

Review

Overcoming Anxiety in Hemodialysis Patients with Mindfulness Therapy: Literature Review

Trisno Yuwono¹, Ratna Wardani², Joko Prasetyo²

¹ Bhayangkara Hospital Kediri, East Java, Indonesia

² Institute of Health Science STRADA Indonesia, East Java, Indonesia

ARTICLE INFO

ABSTRACT

Article History

Submit : Jan 15, 2024

Revised : May 12, 2024

Accepted : Jun 24, 2024

Keywords:


Anxiety, Hemodialysis, Mindfulness Therapy

Background: Individuals suffering from chronic kidney failure who undergo Hemodialysis therapy are prone to experiencing anxiety. The literature review aims to determine the importance of Mindfulness in overcoming anxiety in chronic kidney failure patients undergoing hemodialysis therapy.


Methods: The design uses the PRISMA approach. The whole text and the year of publication are considered when making selections during the research stage. Additionally, journals and papers that were judged less important were not included. Seven pertinent papers were found through Google Scholar, Indonesia One Search, DOAJ, and Garuda using the keywords "mindfulness therapy," "hemodialysis," and "anxiety."


Results: After reviewing the selected articles, it was found that by administering mindfulness therapy, the anxiety level of chronic kidney failure patients undergoing hemodialysis therapy decreased

Conclusion: Mindfulness therapy can be used to decrease the anxiety level of chronic kidney failure patients undergoing hemodialysis.

 *Corresponding Author*

 *Affiliation*

 *Email*

 *Cite this as*

: Trisno Yuwono

: Bhayangkara Hospital Kediri, Indonesia & Institute of Health Science STRADA Indonesia, Indonesia

: trisnoyuwono835@gmail.com

: Yuwono, T., Wardani, R., & Prasetyo, J. (2024). Overcoming Anxiety in Hemodialysis Patients with Mindfulness Therapy: Literature Review. Journal of Applied Nursing and Health, 6(1), 36–42. <https://doi.org/10.55018/janh.v6i1.171>

Introduction

Individuals suffering from chronic kidney failure who undergo Hemodialysis therapy are prone to experiencing anxiety. There are many changes experienced by chronic kidney failure patients, including regulation of diet, exercise, blood sugar, urea, creatinine, and use of renal replacement therapy (Mardiyah & Azmy, 2022; Nursalam et al., 2020; Tanoto & Zaenal B., 2022). Chronic kidney failure patients look anxious when undergoing

hemodialysis; they also report heart palpitations, nausea, tremors, nervousness, inability to concentrate, and feelings of discomfort. From these signs and symptoms, it can be seen that the patient is experiencing anxiety. Chronic kidney failure patients said they were anxious because they saw blood flowing through the tubes, the costs that had to be paid, anxiety because invasive procedures would be carried out, and there was no hope of recovery.



People who get hemodialysis therapy and have chronic renal failure are more likely to experience anxiety. Patients with chronic kidney failure undergo numerous changes, such as altered nutrition, physical activity, blood sugar, urea, creatinine, and use of renal replacement medication. (Anisah & Maliya, 2021) As many as 48.6% of hemodialysis patients experience anxiety disorders. Riskesdas data (2018) states that in Indonesia, there are 9.8% of people with chronic kidney failure. Research results (Larasati, 2018) in the Central Java Province region said that there was a level of severe anxiety of 35.50% in patients undergoing hemodialysis.

A patient may have physical symptoms and behavioral changes that indicate changes in their psychological response, such as becoming passive, confused, or dependent. Certain dialysis patients cannot resume their previous activity or employment following hemodialysis. Due to the systemic disease that precedes it, patients frequently encounter issues including losing their work, income, independence, life expectancy, and sexual function, which can make them angry and anxious (Alfikrie et al., 2020; Suwardianto et al., 2021).

Based on research (by Alfikrie et al., 2020) stated that chronic kidney failure patients, both new and existing patients, are very vulnerable to suffering from psychological disorders, including anxiety and fear, when undergoing hemodialysis. Anxiety experienced by individuals can be caused by threats to physical integrity as well as threats to the integrity of body

systems. Threats to physical integrity are related to decreased ability to carry out daily activities. Meanwhile, threats to the integrity of body systems involve damage to a person's identity, self-esteem, and integrated social functioning (Stuart, 2014). Untreated anxiety can lead to irrational behavior, conflict, disobedience, fear, inability to carry out daily activities, and fear of death (Dewanti & Supratman, 2020). One of the complementary therapies used to overcome anxiety is Mindfulness therapy.

Being fully aware of oneself, one's location, actions, and the ability to yield to God and not overreact to external events are all components of mindfulness. This is endorsed by. Investigation (Rokhyati et al., 2019) states that non-pharmacological Islamic Spiritual Mindfulness therapy can reduce anxiety, stress, and depression in patients with chronic kidney failure. They also supported a study (Alfikrie et al., 2020) which states that deep breathing relaxation can reduce Anxiety in Patients with Chronic Kidney Failure. Based on the background, researchers are interested in conducting a literature review related to mindfulness to overcome anxiety in chronic kidney failure sufferers undergoing hemodialysis therapy.

Methods

Critical thinking combined with a review of the literature produced this paper. A review study examines the body of literature on a given subject and summarizes the results of earlier studies. Although having a wealth of material is beneficial, a systematic review approach is required to ensure that researchers may use it to finish their work. The researchers themselves conducted the literature search. To incorporate pertinent and appropriate papers

for this research, several researchers independently examine extracted documents. Discharge planning, quality of life, and stroke were the search terms used in the Google Scholar database. Beginning on January 02, 2024, and lasting until January 10, 2024, the researcher used keywords she had chosen:

mindfulness therapy, hemodialysis, and anxiety. Lastly, the author has received seven journals and publications, which are subsequently analyzed to extract the main ideas of each reference and numerous crucial elements. The process of writing an article comes last.

Results

Review searches were identified and filtered according to the variables used. Then, the feasibility test was then obtained, and 7 journals were selected using the criteria to get seven journals. The journal search engine used in this research is a reputable journal with Google Scholar, Indonesia One Search, DOAJ, and Garuda.

No	Title, Author, and Year	Research Result
1	Application Of Mindfulness Therapy In Overcoming Anxiety In Hemodialisa Patients At The Hajimena Hemology Center Author: (Ulfa & Susanto, 2023)	The evaluation results in case I, Mrs. L, and case II Mrs. S found that on July 10, Mrs. L scored an anxiety level of 15(severe anxiety category), Mrs. S scored 16 (severe anxiety category); on July 11, 2023, Mrs. L score 11 (moderate anxiety category) Mrs. S score 12 (moderate anxiety category) and on July 12, 2023, Mrs. L with a score of 8 (mild anxiety category) on Mrs. S score 9 (mild anxiety category). From the above results, it can be concluded that mindfulness therapy is very effective in reducing the level of anxiety experienced by hemodialysis patients. It is hoped that GGK patients can do mindfulness regularly to reduce the anxiety experienced.
2	Brief mindfulness meditation for depression and anxiety symptoms in patients undergoing hemodialysis a pilot feasibility Author: (Thomas et al., 2017)	Brief Mindfulness is effective in reducing anxiety and depression in chronic kidney failure patients undergoing hemodialysis therapy.
3	Penerapan Intervensi Mindfulness Based Stress Reduction Terhadap Tingkat Kecemasan Pasien CKD di RSUD Toto Kabila Author: (Syamsuddin et al., 2023)	After carrying out the Mindfulness-Based Stress Reduction intervention, namely for mild anxiety, as many as eight respondents and moderate anxiety, as many as two respondents with p-value = 0.005. The conclusion is that there is a significant effect of Mindfulness-Based Stress Reduction therapy on reducing anxiety levels by 1 level.

No	Title, Author, and Year	Research Result
4	Efficacy of Mindfulness-based Stress Reduction in Hemodialysis Patients with Anxiety and Depression: a randomized, double-masked, parallel-group trial Author: (Haghshenas et al., 2019)	The mean age of the intervention and control groups were 46.86±11.66 and 46.26±11.71, respectively. The mean duration of illness was 2.47±1.78 and 2.62±1.32 in the intervention and control groups, respectively. There were no significant differences between the two groups regarding age, sex, education level, and job. Depression and anxiety were reduced in the intervention group compared with the control group (p=0.0001). The MBSR program may reduce anxiety and depression in hemodialysis patients.
5	The Effectiveness of Mindfulness-Based Cognitive Therapy on Symptoms of Anxiety, Depression, and Stress in Renal Patients Under Hemodialysis Author: (Khoshkhatti et al., 2020)	Mindfulness-based cognitive therapy is considered an effective treatment to reduce the symptoms of depression, anxiety, and stress in hemodialysis patients. Therefore, it is suggested that therapists and specialists use the effects of the present study to improve patients' health.
6	Efektivitas Terapi Mindfulness Terhadap Tingkat Kecemasan Pasien Yang Menjalani Hemodialisis Author: (Astuti et al., 2022)	After being given mindfulness, it was found that the level of anxiety decreased by an average of 17.7 (mild anxiety). Based on the Wilcoxon test, a p-value of 0.000 was obtained, indicating that providing mindfulness therapy was effective in reducing anxiety levels in chronic kidney failure patients undergoing hemodialysis at Pelita Anugerah Hospital, Demak. Therefore, it can be concluded that mindfulness therapy can effectively reduce anxiety levels in chronic kidney failure patients undergoing hemodialysis.
7	Overcoming Anxiety Chronic Kidney Failure Patients with Spiritual Mindfulness Intervention: A Case Study Author: (Mahyuvi & Sari, 2023)	The results of the spiritual mindfulness intervention after nursing actions were carried out for three days, and the nursing anxiety problem was resolved. The patient experienced a change from initially the patient having an anxiety score of 80 (severe anxiety) to 40 (not anxious). Spiritual mindfulness intervention is effective in reducing anxiety, so it can be used as an alternative to reduce stress in patients with chronic kidney failure.

Discussion

Through the functioning limbic system, which can provide a constructive coping mechanism, mindfulness is one technique to reduce anxiety, which functions as a positive psychological factor (free from stress and anxiety). (Wisnusakti,

2018). Mindfulness can significantly help patients adapt to changes caused by chronic kidney failure. Mindfulness therapy is believed to be able to reduce anxiety optimally because it can be carried out independently, anytime and anywhere, and is inexpensive and non-toxic (Yusuf et al.,



2020). The relationship between humans and the Creator is the first element of spirituality. With mindfulness therapy, a person will draw closer to God, which is the coping strategy most often used by patients to overcome the anxiety of chronic kidney failure patients. Mindfulness can be defined as an individual's ability to be fully aware of one's existence, where one is, what one is doing, and not overreacting to what is happening around one and by surrendering to God.

Mindfulness can be interpreted as the ability of a human being to be fully aware of one's existence, where one is, and what one is doing, and not overreact to what is happening around one. Mindfulness should be done naturally, so practicing mindfulness in everyday life would be better. Mindfulness is more of a strategic aspect of focusing attention to deal with cognitive problems and reactivate the power of the mind to reduce emotional distress (Alimuddin, 2018). Mindfulness is a transformative process in which a person can develop the abilities of mindfulness, the experience of being present, acceptance, attention, and awareness. (White, 2014).

Anxiety reduction is significantly influenced by something that occurs during the mindfulness therapy process. The sympathetic nervous system becomes more active in reaction to stress when an individual experiences anxiety. The sympathetic nervous system is activated by activating the adrenal medulla, increasing the release of cortisol, norepinephrine, and adrenaline and reducing nitric oxide. The body's reaction to this circumstance may alter, leading to variations in heart rate, respiration, blood pressure, blood flow to different organs, and bodily metabolic processes. Exercise that involves spiritual mindfulness will activate the prefrontal cortex, the brain's center for regulating emotions and making judgments. This will

instruct emotional reactions, and the body will react in an accepting and nonjudgmental way. Meanwhile, the hippocampus and amygdala, in addition to being regions for controlling emotions, are also regions for openness, extinction, and strengthening. These regions will provide instructions to open up more, enabling people to release themselves in awareness and control their internal reactivity (Alimuddin, 2020).

Based on evidence-based practice from the results of a literature review with mindfulness, after being able to practice and focus on breathing mindfully, individuals will find it easier to focus attention on the breath, which is an important skill to help overcome stress, anxiety, and negative emotions as well as cooling oneself when angry, and improving concentration skills. Mindfulness therapy is beneficial because it allows individuals to refocus when they feel that stressful thoughts are carrying away their thoughts and feelings. Conscious mindfulness also helps individuals remain "present or present" in the moment rather than being distracted enough to regret the past or worry about the future. During the mindfulness therapy process, chronic kidney failure patients will feel calm and increase their level of affection for themselves; there will be an attachment to spirituality and increased awareness of health and self-care so that the patient's anxiety decreases and even becomes less anxious.

Conclusion

Mindfulness therapy effective in reducing the anxiety level of chronic kidney failure patients undergoing hemodialysis therapy.

Authors Contributions

The authors' contributions to this literature review are multifaceted and

integral to the development of the manuscript: one author meticulously formulated the research objectives, conducted a thorough review of existing literature, and synthesized key findings to establish the theoretical framework; another author critically analyzed the selected literature, identified gaps and emerging trends, and provided insightful interpretations; while a third author meticulously crafted the manuscript, ensuring clarity of presentation, coherence of arguments, and adherence to scholarly standards.

Conflicts of Interest

The authors confirm that no potential conflicts of interest exist, either financial or personal, that could have affected the integrity and impartiality of the research conducted and reported in this study.

Acknowledgment

I want to extend my deepest gratitude to all those who provided invaluable assistance and resources during the literature review phase of this research, whose contributions were instrumental in shaping the foundation and direction of this study.

References

- Alfikrie, F., Purnomo, A., & Selly, R. (2020). Pengaruh Relaksasi Napas Dalam Terhadap Kecemasan Pada Pasien Gagal Ginjal Kronis Yang Menjalani Hemodialisa. *BORNEO NURSING JOURNAL (BNJ)*, Vol. 2 No. (n1), 18–24. <https://doi.org/10.24198/jkp.v3n1.3>
- Alimuddin, T. A. (2018). *Pengaruh Spiritual Mindfulness Based On Breathing Exercise Terhadap Kecemasan, Kadar Glukosa Darah Dan Tekanan Darah Pasien Diabetes Melitus Tipe 2*. Universitas Airlangga.
- Alimuddin, T. A. (2020). Efektivitas Spiritual Mindfulness Based On Breathing Exercise terhadap Kecemasan Pasien Diabetes Melitus. *Ners Journal Awal Bros*.
- Anisah, I. N., & Maliya, A. (2021). Efektivitas Relaksasi Benson Terhadap Kecemasan Pasien Yang Menjalani Hemodialisa. *Jurnal Berita Ilmu Keperawatan*, 14(1), 57–64.
- Astuti, V., Fitriyanti, D., & Yono, N. H. (2022). Efektivitas Terapi Mindfulness Terhadap Tingkat Kecemasan Pasien Yang Menjalani Hemodialisis. *Karya Kesehatan Siwalima*. <https://ojs.ukim.ac.id/index.php/KKS>
- Dewanti, G. S., & Supratman. (2020). Relaksasi Otot Progresif Terhadap Tingkat Kecemasan Pada Pasien Hemodialisa. *Seminar Nasional Keperawatan Universitas Muhammadiyah Surakarta (SEMNASKEP)*, 93–98.
- Haghshenas, M., Assarian, F., Omidi, A., Razaghof, M., & Rahimi, H. (2019). Efficacy of Mindfulness-based Stress Reduction in Hemodialysis Patients with Anxiety and Depression: a randomized, double-blind, parallel-group trial. *Electronic Physician*, 11(1), 7370–7377. <https://doi.org/10.19082/7370>
- Khoshkhatti, N., Majd, M. A., Bazzazian, S., & Yazdinezhad, A. (2020). The Effectiveness of Mindfulness-Based Cognitive Therapy on Symptoms of Anxiety, Depression and Stress in Renal Patients Under Hemodialysis. *Iranian Journal of Nursing Research*, 14(6). <https://doi.org/10.21859/ijnr-140602>
- Larasati, R. (2018). *Hubungan Dukungan Keluarga Dengan Tingkat Kecemasan Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisa Di Rumah Sakit Dr Moewardi Surakarta*. Unuversitas Muhammadiyah Surakarta.
- Mahyuvi, T., & Sari, N. (2023). Overcoming Anxiety Chronic Kidney Failure Patients

- with Spiritual Mindfulness Intervention: A Case study. *Nursing Sciences Journal*, 7(2).
- Mardiyah, A., & Azmy, R. A. (2022). Level Fatigue of Chronic Kidney Disease Patients Undergoing Hemodialysis. *Journal of Applied Nursing and Health*, 4(1 SE-Articles), 126–131. <https://doi.org/10.55018/janh.v4i1.64>
- Nursalam, N., Kurniawati, N. D., Putri, I. R. P., & Priyantini, D. (2020). Automatic reminder for fluids management on confidence and compliance with fluid restrictions in hemodialysis patients. *Systematic Reviews in Pharmacy*, 11(5), 226–233. <https://doi.org/10.31838/srp.2020.5.34>
- Rokhyati, Dwidiyanti, M., & Padmasari, S. (2019). Non-Pharmacological Intervention On Stress Levels Of Chronic Kidney Disease Patients That Have Hemodialisa ; Literature Review. *Jurnal Ilmu Keperawatan Jiwa*, 2(1).
- Stuart, G. W. (2014). *Principles and Practice of Psychiatric Nursing (Principles and Practice of Psychiatric Nursing (Stuart))*. Mosby, Inc, an Affiliate of Elseiver, Inc.
- Suwardianto, H., Setiawan, L., Siswoariwibowo, A., & Santoso, T. (2021). Safety Use Of Personal Protective Equipment (PPE) to Anxiety During The Covid-19 Pandemic On Nurses. *STRADA Jurnal Ilmiah Kesehatan*, 10(2), 1493–1498. <https://doi.org/https://doi.org/10.30994/sjik.v10i2.853>
- Syamsuddin, F., Simbala, I., & Latjompoh, K. A. (2023). Penerapan Intervensi Mindfulness Based Stress Reduction Terhadap Tingkat Kecemasan Pasien CKD di RSUD Toto Kabila. *Jurnal Kesehatan Masyarakat*, 7(3), 2023.
- Tanoto, W., & Zaenal B., Moch. (2022). Therapy Compliance Level of Chronic Kidney Failure Patients With Hemodialization In The Hemodialization Room. *Journal of Applied Nursing and Health*, 4(1 SE-Articles), 132–139. <https://doi.org/10.55018/janh.v4i1.65>
- Thomas, Z., Novak, M., Platas, S. G. T., Gautier, M., Holgin, A. P., Fox, R., Segal, M., Looper, K. J., Lipman, M., Selchen, S., Mucsi, I., Herrmann, N., & Rej, S. (2017). Brief mindfulness meditation for depression and anxiety symptoms in patients undergoing hemodialysis a pilot feasibility study. *Clinical Journal of the American Society of Nephrology*, 12(12), 2008–2015. <https://doi.org/10.2215/CJN.03900417>
- Ulfa, S. R., & Susanto, G. (2023). Application Of Mindfulness Therapy In Overcoming Anxiety In Hemodialisa Patients At The Hajimena Hemology Center. *Nusantara Hasana Journal*, 3(5), Page.
- White, L. (2014). Mindfulness in nursing: an evolutionary concept analysis. *Journal of Advanced Nursing*. <https://doi.org/doi:10.1111/jan.12182>.
- Wisnusakti, K. (2018). The Relationship Between Levels Of Spiritual Welfare and Anxiety in Elderly. *Jurnal Pendidikan Keperawatan Indonesia*, 4(2), 91–96. <https://doi.org/10.17509/jpki.v4i2.13638>
- 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 postoperative nonpatological orthopedic fracture patients. *EurAsian Journal of BioSciences*, 14(1), 1625–1631.