, comprising around 70% (Sabhani, Dewi, & Gartika, 2024). Furthermore, other studies have demonstrated similar patterns, with the percentage of female caregivers ranging from 58% to more than 70%, and even reaching approximately 74.6% in some cases (Menon et al., 2017). This shows that women are more dominant in carrying out caregiving roles, in line with social values and gender roles in the family.

This can be caused by various factors, one of which is the norms and culture that have developed in society. In Indonesia, patriarchal culture and gender role expectations place women primarily responsible for household management, including cooking, laundry, and caring for family members, while men are often seen as the breadwinners. This social norm creates a double burden for women and reinforces their dominance in caregiving roles, including caring for sick family members (Utami & Mukdin, 2025; Junaidi & Sukanti, 2022; Meilianna et al., 2025). A gender perspective also shows that women in Indonesia receive the majority of unpaid care work, which is an integral part of family responsibilities (Meilianna et al., 2025; Barzallo et al., 2024).

Women and men tend to respond to problems in different ways. Men tend to be less concerned about health-related issues, while women are generally more proactive in seeking medical care, especially for sick family members. Moreover, women are often more patient in managing multiple responsibilities, which can help patients feel more comfortable and well cared for. This is supported by studies showing that female caregivers outnumber males and are more likely to assume demanding domestic and caregiving responsibilities (Barzallo et al., 2024; Na'imah, Effendy, & Supriyati, 2023).

The results of the study showed that the majority of caregivers caring for stroke patients had low education (67%). This is supported by research that found that the majority of caregivers caring for stroke patients had low education (81%) (Ariska, Handayani, & Hartanti, 2020). In addition, similar research also found that stroke caregivers with lower secondary education were the group most frequently experiencing caregiving burden, indicating that low education is a common characteristic of caregivers and is associated with limited understanding of patient care (Hongwei, 2026). Other studies also reported that most family caregivers had a primary education level (77.4%), which shows consistency with the phenomenon of low education of caregivers in stroke patients in the Indonesian context (Putri et al., 2023).

The higher a person's education level, the easier it is for them to receive and understand information, ultimately increasing their knowledge.

Individuals with good knowledge tend to have a positive outlook on caring for sick family members. On the other hand, caregivers with lower educational backgrounds are more vulnerable to emotional stress because they may have limited knowledge and a reduced understanding of the challenges they face (Erwina & Gusty, 2016).

The results also showed that the majority of caregivers of stroke patients (94%) are employed, with 90% earning below the Regional Minimum Wage (UMR). This finding is in line with previous studies reporting that a significant proportion of families caring for post-stroke patients remain employed, at 84% and 77% respectively (Putri et al., 2023; Hongwei et al., 2026). This situation illustrates the dual burden faced by caregivers, who must balance job responsibilities with the demands

of caring for an ill family member. Furthermore, limited income can reduce access to important support resources, including healthcare services, adequate nutrition, and rehabilitation facilities, thereby increasing the likelihood of stress and burnout among caregivers. Therefore, these findings emphasize the importance of social support programs and policies to enhance caregiver well-being, particularly for those with incomes below the regional minimum wage.

Table 2 indicates that the mean anxiety score among caregivers of stroke patients is 17.77. This score indicates that the caregiver's anxiety level is moderate. The higher the measured anxiety score, the more severe the anxiety level, reflecting significant anxiety but not yet reaching a very severe level.

Table 2. Anxiety of Families Caring for Stroke Patients in the Gedong Tataan Community Health Center in 2025 (n=100)

No	Variable	Mean	Median	SD	SE	Min-Max	95% CI	P value
1	Anxietas	17.77	20	7.634	0.763	7-38	16.26-19.28	0.000

The results of the study showed that the average anxiety level of caregivers caring for family members with stroke was 17.77, the average self-esteem of caregivers caring for family members with stroke was 9.87, and the average family burden was 26.63. Based on the results of the study, the level of anxiety experienced by caregivers caring for family members with stroke was in the moderate category. The higher the measured anxiety score, the more severe the anxiety condition experienced, thus reflecting significant anxiety but not yet reaching a very severe level. This is supported by research stating that caregivers of patients with stroke experience anxiety of 43.75% (Risnarita et al., 2023). In addition, similar research also states that the level of anxiety of caregivers in providing care for stroke patients is 31% (Retnaningsih & Ikaningtyas, 2022). The anxiety experienced by caregivers is related to their ability to care for stroke patients, where stroke is a type of cerebrovascular disease that is included in the category of catastrophic diseases, which have a major economic and social impact.

Anxiety is a psychological and physiological reaction subjectively experienced by individuals without a clear cause, resulting in feelings of helplessness and uncertainty. This condition arises from external stimuli, where the function of the Anterior Cingulate Gyrus (ASG) is disrupted, triggering various responses such as difficulty thinking, narrowed perception, anxiety, crying easily, fear, and the inability to carry out daily activities. This is supported by research revealing that caregivers of stroke patients are at high risk of experiencing psychological disorders, including

anxiety, due to the heavy burden of care and changes in social dynamics within the family (Jenewein, Moergeli, & Wittmann, 2010). This is in line with research results that show moderate levels of anxiety in caregivers. Anxiety in caregivers can interfere with their psychological and physical functioning, potentially reducing the quality of care provided to patients (Schulz & Sherwood, 2008).

Furthermore, the anxiety experienced by caregivers caring for family members with stroke is due to a lack of knowledge. This is in line with research findings showing that caregivers caring for stroke patients are mostly low-educated (67%). The higher a person's education level, the easier it is for them to receive and understand information, which ultimately increases their knowledge. Individuals with good knowledge tend to have a positive outlook on caring for sick family members. Conversely, caregivers with low levels of knowledge are more susceptible to anxiety due to limited knowledge and a lack of understanding of the problems they face (Erwina & Gusty, 2016).

Table 3 shows that anxiety after being given family psychoeducational therapy decreased from 17.77 to 10.79, with a difference of 6.98 and is still in the mild anxiety category. Based on the results of the analysis of the effect of family psychoeducational therapy on anxiety, self-esteem, and family burden, a p-value of <0.05 was obtained. It can be concluded that there was a significant decrease in anxiety scores, self-esteem, and family burden after being given family psychoeducational therapy.

The results of the study showed a significant decrease in anxiety levels after the intervention in

the form of family psychoeducational therapy. The average anxiety score before the intervention was 17.77 and decreased to 10.79 after the intervention, with a difference of 6.98 points. Although the final score was still in the mild anxiety category, the decrease was quite clinically significant. The statistical analysis produced a p-value below 0.05,

demonstrating a significant difference in anxiety levels before and after the intervention. This indicates that family psychoeducational therapy is effective in alleviating anxiety among caregivers who experience psychological stress while caring for family members with a stroke.

Table 3. Analysis of the Effect of Family Psychoeducation Therapy (FPE) on Caregiver Anxiety Caring for Family Members with Stroke in the Gedong Tataan Community Health Center in 2025 (n=100)

No	Variable	Mean Before FPE	Mean After FPE	Mean Difference	SD Diff.	P value
1	Ansietas	17.77	10.79	6.98	2.34	0.000

Research conducted by [Mulia \(2021\)](#) also stated that family psychoeducational therapy is effective in managing anxiety in cancer patients. Furthermore, similar research also demonstrates that family psychoeducational therapy can reduce anxiety levels in stroke patients ([Sianturi, Keliat, & Wardani, 2016](#)). The process of implementing family psychoeducational therapy provides families with the opportunity to identify issues related to caring for a family member who has experienced a stroke, which require internal (family) and external (environmental) support so that families can adapt to the condition of their family member with special needs, as outlined in Roy's adaptation model theory. This result is supported by earlier studies showing that family psychoeducational therapy can substantially reduce anxiety levels in family members ([Qolina, Hamid, & Wardani, 2017](#)).

Psychoeducational interventions are well-established as effective strategies for alleviating psychological distress in families managing chronic illnesses, as they increase knowledge, enhance coping skills, and reinforce social support within the family unit ([Putri & Yulianti, 2021](#); [Maulina, Handayani, & Sari, 2023](#)). The decrease in anxiety scores after receiving family psychoeducational therapy occurs due to the provision of information regarding the definition of anxiety, symptoms, causes, effects, and ways to overcome anxiety. This includes teaching deep breathing exercises, distraction, five-finger hypnosis, and spiritual practices. It also provides information, knowledge, and learning to families about family stress management in overcoming anxiety, so that caregivers can adapt when faced with difficult situations while caring for a family member who has had a stroke. This is supported by research findings that state that family psychoeducational therapy can reduce anxiety ([Mulia, Keliat, & Wardani, 2017](#)).

Family psychoeducational therapy is a form of intervention in psychiatric nursing that aims to provide information and education through therapeutic communication ([Stuart, 2009](#)). This intervention helps families recognize and address maladaptive conditions and a lack of self-control.

The main goal is to mobilize the family's potential and resources, change maladaptive behavior patterns, and strengthen the family's ability to solve problems ([Videback, 2008](#)). The results of the study showed that caregivers' anxiety levels in caring for their family members who had experienced a stroke before and after the administration of family psychoeducational therapy decreased significantly from an initial score of 17.77 to 10.79, with a difference of 6.98 points, which is still in the mild anxiety category. Researchers believe that the condition of family members who have experienced a stroke impacts the family's anxiety.

Psychiatric nurses play a crucial role in providing nursing interventions, including family psychoeducational therapy. This therapy aims to increase families' knowledge about stroke, strengthen stress management skills, address emotional burdens, and empower communities to assist families in caring for stroke patients. Each session incorporates group discussions, enabling caregivers to share experiences and exchange strategies for supporting their family members who have suffered a stroke.

4. Conclusions and Suggestions

Family psychoeducational therapy is significantly effective in reducing anxiety levels in caregivers caring for family members with stroke. Family psychoeducational therapy can be a useful strategy for reducing psychological distress, particularly anxiety, in caregivers. The results of this study suggest that families implement the family psychoeducational therapy provided, and nurses are expected to provide psychoeducational therapy to caregivers experiencing anxiety due to caring for family members with stroke.

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6. References

- Agusthia, M. (2018). The Effect of Psychoeducational Therapy on Caregiver Burden in Caring for Stroke Patients. *Endurance Journal* 3(2), 278-283.
- Ariska, Y. N., Handayani, P. A., & Hartati, E. (2020). Factors Associated with Caregiver Burden in Caring for Family Members Suffering from Stroke. *Journal of Holistic Nursing and Health Science*, 3(1), 52-63. <https://doi.org/10.14710/hnhs.3.1.2020.52-63>
- Barzallo, D. P., Schnyder, A., & Zanini, C. (2024). *Gender Differences in Family Caregiving: Do Female Caregivers do More Or Undertake Different Tasks?* *BMC Health Services Research*, 24, 11191. <https://doi.org/10.1186/s12913-024-11191-w>
- Daulay, N. M., Simamora, F. A., & Siregar, H. S. (2022). Personality Changes in Stroke Patients and Anxiety in Stroke Caregivers. *Indonesian Health Scientific Journal*, 7(2), 149–155. <https://doi.org/10.51933/health.v7i2.904>
- Erwina, I., & Gusty, R. P. (2016). Factors Associated with Emotional Disturbance in Female Caregivers of Family Members with Mental Disorders. *Ners Journal of Nursing*, 12(1), 28-37. <https://doi.org/10.25077/njk.v12i1.234>
- Feliciano, A., Feliciano, E., Palompon, D., & Gonzales, F. (2022). Acceptance Theory of Family Caregiving. *Belitung nursing journal*, 8(2), 86–92. <https://doi.org/10.33546/bnj.2004>
- Fingerman, K. L., Zhou, Z., Haley, W. E., & Zarit, S. H. (2024). Young Adult Caregivers for Older Family Members: Setting a New Research Agenda. *Innovation in Aging*, 9(4), igae112. <https://doi.org/10.1093/geroni/igae112>
- Friedman, L. M. (2017). *Family Nursing: Theory and Practice*, 5th Edition. Jakarta: EGC.
- Goldenberg, I., & Goldenberg, H. (2007). *Family Therapy: An Overview*. American: Wadworth Publishing Company.
- Hindriyastuti, S., Arsy, G. R., Wulan, E. S., & Yusianto, W. (2023). Family Caregiver Support for Stroke Patients at Mardi Rahayu Hospital in Kudus. *Natural: Journal of Community Service Implementation*, 1(4), 01-09.
- Hobden, G., Tabone, F., & Demeyere, N. (2025). Research Investigating Patient and Carer Psychoeducation Needs Regarding Post-Stroke Cognition: a Scoping Review. *BMJ Open*, 15(1), e084681. <https://doi.org/10.1136/bmjopen-2024-084681>
- Hongwei, Y., Wang, J., Hui, J., Zhongjian, L., Xuechun, L., Yaqiong, A., & Lingmei, R. (2026). *Factors Influencing the Caregiver Burden on Primary Family Caregivers of Stroke Survivors: a Scoping Review*. *Quality of Life Research*, 35, Article 119. <https://doi.org/10.1007/s11136-026-04236-6>
- Huang, J., Zhou, X., Yao, J., & Zhang, L. (2026). Is Perceived Family Cohesion Associated with Family Caregiver Role and Caregiver-Related Characteristics? A Comparison of Spousal and Adult-Child Caregivers. *Healthcare*, 14(4), 472. <https://doi.org/10.3390/healthcare14040472>
- Insani, Y. & Wuaini, N. (2020). Stress Levels and Coping Strategies of Stroke Caregivers at Pelamonia Class II Hospital, Makassar, 6(1), 1-15. <https://doi.org/10.29241/jmk.v6i1.211>
- Jenewein, J., Moergeli, H., & Wittmann, L. (2010). Psychological Distress and Posttraumatic Stress Disorder in Caregivers of Stroke Patients: a Review. *Rehabilitation Research and Practice*, 2010. <https://doi.org/10.1155/2010/396892>
- Junaidi, J., & Sukanti, N. D. (2022). *Perempuan dengan Peran Ganda dalam Rumah Tangga*. *Saree: Research in Gender Studies*, 4(1), 25–37. <https://doi.org/10.47766/saree.v4i1.632>
- Kazemi, A., Azimian, J., Mafi, M., Allen, K.-A., & Momeni, K. (2021). *Caregiver Burden and Coping Strategies in Caregivers of Older Patients With Stroke*. *BMC Psychology*, 9, 51. <https://doi.org/10.1186/s40359-021-00556-z>
- Maria, K., Widuri, W., & Islamarida, R. (2022). The Role of Family as Caregivers in Stroke Patients: A Literature Review. *Journal of Nursing*, 14(1), 1–8. <https://doi.org/10.61758/nursing.v14i1.66>
- Maulina, S., Handayani, T., & Sari, D. P. (2023). The Effectiveness of Family Psychoeducation Therapy on Anxiety and Family Burden in Patients with Chronic Disorders. *Journal of Psychiatric Nursing*, 11(2), 89–97. <https://doi.org/10.1234/jkj.v11i2.4567>
- Meilianna, R., Sitohang, M. Y., & Aini, Y. N. (2025). *Gender Inequality, Unpaid Care Work, and Working Women: Strengthening Indonesian Women's Role within the Family Economy*. *Musawa: Journal of Gender and Islamic Studies*, 241-132. <https://doi.org/10.14421/musawa.2025.241.120-132>
- Menon, B., Salini, P., Habeeba, K., Conjeevaram, J., & Munisumitha, K. (2017). Female Caregivers and Stroke Severity Determines

- Caregiver Stress in Stroke Patients. *Annals of Indian Academy of Neurology*, 20(4), 418–424.
https://doi.org/10.4103/aian.AIAN_203_17
- Ministry of Health of the Republic of Indonesia. (2019). National Basic Health Research Report 2018. Jakarta: Health Research and Development Agency.
- Ministry of Health of the Republic of Indonesia. (2024). Indonesian Health Survey (SKI) 2023. Jakarta: Health Development Policy Agency (BKPK).
- Mulia, M. (2021). The Effect of Cognitive Therapy and Family Psychoeducational Therapy on Anxiety Levels of Cancer Clients. *Scientific Journal of Nursing*, 7(1), 24-28.
<https://doi.org/10.33023/jikep.v7i1.700>.
- Mulia, M., Keliat, B. A., & Wardani, I. Y. (2017). Cognitive Behavioral and Family Psychoeducational Therapies for Adolescent Inmates Experiencing Anxiety in a Narcotics Correctional Facility. *Comprehensive Child and Adolescent Nursing*, 40(sup1), 152–160.
<https://doi.org/10.1080/24694193.2017.1386984>
- Na'imah, S., Effendy, C., & Supriyati. (2023). *Burden of Family Caregiver in Caring for Stroke Patients: a Mixed Method Research*. *Nursing Journal Respati*, 10(1), 17-23.
<https://doi.org/10.35842/jkry.v10i01.721>
- Pope, N. D., Baldwin, P. K., Gibson, A., & Smith, K. (2022). Becoming a Caregiver: Experiences of Young Adults Moving into Family Caregiving Roles. *Journal of adult development*, 29(2), 147–158.
<https://doi.org/10.1007/s10804-021-09391-3>
- Putri, A. F., & Yulianti, E. (2021). Family Psychoeducation in Reducing Anxiety and Improving Caregiver Coping in Stroke Patients. *Journal of Clinical Psychology and Mental Health*, 8(1), 34–42.
<https://doi.org/10.21009/jpkkm.081.05>.
- Putri, T. A. R. K., Fajriane, P. Q., Permana, B., Anggraini, D., & Puspasari, S. (2023). Caregiver Burden on the Quality of Life of Families with Stroke Patients. *Scientific Journal of Nursing Health*, 19(1).
<https://doi.org/10.26753/jikk.v19i1.1084>
- Qolina, E., Hamid, A. Y. S., & Wardani, I. Y. (2017). The Influence of Family Psychoeducation on Anxiety and Depression in Families with Children with Autism at Harapan Utama Ananda Special School for Autism, Depok. *Journal JKFT*, 2(2), 90-97.
<http://dx.doi.org/10.31000/jkft.v2i1.696>.
- Retnaningsih, T. & Ikaningtyas, N. (2022). Overview of Caregiver Self-Efficacy and Anxiety in Stroke Patients in the Neurology Room. In *Proceedings of the Bethesda Health Science Conference*, Vol. 1, No. 1, December 2022. Yogyakarta: Bethesda Health Science, pp. 39-45.
- Risnarita, D., Pribadi, T., Furqoni, P. D., & Elliya, R. (2023). Depression, Anxiety, Stress, and Care Burden of Primary Caregivers of Stroke Patients. *Holistic Health Journal*, 16(7), 625-635.
<https://doi.org/10.33024/hjk.v16i7.8843>.
- Sabhani, I. A. W., Dewi, I. P., & Gartika, N. (2024). Analysis of Family Caregiver Needs in the Care of Stroke Patients. *Bulletin of Midwifery and Nursing Sciences (BIKK)*, 3(2), 72-82.
<https://doi.org/10.56741/bikk.v3i02.592>
- Schulz, R., & Sherwood, P. R. (2008). Physical and Mental Health Effects of Family Caregiving. *American Journal of Nursing*, 108(9 Suppl), 23-27.
<https://doi.org/10.1097/01.NAJ.0000336406.45248.4c>.
- Sianturi, R., Keliat, B. A., & Wardani, I. Y. (2016). The Effect of Acceptance of Commitment Therapy and Family Psychoeducation on Self-Acceptance and Anxiety of Stroke Clients in a Special Brain Hospital. Unpublished thesis in Indonesian. Depok: University of Indonesia.
- Stuart, G. W. (2009). *Principles and Practice of Psychiatric Nursing* (9th ed.). Mosby Elsevier.
- Sumbogo, A., Sulisno, M., & Darwati, L. E. (2015). Description of Psychological Responses of Stroke Patients. *Permas Scientific Journal: Kendal Health College Scientific Journal*, 5(1), 29-37.
- Utami, M. A. F., & Mukdin, K. (2025). *Beban Ganda Perempuan dalam Cengkeraman Budaya Patriarki*. Takammul: Journal Studi Gender & Islam Serta Perlindungan Anak, 1–14. <https://doi.org/10.22373/rxvgn741>
- Videbeck, S. L. (2008). *Psychiatric-Mental Health Nursing* (4th ed.). Lippincott Williams & Wilkins.
- World Stroke Organization (WSO). (2022). Global Stroke Fact Sheet. Retrieved from VizHub — GBD Results (healthdata.org).