

## Section: Community Nursing

### The impact of Holy Qur'an therapy on anxiety reduction in patients with diabetic foot ulcers

Aziza Faziera Salsabila , Priyo Priyo, Sigit Priyanto

#### Authors information

Department of Nursing, Universitas Muhammadiyah Magelang, Indonesia



**Contactable email:** azizafaziera03@gmail.com / Article DOI: On process

#### Abstract

Patients with diabetes mellitus often face a range of complications, one of the most significant being diabetic ulcers. Those suffering from diabetic ulcers typically experience higher levels of anxiety compared to patients with diabetes who do not have complications. This heightened anxiety can be attributed to several factors, including increased dependency, feelings of fear, a greater need for healthcare, and reduced mobility. Furthermore, the anxiety among patients with diabetic ulcers is exacerbated by the prolonged wound healing process and the fact that the risk of mortality triples within 18 months following the onset of the first foot ulcer. To manage the anxiety levels in diabetic ulcer patients during wound care, non-pharmacological therapies can be effective, one of which is Al-Qur'an Murattal therapy. The recitation of the Qur'an, delivered through the human voice, serves as a powerful healing medium and is easily accessible. This therapeutic approach has been shown to decrease stress hormones, activate natural endorphins, and promote relaxation. It also serves as a distraction from fear, improves the body's chemical balance, lowers blood pressure, and slows breathing, heart rate, and brain wave activity. A slower or deeper breathing rate fosters calmness, emotional regulation, clearer thinking, and enhanced metabolism. In this case study, the non-pharmacological intervention applied was Al-Qur'an therapy, administered for 30 minutes daily between 14:00 and 14:30 over a period of two days. Following the intervention, the anxiety score, measured using the Hamilton Rating Scale for Anxiety (HARS) questionnaire, decreased from 25 to 18, indicating a significant reduction in anxiety levels.

**Keywords:** Diabetic foot ulcers; anxiety; Holy Qur'an; complementary therapy; community nursing

#### Introduction

Diabetes mellitus is a condition in which the body no longer produces insulin, leading to elevated blood sugar levels (American Diabetes Association, 2010). According to data from the International Diabetes Federation (IDF) for 2021, there are 537 million people worldwide suffering from diabetes mellitus. The IDF estimates that this number will rise to 600 million by 2045 (Sun et al., 2022). The World Health Organization (WHO) reports that diabetes mellitus causes 1.5 million deaths each year, with its prevalence continuing to increase over the past few decades. A study described that Indonesia ranks fifth in the world for the number of diabetes mellitus sufferers, with 19.5 million individuals affected (Lestari, Adriono, Ratmilia, Magdalena, & Sitompul, 2023). This number is projected to grow to 28.6 million by 2045. In Central Java, diabetes mellitus ranks second among the highest non-communicable diseases (PTM), accounting for 10.7% of cases. Reducing the rate of non-communicable disease is a top priority to minimize the occurrence of new cases (Calcaterra & Zuccotti, 2022). The Central Java Health Service estimates that there are approximately 618.546 diabetes mellitus sufferers, with 84.5% residing in Magelang Regency. The high incidence of diabetes mellitus must be addressed promptly to reduce the associated risk of complications. One significant complication is diabetic ulcers. In Indonesia, the prevalence of diabetes mellitus has increased from 6.9% to 8.5%, with the incidence of diabetic ulcers reaching 25%. Diabetic ulcers occur in 15-25% of diabetes mellitus patients, with more than 2% experiencing ulceration annually among those with neuropathy (Sukartini et al., 2020).

Diabetic ulcers, commonly referred to as diabetic wounds, arise from abnormalities in nerves and blood vessels that can lead to infections. If left untreated, these infections can result in tissue decay and, in severe cases, amputation (Walicka et al., 2021). Patients with diabetic ulcers often experience heightened anxiety during wound care. Anxiety, while similar to fear, is less specific; fear responds to immediate threats, whereas anxiety involves worry about potential future dangers. It is characterized by negative emotional states, such as foreboding and physical tension, which may manifest as a racing heart, sweating, and difficulty breathing (Annisa & Ildil, 2016). Estimates suggest that 15% of patients with diabetic ulcers are at risk of amputation. Furthermore, approximately two-thirds of individuals with diabetic ulcers will heal within six months, but 60% may experience recurrence within 12 months. The management of diabetic ulcers imposes a significant economic burden on healthcare systems, while the indirect costs include loss of productivity due to disability and premature death.

Individuals with diabetic ulcers exhibit higher levels of anxiety than those without diabetes-related complications. The anxiety experienced by these patients is influenced by several factors, including increased dependence on others, fear of amputation, a heightened need for healthcare, and the associated loss of mobility due to the severity of ulceration. Additionally, anxiety is linked to prolonged wound healing times and a tripled risk of death within 18 months following the first foot ulcer (Polikandrioti et al., 2020). Nurses can help alleviate anxiety in patients undergoing treatment for diabetic ulcers through non-pharmacological therapies. One effective approach is Murattal therapy, which utilizes the recitation of the Qur'an as a form of music therapy to reduce anxiety. The recitation, delivered through the human voice, serves as a powerful healing medium that is easily accessible. This therapy has been shown to decrease stress hormones, activate natural endorphins, and promote relaxation. It can also divert feelings of fear, improve the body's chemical balance, lower blood pressure, and slow breathing, heart rate, and brain wave activity. A deeper or slower breathing rate can lead to greater calmness, emotional control, clearer thinking, and improved metabolism. Previous research supports the effectiveness of Murattal Al-Qur'an therapy, indicating that it is particularly effective in reducing anxiety when administered for 15 minutes over four sessions (Asnaniar et al., 2023). For this reason, the study aimed to evaluate the benefit of Holy Qur'an in reducing anxiety among patient with diabetic ulcers.

## Case Description

Mr. A expressed feeling anxious during the treatment of his diabetic ulcer, worrying that the wound was not healing and might worsen. Objective observations indicated that the client appeared anxious. An assessment of his anxiety level using the Hamilton Rating Scale for Anxiety (HARS) revealed a moderate anxiety score of 25. Consequently, the nursing plan was developed to include identifying and implementing a distraction technique (Al-Qur'an murattal therapy), explaining the benefits and types of sensory distraction, and recommending the practice of these techniques. Implementation occurred on June 21, 2024, from 14:00 to 14:30, and again on June 22, 2024, during the same time frame. The author played Surah Ar-Rahman, verses 1–78, using a mobile phone. Evaluations were conducted at the end of each session, resulting in a HARS score of 22 on June 21 and a decrease to 18 on June 22. Mr. A reported experiencing pain during the treatment of his diabetic ulcer, describing it as follows: P = pain during treatment, Q = pricking sensation, R = located on the sole of the left foot, S = rated as 3 on a scale of 0 to 10, and T = pain that comes and goes. Objective data indicated that the client appeared to be grimacing and exhibiting protective behavior. Therefore, the nursing diagnosis of acute pain was established. The nursing plan included identifying the pain scale, recognizing non-verbal pain responses, providing pharmacological therapy, recommending independent monitoring of anxiety and pain, and collaborating on medication administration as per instructions (e.g., acetylsalicylic acid).

Implementation took place on June 21, 2024, from 14:00 to 14:30, and on June 22, 2024, during the same timeframe, with the author again playing Surah Ar-Rahman, verses 1–78, using a cellphone. Evaluations at the end of each session showed a pain scale of 3 on June 21, which decreased to 1 on June 22. Mr. A also mentioned that he was not fully aware of his condition—diabetic ulcers—and was only trying to manage it by taking medication and avoiding certain foods, which he considered taboo. He stated that he did not know the cause of his condition. The client's family admitted to having limited knowledge about the signs and symptoms of diabetes and were unaware of how to prevent the disease from worsening. They believed that if they felt unwell, they should visit a doctor or the nearest health center. Observations indicated that the family struggled to answer questions regarding the meaning of the disease, its prevention, care, and treatment. Additionally, clients inquired about which foods should be avoided to prevent further complications. Hence, the nursing diagnosis of knowledge deficit (ignorance about diabetic ulcers) related to a lack of information was established. The nursing plan included assessing the client's readiness and ability to receive information, providing opportunities for questions, and explaining the risk factors that could affect health. Implementation occurred on June 21, 2024, from 14:30 to 14:45, during which the author conducted health education activities regarding diabetic ulcers. The evaluation indicated that the client understood the meaning, prevention, and symptoms of diabetic ulcers but still had questions about care and treatment. This was evident when both the client and family appeared confused in response to questions posed by the author. On June 22, 2024, from 14:30 to 14:45, the author made a follow-up home visit and provided additional health education to Mr. A. The evaluation showed that the client now understood the explanation regarding the care and treatment of diabetic ulcers, as he was able to accurately and thoroughly repeat the information when asked.

## Discussion

Nursing assessment is the initial stage conducted to collect information from the patient, establish baseline data, and document the patient's health responses. The problems identified during this assessment serve as the foundation for establishing nursing diagnoses. Based on an assessment of anxiety levels during wound care in patients with diabetic ulcers, the author implemented non-pharmacological therapy: Al-Qur'an Murattal therapy, specifically Surah Ar-Rahman, verses 1-78, for two sessions of 30 minutes each. From the study results, Mr. A reported that he had been suffering from diabetes mellitus for several years. At the beginning of June, the sole of his left foot was injured by a

sharp object in the garden, resulting in a torn wound. He then visited the nearest clinic for treatment, where it was noted that the wound was still wet. The Al-Qur'an Murattal therapy conducted for Mr. A aimed to reduce anxiety levels associated with diabetic ulcer treatment. Significant results were observed: Mr. A's anxiety levels (assessed using the HARS questionnaire) decreased after implementing the therapy. On the first day, his anxiety score was 25 (moderate anxiety); on the second day, it decreased to 22 (still moderate anxiety); and by the third day, it further decreased to 18 (mild anxiety). A nursing diagnosis is a clear statement regarding the health status or actual problems or risks that help identify and determine nursing interventions aimed at reducing, eliminating, or preventing health issues within the nurse's responsibility (Rodríguez-Suárez et al., 2022). In this case study, the author identified three nursing diagnoses: anxiety related to a situational crisis, acute pain related to physiological injurious agents, and knowledge deficit (ignorance about diabetic ulcers) related to a lack of information.

Nursing interventions encompass all actions taken by nurses, clients/patients, families, and those closest to the patient to address problems and improve the patient's health status. These interventions must be consistently implemented by all nurses on duty, even after their official hours. For the first nursing diagnosis, anxiety related to a situational crisis, the family's inability to recognize health problems was noted. The expected outcome criteria, aligned with SLKI (Indonesian Nursing Outcome Standards), include a decrease in restless and tense behavior. Non-pharmacological techniques, specifically Al-Qur'an Murattal therapy (Surah Ar-Rahman, verses 1-78 for 2 x 30 minutes), were utilized. In this case study, a mobile phone was used as a medium to support the implementation of Murattal therapy. For the second nursing diagnosis, acute pain related to a physiological injuring agent, the family's inability to recognize the health problem was again a factor. The expected outcome criteria included reduced pain and the client not appearing to grimace. Non-pharmacological techniques to reduce the pain scale were again implemented through Al-Qur'an Murattal therapy (Surah Ar-Rahman, verses 1-78 for 2 x 30 minutes), using a cellphone as the medium. For the third nursing diagnosis, knowledge deficit (ignorance about diabetic ulcers) related to a lack of information, the family's inability to recognize health problems was also highlighted. The expected outcome criteria were that the family would be able to explain the meaning, causes, signs, symptoms, and management of diabetic ulcers, demonstrating behavior consistent with increased knowledge. Health education was provided through home visits lasting 2 x 15 minutes. After conducting the non-pharmacological therapy—Al-Qur'an Murattal therapy—by playing Surah Ar-Rahman, verses 1-78, using cellphone media for 2 x 30 minutes on June 21, 2024, from 14:00 to 14:30, and on June 22, 2024, from 14:00 to 14:30, the author observed.

Data shows that anxiety levels decreased after the implementation of non-pharmacological therapy: Al-Qur'an Murattal therapy, which involved playing Surah Ar-Rahman, verses 1-78, using cellphone media for two sessions of 30 minutes each. This finding aligns with a study which states that Murattal therapy affects the brain (Hartiningsih, Nurhayati, Oktavianto, & Setyorini, 2022). The stimulation from Murattal therapy enables the brain to produce chemicals called neuropeptides, which can help reduce anxiety. According to a study that explained respondents who underwent Murattal therapy reported feeling more comfortable and calmer (Hartiningsih, Nurhayati, Oktavianto, & Setyorini, 2022). Moreover, listening to Murattal Al-Qur'an has a positive influence, resulting in an increase in muscle electrical current and changes in the skin's perceptive power. These changes indicate relaxation and a reduction in nerve tension, leading to the loosening of arteries, increased blood flow to the skin, elevated skin temperature, and a decrease in heart rate (Ghiasi, & Keramat, 2018). This has been corroborated by various experts, including Ahmad Al-Qadhi, the main director of the Islamic Medicine Institute for Education and Research in Florida, USA. Al-Qadhi presented research results on the influence of the Al-Qur'an on humans from both physiological and psychological perspectives. His findings showed that listening to the holy verses of the Al-Qur'an significantly reduces nervous tension, with results recorded both quantitatively and qualitatively using a tool based on mental illness assessments (Somana & Kuku, 2017).

Listening to Murattal therapy stimulates the hypothalamus, resulting in the production of CRF (Corticotrophin Releasing Factor). This, in turn, stimulates the anterior pituitary gland to produce ACTH (Adenocorticotrophic Hormone) and triggers the release of endorphins (Sunny, Oktavianto, Timiyatun, & Sumiyati, 2023). One advantage of Surah Ar-Rahman is the repetition of specific verses 31 times. The repetition emphasizes gratitude for the blessings bestowed upon all of Allah's creatures, not just humans or jinn. The Surah also warns that hypocrites will not find peace and will face Allah on the Day of Resurrection, appearing in the most beautiful form and with the most fragrant scent. Surah Ar-Rahman is known for its healing effects on both physical and spiritual ailments. It strengthens faith and provides peace of mind ((Sunny, Oktavianto, Timiyatun, & Sumiyati, 2023). Reciting the holy verses of the Qur'an has a relaxing effect, as it activates endorphin hormones, enhances feelings of relaxation, alleviates fear, anxiety, and tension, and improves the body's chemical balance, thereby lowering blood pressure and slowing breathing. The influence of Surah Ar-Rahman, which frequently highlights Allah's blessings, can provide relaxation and peace of mind for its listeners (Sumaryani & Sari, 2015).

## Conclusion

The implementation of Al-Qur'an Murattal therapy has shown significant benefits in reducing anxiety levels among patients. This non-pharmacological approach not only promotes relaxation but also stimulates the production of

neuropeptides and endorphins, contributing to an overall sense of well-being. Various studies indicate that listening to the holy verses of the Qur'an can lead to physiological and psychological improvements, including decreased tension, enhanced feelings of calmness, and increased faith. For future studies, it is recommended to conduct longitudinal research to assess the long-term effects of Al-Qur'an therapy on anxiety levels and its sustainability over time. Additionally, expanding research to include diverse populations will provide a more comprehensive understanding of the therapy's effectiveness across different demographics.

## References

- Amelia, A. R., Ahri, R. A., & Jiranah, J. (2020). Pengaruh Stimulus Auditori Qur'an Atau Murattal Qur'an Terhadap Penurunan Ansietas Pada Penderita Hipertensi. *Jurnal Keperawatan Jiwa (JKJ): Persatuan Perawat Nasional Indonesia*, 10(1): 45–56.
- American Diabetes Association (2010). Diagnosis and classification of diabetes mellitus. *Diabetes care*, 33 Suppl 1(Suppl 1), S62–S69. <https://doi.org/10.2337/dc10-S062>
- Annisa, D. F., & Ildil, I. (2016). Konsep Kecemasan (Anxiety) pada Lanjut Usia (Lansia). *Konselor*, 5(2), 93.
- Asnaniar, W. O. S., Hidayat, R., Asfar, A., Safruddin, S., Emin, W. S., Ishak, P. R. T., Wijaya, D. N. H., Kasan, H. A., Agusnitar, A. S. N., & Anggi, A. (2023). Pendidikan Kesehatan Tentang Manfaat Terapi Murattal Al-Quran. *Jurnal Abmas Negeri (JAGRI)*, 4(1), 33–37.
- Calcaterra, V., & Zuccotti, G. (2022). Non-Communicable Diseases and Rare Diseases: A Current and Future Public Health Challenge within Pediatrics. *Children (Basel, Switzerland)*, 9(10), 1491. <https://doi.org/10.3390/children9101491>
- Ghiasi, A., & Keramat, A. (2018). The Effect of Listening to Holy Quran Recitation on Anxiety: A Systematic Review. *Iranian journal of nursing and midwifery research*, 23(6), 411–420. [https://doi.org/10.4103/ijnmr.IJNMR\\_173\\_17](https://doi.org/10.4103/ijnmr.IJNMR_173_17)
- Hartiningsih, S. N., Nurhayati, P., Oktavianto, E., & Setyorini, A. (2022). Terapi Murottal Berpengaruh terhadap Tekanan Darah dan Kecemasan pada Lansia Penderita Hipertensi. *Jurnal Penelitian Perawat Profesional*, 4(4), 1129–1134. <https://doi.org/10.37287/jppp.v4i4.1177>
- Hartiningsih, S. N., Nurhayati, P., Oktavianto, E., & Setyorini, A. (2022). Terapi Murottal Berpengaruh terhadap Tekanan Darah dan Kecemasan pada Lansia Penderita Hipertensi. *Jurnal Penelitian Perawat Profesional*, 4(4), 1129–1134. <https://doi.org/10.37287/jppp.v4i4.1177>
- Lestari, Y. D., Adriono, G. A., Ratmilia, R., Magdalena, C., & Sitompul, R. (2023). Knowledge, attitude, and practice pattern towards diabetic retinopathy screening among general practitioners in primary health centres in Jakarta, the capital of Indonesia. *BMC primary care*, 24(1), 114. <https://doi.org/10.1186/s12875-023-02068-8>
- Polikandrioti, M., Vasilopoulos, G., Koutelekos, I., Panoutsopoulos, G., Gerogianni, G., Alikari, V., Dousis, E., & Zartaloudi, A. (2020). Depression In Diabetic Foot Ulcer: Associated Factors And The Impact Of Perceived Social Support And Anxiety On Depression. *International Wound Journal*, 17(4), 900–909.
- Rodríguez-Suárez, C. A., Rodríguez-Álvaro, M., García-Hernández, A. M., Fernández-Gutiérrez, D. Á., Martínez-Alberto, C. E., & Brito-Brito, P. R. (2022). Use of the Nursing Interventions Classification and Nurses' Workloads: A Scoping Review. *Healthcare (Basel, Switzerland)*, 10(6), 1141. <https://doi.org/10.3390/healthcare10061141>
- Somana, A., & Kuku, T. C. (2017). Pengaruh Terapi Murattal Al-Quran Terhadap Tingkat Kecemasan Pasien Pre Operasi. *Jurnal Kesehatan Budi Luhur : Jurnal Ilmu-Ilmu Kesehatan Masyarakat, Keperawatan, Dan Kebidanan*, 10(1), 115–120.
- Sukartini, T., Theresia Dee, T. M., Probawati, R., & Arifin, H. (2020). Behaviour Model For Diabetic Ulcer Prevention. *Journal of Diabetes and Metabolic Disorders*, 19(1), 135–143.
- Sumaryani, S., & Sari, P. I. P. (2015). Senam Disminorhea Berbasis Ar-Rahman Terhadap Penurunan Nyeri. *Jurnal Universitas Airlangga*, 10(2).
- Sun, H., Saeedi, P., Karuranga, S., Pinkepank, M., Ogurtsova, K., Duncan, B. B., Stein, C., Basit, A., Chan, J. C. N., Mbanya, J. C., Pavkov, M. E., Ramachandran, A., Wild, S. H., James, S., Herman, W. H., Zhang, P., Bommer, C., Kuo, S., Boyko, E. J., & Magliano, D. J. (2022). IDF Diabetes Atlas: Global, regional and country-level diabetes prevalence estimates for 2021 and projections for 2045. *Diabetes research and clinical practice*, 183, 109119. <https://doi.org/10.1016/j.diabres.2021.109119>
- Sunny, S., Oktavianto, E., Timiyatun, E., & Sumiyati, S. (2023). Efektifitas Murattal Ar-Rahman Disertai Pemberian Aromaterapi Lemon Terhadap Penurunan Nyeri Dismenorea. *Health Sciences And Pharmacy Journal*, 7(2), 55–61.
- Walicka, M., Raczynska, M., Marcinkowska, K., Lisicka, I., Czaicki, A., Wierzba, W., & Franek, E. (2021). Amputations of Lower Limb in Subjects with Diabetes Mellitus: Reasons and 30-Day Mortality. *Journal of diabetes research*, 2021, 8866126. <https://doi.org/10.1155/2021/8866126>