



The Effect of Spiritual Care on Anxiety Level in Fracture Patients

Budiana Yazid¹, Rina Rahmadani Sidabutar¹

¹Bachelor of Nursing, Sekolah Tinggi Ilmu Kesehatan Flora, Medan, Indonesia

*Email correspondence: budianayazid@gmail.com

Track Record Article Revised: 20 October 2025 Accepted: 17 November 2025 Published: 31 December 2025 How to cite: Yazid, B., & Sidabutar, R. R. (2025). The Effect of Spiritual Care on Anxiety Level in Fracture Patients. <i>Contagion: Scientific Periodical Journal of Public Health and Coastal Health</i> , 7(3), 34–43.	Abstract <i>Fractures are the most common physical injuries caused by accidents. The results Riskesdas (2018) show that in Indonesia, there are cases of fractures caused by traffic accidents, falls and sharp or blunt object trauma. Of the 45,987 falls that resulted in fractures, 1,775 people (3.8%) experienced fractures, of the 20,829 traffic accident cases that resulted in fractures. In every province in Indonesia, the most common fracture surgery in the extremities is in Bali with 3,065 cases, DKI Jakarta with 2,781 cases, while in North Sumatra there are 2,576 cases (Mongan & Solikhah, 2023). This study aims to see the effect of spiritual care on anxiety level in fracture patients at Sundari Hospital. This type of research is quasi-experimental with a pre test and post test design with control group. This research was carried out at Sundari Hospital from 11 April to 20 Mei 2025. The study population included 37 patients of fractures. The sampling technique is non-probability sampling. The number of samples in this study was 15 people for the control group and 15 people for the treatment group. The results of the study showed that there was a difference in the average anxiety level of fracture patients who were given spiritual care intervention compared to the group of patients who were not given intervention with $p \text{ value} = 0.000$; $95\% \text{ CI} < \alpha = 0.05$</i> Keywords: <i>Spiritual care, Anxiety level, Fracture</i>
---	--

INTRODUCTION

The World Health Organization (WHO) recorded that in 2018-2020, 7.6 million people died and 3.3 million people suffered fractures due to traffic accidents (Riskesdas, 2018). According to a 2020 Indonesian Ministry of Health survey in Rohmah, Nur, & Rivani, (2023), 15% of fracture sufferers experienced psychological stress in the form of anxiety (Rohmah & Rivani, 2023). Taufik & Sitio (2022) noted that 87% of 60 people who experienced lower extremity fractures and underwent open surgery experienced anxiety (Taufik et al., 2022). Based on data from the Medical Records Department of Sundari Hospital, Medan City, the number of closed fracture patients in 2020 was 30 people/month, in 2022 as many as 35 people/month, and in 2023 as many as 45 people/month. Based on the results of the basic health research report of North Sumatra province in 2020, it was noted that the incidence of fractures in North Sumatra in all types of fractures in men and women was 7.8%, while for sprains or dislocations it was 47.2% (Riskesdas, 2018). Recovery of fracture patients after conservative treatment is carried out with continuous training and spiritual support from health services. Based on the results of research conducted by Wilujeng & Prajanti, 2023 it was found that most respondents in fracture patients experienced decreased range of motion (ROM) and decreased

muscle strength with a muscle strength scale of 0, namely 53.3% (Wilujeng et al., 2023). Based on the results of research conducted by Yulianita, 2023 it was found that decreased muscle strength was the most common related factor (etiology) that appeared in patients with a nursing diagnosis of physical mobility disorders, namely 92.3% (Yulianita et al., 2023).

Anxiety is a subjective feeling experienced by a person, especially in response to new experiences, including those undergoing invasive procedures such as surgery. Preoperative anxiety is an anticipatory response to an experience that the patient perceives as a threat to their role in life, bodily integrity, or even life itself. Various reasons can cause fear or anxiety in patients undergoing open fracture surgery, including fear of physical changes (disability), fear of the operating room, fear of dying during anesthesia, and fear of the operation failing. Possible consequences if preoperative anxiety in patients with open fractures is not promptly addressed, the patient may be unable to concentrate and understand what is happening during the procedure, resulting in uncooperativeness during the procedure. This can lead to bodily disharmony, which can increase blood pressure and breathing, leading to bleeding both during and after surgery. In such situations, intervention is necessary to reduce anxiety (Rohmah & Rivani, 2023).

Spiritual nursing is an element of quality health care that demonstrates compassion to clients, thus forming a trusting relationship that is strengthened when the caregiver values and supports the client's spiritual well-being (Yusuf et al., 2020). Spiritual care for fracture patients is an intervention of spiritual care aimed at patients experiencing anxiety and decreased self-confidence. The aim is to increase emotional intelligence, enabling patients to interpret their life as a blessing from Allah SWT so that clients can improve coping that can reduce the intensity of client anxiety. This spiritual care emphasizes prayer guidance, teaching to surrender (tawakkal) to Allah. Optimal spiritual care is perceived in the limbic system and then spreads to the hypothalamic neurons which will result in decreased CRH (Sari & Haflah, 2024).

Pre operative procedures can lead to fear of physical changes, fear of facing the operating room, fear of dying during anesthesia, and fear of failure of the operation. A nurse's assessment of the client's psychological and spiritual aspects can identify existing problems. Disturbances in the spiritual dimension can cause anxiety in clients. Patients behavior to meet their spiritual needs, if not met, can cause them to experience spiritual distress. Clients respond to the anxiety by using coping mechanisms, spiritual intelligence, and physiological mechanisms in the prefrontal cortex, which can lead to changes in reducing anxiety. Interventions performed on patients with open fractures before surgery. Based on the above

background, the author is interested in examining the effect of spiritual care on anxiety levels in fracture patients.

METHODS

This type of research is quasi-experimental with a pre-test-post-test design with a control group. This design is considered the most appropriate by researchers because they cannot control other confounding variables strictly during the research process (Soekidjo Notoadmodjo, 2018). This research was conducted in the Melati inpatient room at the Sundari General Hospital, Medan City. This room is specifically for treating patients undergoing surgery (fractures). Researchers carried out the research process for one month (11 April to 20 May 2025).

The population in this study were all patients with open fractures with grade 2 and 3 who were hospitalized at Sundari General Hospital, Medan City. The average number of open fracture patients treated in the Melati room per month was 37 patients. The inclusion and exclusion criteria for the study sample were a minimum age of 18 years, able to communicate well, open fracture patients based on the Gustilo Anderson classification with degrees 2 and 3. For degree 2, the wound area is 1-10 cm, bleeding and closed soft tissue while for degree 3, the wound area is > 10 cm, bleeding and closed soft tissue and fracture surgery has been performed on the first day. Patients were also willing to participate in the study by providing written consent. In this study, for the sample size, researchers were able to obtain 15 respondents for the treatment group and 15 respondents in the control group.

The research instruments were tested for validity and reliability. The Daily Spiritual Experience Scale (DSES) was used for the spiritual care questionnaire. Validity was tested using a comparison with a significance value. A significance value <0.05 indicates validity, and the obtained significance value was 0.01, indicating the instrument was valid. Reliability was tested using Cronbach's alpha with an α value of 0.85, indicating reliability. The anxiety level instrument used the Hamilton Anxiety Rating Scale (HARS) questionnaire with a significance value of 0.001 indicating validity. The reliability was tested using Cronbach's alpha with 0.70 indicating reliability.

Data analysis was performed using univariate analysis to describe demographic data, independent and dependent variables, and bivariate analysis using the Mann-Whitney test with a significance level of $\alpha <0.05$. This test was used to determine differences in anxiety levels between the treatment and control groups. If the results of the research analysis show a *p value*

$<\alpha$ (0.000<0.05), this means that H_0 is rejected and H_a is accepted, which means there is difference in anxiety levels for the treatment group and the control group. Control ethical considerations were carried out after the researchers received approval from LPPM STIKes Flora with number 247/STIKes-FL/TU-IV/2025 and permission from Sundari Hospital. In this research there are several things related to ethical issues, namely providing explanations to potential respondents about the objectives and procedures for carrying out research.

RESULT

The research results in table 1 in the treatment group and control group show that respondents were generally man (66.7%), self-employed (33.3%), marital status, not married yet (46.7%), based on education level, most were high school (66.7%).

Table 1. Characteristic of Respondents

Variable	Treatment Group		Control Group		Total	
	n	(%)	n	(%)	Total	(%)
Gender						
Man	10	66.7	9	60.0	19	63.3
Female	5	33.3	6	40.0	11	36.7
Amount	15	100	15	100	30	100
Education						
Elementary	2	13.3	1	6.7	3	10
Junior High School	3	20	2	13.3	5	16.7
High School	9	60	10	66.7	19	63.3
College	1	6.7	2	13.3	3	10
Amount	15	100	15	100	30	100
Job						
Self Employee	5	33.3	3	20	8	26.7
Teacher	2	13.3	3	20	5	16.7
Student	5	33.3	3	20	8	26.7
Housewife	3	20	2	13.3	5	16.7
Etc	0	0	4	26.7	4	13.3
Amount	15	100	15	100	30	100
Marital Statue						
Married	6	40	7	46.7	13	43.3
Not Married Yet	7	46.7	7	46.7	14	46.7
Divorce/Widow/Widower	2	13.3	1	6.7	3	10
Amount	15	100	15	100	30	100

The research results in table 2 show that majority of spiritual care for fracture patients in the treatment group after the post test were in good spiritual care 8 (53.4%) and the minority in deficient spiritual care 2 (13.3%).

Table 2. Spiritual Care In Fracture Patients

Category	Treatment				Control			
	Pretest		Posttest		Pretest		Posttest	
	n	%	n	%	n	%	n	%
Deficient Spiritual Care	4	26.7	2	13.3	2	13.3	2	13.3
Sufficient Spiritual Care	8	53.3	5	33.3	10	66.7	9	60.0
Good Spiritual Care	3	20.0	8	53.4	3	20.0	4	26.7
Amount	15	100	15	100	15	100	15	100

The research result in table 3 shows that level of majority anxiety of fracture patients in the treatment group after post test were in mild anxiety 10 (66.7%) and the minority severe anxiety in 0%.

Table 3. Anxiety Level In Fracture Patients

Category	Treatment				Control			
	Pretest		Posttest		Pretest		Posttest	
	n	%	n	%	n	%	n	%
Mild anxiety	4	26.7	10	66.7	0	0	0	0
Moderate anxiety	10	66.7	5	33.3	10	66.7	11	73.3
Severe Anxiety	1	6.6	0	0	5	33.3	4	26.7
Amount	15	100	15	100	15	100	15	100

The research result in table 4 shows a sample of 15 respondents on the Pre-test and Post-test anxiety level variables. Spiritual care was carried out on the anxiety level of fracture patients. The Z value was -3.520, indicating a Sig. (2-tailed) result of $0.000 < 0.05$. This indicates that there is an influence of spiritual care on the anxiety level of fracture patients.

Table 4. The Effect of Spiritual Care On Anxiety Level In Fracture Patients

Group		n	Mean Rank	Sum of Rank
Result	Treatment	15	11.78	188.50
	Control	15	21.221	339.50
	Total	30		
Test Statistics^a			Result	
Mann-Whitney U			52.500	
Wilcoxon			188.500	
Z			-3.520	
Asymp.Sig. (2 tailed)			.000	
Exact Sig. (2(1-tailed Sig.))			.003 ^b	

DISCUSSION

The types of anxiety frequently experienced by respondents included fear of their own thoughts, specifically fear of their condition after a fracture, difficulty sleeping, tension while awaiting surgery, and a premonition about the upcoming surgery (Yempabe et al., 2021). This is in line with Stuart (2019) who stated that there are two factors that influence anxiety: external and internal factors. External factors include: disruption to basic human needs (illness suffered, physical trauma and surgery to be performed (Ahmed et al., 2023). Anxiety is influenced by several factors, including age and gender. From the general characteristics data, it was found that the age of respondents in both the treatment group and the control group who experienced anxiety was mostly 26-35 years old who were in early adulthood (Sidabutar & Mardhiah, 2021). In accordance with Hart's opinion (2022), that anxiety often occurs in early adulthood. This could be because at this age it is a transitional period or shift from adolescence to adulthood (Patel et al., 2021). Both transitions are physical, intellectual, and social roles. In addition, in early adulthood, individuals are no longer psychologically dependent on their parents (Dent et al., 2023). At this age, the demands of life are also quite large, reproductive age tends to prove socioeconomic status, so that fracture conditions have an impact on anxiety that disrupts its integrity (Wong et al., 2020).

Many religious traditions recognize anxiety as part of the spiritual process: In Islam, feelings of fear (khauf) and hope (raja') are two dimensions that accompany a believer's spiritual journey (Hoffmann et al., 2023). Anxiety about sin, the future, or death can trigger repentance, introspection, and a deepening relationship with God. In Christianity, Saint Augustine wrote about the restlessness of the human heart before finding rest in God ("Our hearts are restless until they rest in You, O Lord"). Anxiety here is a profound longing to return to the Creator. In Buddhism, anxiety (dukkha) is part of the human condition that can only be transcended through enlightenment. Anxiety is not rejected, but rather observed as a form of attachment to the ego and the world (Wang et al., 2020).

In spirituality, anxiety is seen as a call to union with something greater than oneself whether it be God, the universe, or a meaningful purpose in life. Healthy spirituality does not eliminate anxiety, but rather teaches how to experience it consciously, surrender it to God, and learn from it. Spiritual guidance also provides strength and can restore the physical condition of post-operative/pre-operative fracture patients so that patients are in good condition before facing their condition (Gibbs et al., 2020). Spiritual care for fracture patients is not the only factor that can accelerate the healing of fracture patients, another factor that also greatly

supports the healing of fracture patients is ROM (Range of Motion) exercises (Hoffmann et al., 2022). The results of the study indicate that there is a tendency for lower extremity fracture patients to experience pain that can cause patients to rarely move their muscles, resulting in muscle weakness.

Fractures will cause physiological changes that affect the functional movement of respondents (Fernalia et al., 2020). This condition leads to problems with muscle strength in fracture patients, so that more than half of the respondents' motor muscle strength is scale 2, namely full muscle movement against gravity with support and a small number of respondents are scale 3, namely normal movement against gravity but cannot resist resistance (Sahrudi, 2021). This is caused by pain and adaptation to the addition of screws and plates, which have an impact on muscle and vascular weakness. The results of the study showed a significant effect of spiritual care intervention on the anxiety levels of post-operative open fracture patients in the treatment group (Sri Enawati et al., 2022).

This was likely due to patients gaining confidence in adapting to their pre-operative situation. Relaxation is achieved through a combination of physiological, psychological, cognitive, and social responses with relaxation techniques (Yazid et al., 2020). Psychological responses may include anxiety, depression, insomnia, phobias, and hallucinations. The most commonly observed physiological responses are characterized by a decrease in: heart rate, respiratory rate, oxygen consumption, muscle tension, and metabolic rate (Unneby et al., 2023).

According to the bone healing stage, muscle strength begins to return physiologically at the cell proliferation stage, which is approximately five days after the hematoma will organize. According to Reni's research (2020) it was concluded that range of motion exercises performed for three consecutive days with a frequency of 2 times a day can significantly increase the flexibility of the hip, knee, dorsiflexion, and ankle plantarflexion in femoral fracture patients with internal fixation who experience motor impairment. Although the increase in range values is not too large, these results are sufficient to prove that the intervention provided the expected results. This is different compared to the control group that only performed range of motion exercises that did not comply with the research rules where after measuring the joint flexibility value there was an increase but the increase was very small compared to the intervention group (Hi Ukum, 2021).

CONCLUSION

Spiritual care can reduce anxiety levels in patients with open fracture surgery at Sundari General Hospital. Prior to surgery, patients experienced fear, difficulty sleeping, and fear of failure. After the intervention, patients felt more confident, optimistic, peaceful, and resigned to the belief that everything that happened was God's will.

REFERENCES

- Ahmed, M. H., Ahmed, F., Abu-Median, A. B., Panourgia, M., Owles, H., Ochieng, B., Ahamed, H., Wale, J., Dietsch, B., & Mital, D. (2023). HIV and an Ageing Population What Are the Medical, Psychosocial, and Palliative Care Challenges in Healthcare Provisions. In *Microorganisms Journal*, 11(10), 1-21. <https://doi.org/10.3390/microorganisms11102426>.
- Dent, E., Daly, R. M., Hoogendijk, E. O., & Scott, D. (2023). Exercise to Prevent and Manage Frailty and Fragility Fractures. In *Current Osteoporosis Reports*, 21(2), 205-215. <https://doi.org/10.1007/s11914-023-00777-8>.
- Fernalia, F., Herlis, Y., & Keraman, B. (2020). Hubungan Perilaku Caring Perawat Dengan Tingkat Kecemasan Pada Pasien Pre Operasi Fraktur di RSUD. Dr. M. Yunus Bengkulu. *Malahayati Nursing Journal*, 2(3), 559-567. <https://doi.org/10.33024/manuju.v2i3.2914>.
- Gibbs, J. C., McArthur, C., Wark, J. D., Thabane, L., Scherer, S. C., Prasad, S., Papaioannou, A., Mittmann, N., Laprade, J., Kim, S., Khan, A., Kendler, D. L., Hill, K. D., Cheung, A. M., Bleakney, R., Ashe, M. C., Adachi, J. D., & Giangregorio, L. M. (2020). The Effects of Home Exercise in Older Women with Vertebral Fractures: A Pilot Randomized Controlled Trial. *Physical Therapy*, 100(4), 662-676. <https://doi.org/10.1093/ptj/pzz188>.
- Hi Ukum, M. (2021). Nurse Caring Behavior Analysis with Fall Risk Patient Safety in Surgical Care of Mokoyurli Hospital Buol District. *Journal of Applied Nursing and Health*, 3(1), 28-33. <https://doi.org/10.55018/janh.v3i1.22>.
- Hoffmann, I., Kohl, M., von Stengel, S., Jakob, F., Kerschhan-Schindl, K., Lange, U., Peters, S., Schoene, D., Sieber, C., Thomasius, F., Bischoff-Ferrari, H. A., Uder, M., & Kemmler, W. (2023). Exercise And The Prevention of Major Osteoporotic Fractures In Adults: A Systematic Review And Meta-Analysis With Special Emphasis On Intensity Progression And Study Duration. *Osteoporosis International*, 34(1), 15-28. <https://doi.org/10.1007/s00198-022-06592-8>.
- Hoffmann, I., Shojaa, M., Kohl, M., Von Stengel, S., Becker, C., Gosch, M., Kemmler, W. (2022). Exercise Reduces the Number of Overall and Major Osteoporotic Fractures in Adults. Does Supervision Make a Difference? Systematic Review and Meta-Analysis. *Journal of Bone and Mineral Research*, 37(11), 2132-2148. <https://doi.org/10.1002/jbmr.4683>.
- Isneini, Nurleli, & Hermansyah. (2023). The Effect of Spiritual Emotional Freedom Technique (Seft) on Anxiety And Pain in Post-Operative Fracture Patient. *Jurnal Mutiara Ners*, 6(1), 1-9. <https://doi.org/10.51544/jmn.v6i1.3353>.
- Mahyuvi, T., & Marta, D. K. (2023). Reducing Pain in Postoperative Femoral Fracture Patients with Spiritual-Based Relaxation Breathing. *Journal of Applied Nursing and Health*, 5(1), 90-96. <https://doi.org/10.55018/janh.v5i1.120>.
- Patel, B., Shah, B., Basyal, V., Prasad, S. M., Shah, R. K., Tiwari, N. N., & Upadhaya, A. (2021). An Assessment of Local Use Pattern and Traditional Knowledge on Medicinal

- and Aromatic Plants in Kapilvastu District Nepal. *The Healer*, 2(1), 17-41. <https://doi.org/10.51649/healer.54>
- Rohmah, N. S., & Rivani, D. (2023). Efektivitas Rom Pasif Terhadap Tonus Otot Pasien Post Operasi Fraktur Ekstermitas : Evidence Based Case Report (EbcR). *Jurnal Syntax Fusion*, 3(06), 641-649. <https://doi.org/10.54543/fusion.v3i06.328>
- Sari, Y., & Hafilah, N. (2024). Penerapan Terapi Murotal Pada Pasien Fraktur Di RSUD Sundari Medan. *Tour Abdimas Journal*, 3(1), 13–18. <https://tourjurnal.akupuntour.com/index.php/tourabdimasjournal>
- Sidabutar, R. R., & Mardhiah, M. (2021). Pengaruh Pendampingan Layanan Spiritual Do'a Dan Tawakkal Terhadap Tingkat Kecemasan Pasien Pre Operasi Closed Fracture Di Rumah Sakit Umum Sundari. *Jurnal Keluarga Sehat Sejahtera*, 19(2), 53-64. <https://doi.org/10.24114/jkss.v19i2.32419>
- Taufik, Sitio, R., Elvin, S. D., & Reubiyana, Z. (2022). Pemberian Rom Aktif Terhadap Tingkat Kemampuan Adl Dasar Pada Pasien Post Operasi Fraktur Ekstremitas Bawah Dengan Tindakan Orif Di RSUD Dr. Zainoel Abidin Banda Aceh. *Journal Keperawatan*, 1(1), 1–10. <https://doi.org/10.58774/jourkep.v1i1.5>
- Unneby, A., Olofsson, B., & Lindgren, B. M. (2023). The Femoral Nerve Block Setting the Agenda for Nursing Care of Older Patients With Hip Fractures-A Qualitative Study. *Sage Open Nursing*, 9, 1-10. <https://doi.org/10.1177/23779608231177533>
- Wang, Q., Jiang, X., Shen, Y., Yao, P., Chen, J., Zhou, Y., Gu, Y., Qian, Z., & Cao, X. (2020). Effectiveness Of Exercise Intervention On Fall-Related Fractures in Older Adults: A Systematic Review And Meta-Analysis Of Randomized Controlled Trials. *BMC Geriatrics*, 20(1). 322- 333. <https://doi.org/10.1186/s12877-020-01721-6>
- Wilujeng, I., Prajayanti, E. D., Pandan, R., & Boyolali, A. (2023). Penerapan Exercise Range of Motion (ROM) Terhadap Intensitas Nyeri. *Jurnal Ilmiah Ilmu Kesehatan Dan Kedokteran*, 1(4), 121–130. <https://doi.org/10.55606/termometer.v1i4.2411>
- Wong, R. M. Y., Chong, K. C., Law, S. W., Ho, W. T., Li, J., Chui, C. S., Chow, S. K. H., & Cheung, W. H. (2020). The Effectiveness of Exercises on Fall And Fracture Prevention Amongst Community Elderlies: A Systematic Review And Meta-Analysis. in *Journal of Orthopaedic Translation*, 24(1), 58-65. <https://doi.org/10.1016/j.jot.2020.05.007>
- Yempabe, T., Edusei, A., Donkor, P., Buunaaim, A., & Mock, C. (2021). Factors Affecting Utilization of Traditional Bonesetters in The Northern Region of Ghana. *African Journal of Emergency Medicine*, 11(1), 105–110. <https://doi.org/10.1016/j.afjem.2020.09.002>
- Yulianita, H., Sugiharto, F., Fitria, N., Setyorini, D., Permana, A., Aviera, B., Mulya, D., Yani, F., Saulikha, M., Fauziah, O., Retno, S., & Jessi, G. (2023). Pengaruh Range of Motion Terhadap Peningkatan Kemampuan Activity Daily Living pada Pasien Pasca Operasi Fraktur Ekstremitas Bawah: Narrative Review. *Malahayati Nursing Journal*, 5(11), 3739–3751. <https://doi.org/10.33024/mnj.v5i11.9739>
- Yusuf, A., Iswari, M. F., Sriyono, S., & Yunitasari, E. (2020). The Effect of Combination Of Spiritual Deep Breathing Exercise Therapy on Pain And Anxiety In Post Operative Non Patological Orthopedic Fracture Patients. In *EurAsian Journal of Bio Sciences Eurasia J Biosci*. 14(1), 1625–1631.
- Oktarini, S., & Prima, R. (2021). Faktor-Faktor Yang Berhubungan Dengan Tingkat Kecemasan Pasien Fraktur Pre Operasi. *Journal Of Nursing Sciences*, 10(1), 54–62. <https://doi.org/10.35328/Keperawatan.V10i1.1590>
- Yazid, B., & Situmorang, T. (2020). Hubungan Tingkat Nyeri dengan Tingkat Kecemasan Pada Pasien Post Operasi Fraktur di RSUD Sundari Medan. *Jurnal Keperawatan Flora*, 13(2), 63–71. <https://www.jurnal.stikesflora-medan.ac.id/index.php/jkpf/article/download/221/21>

- Sri, E., Aan, I. E., & Yuli, W. (2022). Hubungan Kecemasan Dengan Peningkatan Tekanan Darah Pada Pasien Pre Operasi Close Fraktur. *Jurnal Ilmu Kedokteran Dan Kesehatan Indonesia*, 2(3), 87–95. <https://doi.org/10.55606/jikki.v2i3.737>
- Sahrudi, S. (2021). Penerapan Evidence Based Nursing Progresive Muscle Relaxation Terhadap Kecemasan Pada Pasien Pre Operasi Fraktur Ektremitas. Dunia Keperawatan: *Jurnal Keperawatan Dan Kesehatan*, 9(2), 208-219. <https://doi.org/10.20527/dk.v9i2.8680>