

Five-finger hypnosis alleviates fatigue in chronic kidney patients

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Abstract:

Fatigue is a common symptom experienced by chronic kidney failure patients undergoing hemodialysis, which significantly affects their quality of life. This study aims to evaluate the effect of five-finger hypnosis therapy on reducing fatigue in chronic kidney failure patients in the hemodialysis room of Bhayangkara Lumajang Hospital. The research design used was pre-experiment with pre-and post-test approaches. The population in this study were chronic kidney failure patients undergoing regular hemodialysis, with a total of 40 patients. The sample consisted of 36 respondents selected through the purposive sampling technique. Data were collected using the Fatigue Assessment Scale (FAS) questionnaire to measure fatigue levels and the five-finger hypnosis module for intervention techniques. Data were analyzed bivariate using the paired sample t-test. The results showed that the average value of the fatigue level before the five-finger hypnosis intervention was 31.83, with a standard deviation of 4.98. After the intervention, the respondents' average fatigue level was 25.27, with a standard deviation of 4.53. Data analysis using the Paired Sample T-Test showed a significant effect between five-finger hypnosis therapy on reducing fatigue levels with a value of $p = 0.000$ ($p < 0.05$). Five-finger hypnosis therapy can be integrated as part of a non-pharmacological care program to improve the quality of life of patients in hemodialysis units.

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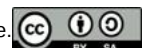
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INTRODUCTION

Chronic kidney disease (CKD) is one of the most pressing non-communicable diseases, with its prevalence showing a significant upward trend over the past two decades. It has become a leading cause of mortality worldwide, as highlighted by Kovesdy (2022). Among the myriad challenges CKD patients face, fatigue is a particularly debilitating symptom, especially for those undergoing hemodialysis therapy (Li & Luo, 2023). This symptom manifests as a subjective feeling of weakness, tiredness, and reduced energy, profoundly impacting physiological and psychological well-being (Rhee et al., 2022). As a result, it significantly diminishes patients' quality of life, affecting their ability to perform daily activities and maintain emotional stability (María, 2020).

The global burden of chronic kidney failure continues to escalate, with over 843.6 million people affected worldwide. Projections suggest that CKD could become the fifth-highest cause of death globally by 2040 (Kovesdy, 2022). At Bhayangkara Lumajang Hospital, an average of 50 patients undergoes hemodialysis monthly, and preliminary studies indicate that fatigue severity varies, with 40% experiencing mild, 30% moderate, and 30% severe fatigue. These figures underscore the urgent need for effective interventions to address this pervasive issue.

Fatigue in CKD patients undergoing hemodialysis is multifactorial, influenced by various physiological and psychological factors (Tsirigotis et al., 2022). Low hemoglobin levels, prolonged hemodialysis sessions, intradialytic hypotension, and increased fluid volume are the primary contributors to fatigue (Xia et al., 2025). Additionally, the psychological toll of hemodialysis therapy,

including sleep disturbances, anxiety, and depression, exacerbates the condition (Brys et al., 2021;). These factors intensify fatigue and create a vicious cycle that further compromises patients' health and well-being (Doan et al., 2024). Addressing these underlying causes requires a comprehensive approach that combines medical management with supportive interventions to alleviate symptoms and improve patient outcomes (Kalariya et al., 2023).

Non-pharmacological approaches have gained attention as viable strategies to mitigate fatigue in CKD patients (Kassim et al., 2022). Techniques such as relaxation exercises have demonstrated efficacy in reducing muscle tension and alleviating anxiety, both of which contribute to fatigue (Wang et al., 2024). One promising method is the Five Finger Hypnosis Technique, a self-hypnosis designed to induce relaxation, reduce anxiety, and regulate stress-related hormones (Safitri & Tresya, 2023). This technique empowers patients to manage their symptoms actively, offering a cost-effective and accessible solution (Green & Lynn, 2023). By fostering a state of deep relaxation, the Five Finger Hypnosis Technique has the potential to break the cycle of fatigue and improve patients' overall quality of life (Ahmed et al., 2022).

This study aims to evaluate the impact of the Five Finger Hypnosis Technique on reducing fatigue among CKD patients undergoing hemodialysis at Bhayangkara Lumajang Hospital. The research will involve a systematic analysis of fatigue levels before and after the implementation of the technique, providing valuable insights into its effectiveness. Focusing on this population, the study addresses a critical gap in current care practices and offers evidence-based recommendations for healthcare providers. The findings are expected to contribute to developing innovative nursing interventions that prioritize patient-centered care and enhance treatment outcomes.

The significance of this research extends beyond individual patient care, as it aligns with broader public health goals. By addressing fatigue, a key determinant of quality of life, the study underscores the importance of holistic care in managing chronic conditions like CKD (Sułkowski et al., 2024). Effective interventions can reduce the burden on healthcare systems by minimizing complications and improving patient adherence to treatment regimens (Murali & Lonergan, 2020). Furthermore, adopting non-pharmacological techniques like the Five Finger Hypnosis Technique can promote sustainable healthcare practices, particularly in resource-limited settings where access to advanced therapies may be restricted (Chen et al., 2025). This approach benefits patients and supports healthcare providers in delivering comprehensive and compassionate care (FitzGerald et al., 2023).

Fatigue remains a pervasive and debilitating symptom for CKD patients undergoing hemodialysis, necessitating innovative solutions to improve their quality of life (Debnath et al., 2021). The Five Finger Hypnosis Technique represents a promising intervention that combines relaxation, stress reduction, and self-empowerment to address this complex issue (Green & Lynn, 2023;). By conducting this study at Bhayangkara Lumajang Hospital, researchers aim to provide actionable insights that can inform clinical practice and policy development. Ultimately, integrating non-pharmacological approaches into routine care can transform the lives of CKD patients, offering them renewed hope and resilience in their journey toward better health.

METHOD

This study employed a pre-experimental design with a pretest and post-test approach, conducted without a control group, to evaluate the effectiveness of the Five Finger Hypnosis Technique in reducing fatigue among chronic kidney failure (CKF) patients undergoing hemodialysis. The research was carried out from July 1 to July 31, 2024, at the hemodialysis unit of Bhayangkara Lumajang Hospital. The study population consisted of 40 CKF patients undergoing regular hemodialysis and experiencing fatigue. A sample of 36 patients was selected using purposive sampling based on specific inclusion criteria: willingness to participate by signing informed consent, having a compos mentis level of consciousness, being able to communicate effectively, undergoing regular hemodialysis for more than eight sessions, and being of any gender. Exclusion criteria included patients undergoing emergency (cito) hemodialysis, those with decreased consciousness, and individuals who had previously participated in similar studies. This rigorous selection process

ensured that the participants represented a homogenous group suitable for evaluating the intervention's impact.

The independent variable in this study was the Five Finger Hypnosis Technique, administered over eight sessions and conducted twice a week for four weeks, each lasting 10–15 minutes. The dependent variable was the level of fatigue, measured using the Fatigue Assessment Scale (FAS) questionnaire before and after the intervention. All 36 participants completed the study without any dropouts or need for replacements, ensuring the integrity and reliability of the data collected. Univariate analysis was performed to describe the demographic characteristics of the respondents and the FAS scores obtained during the pretest and post-test phases. Bivariate analysis utilized the Paired Sample T-test to determine the statistical significance of the intervention's effect. This test was chosen because the measurement data demonstrated a normal distribution, as confirmed by the normality test. The Paired Sample T-test is particularly appropriate for comparing paired averages within the same group, making it an ideal method for assessing changes in fatigue levels before and after the intervention.

Ethical considerations were paramount in this study, and ethical clearance was obtained from the Health Research Ethics Commission (KEPK) of Hafshawaty Zainul Hasan University, with approval number 225/KEPK-UNHASA/VII/2024. This ethical approval underscores the study's adherence to established guidelines for conducting human research, ensuring the rights and well-being of participants were protected throughout the research process. Informed consent was obtained from all participants, who were fully briefed on the study's objectives, procedures, and potential benefits. By addressing both ethical and methodological aspects, this study aimed to provide robust evidence regarding the efficacy of the Five Finger Hypnosis Technique in alleviating fatigue among CKF patients undergoing hemodialysis. The findings are expected to contribute valuable insights into non-pharmacological interventions that can enhance the quality of life for this vulnerable population.

RESULT

This section will describe the results of the study, including participant characteristic data, results of measuring participant fatigue levels using the FAS (Fatigue Assessment Scale) questionnaire, and the results of bivariate analysis using the Paired Sample T-Test to prove the effect of five-finger hypnosis on reducing fatigue in patients with chronic kidney failure.

Participant Characteristics

The characteristics of the participants in this study can be seen in Table 1.

Table 1. Participant Characteristics

Characteristics	Frequency (f)	Percentage (%)
Age		
< 20 years	0	0
20 - 30 years	3	8.3
31 - 40 years	10	27.7
> 40 years	23	64
Total	36	100
Gender		
Male	18	50
Female	18	50
Total	36	100
Education		
No School	0	0
Elementary School	15	41.7
Junior High School	10	28
Senior High School	8	22
College	3	8.3
Total	36	100

Characteristics	Frequency (f)	Percentage (%)
Occupation		
Not Working	10	28
ASN	2	5.5
Private	7	19.4
Farmer	12	33.3
Self-Employed	5	13.8
Students	0	0
Total	36	100
Hemodialysis Duration		
1 time/week	0	0
2 times/week	2	100
3 times/week	0	0
>3 times/week	0	0
Total	36	100

Table 1 shows that the majority of participants involved in this study were over 40 years old (64%), female (50%) and Male (50%). The last education of the majority of participants was elementary school (41.7%), with the majority working as farmers (33.3%). The most participants' hemodialysis duration was 2 times/week (100%).

Fatigue Level Before Five Finger and After Hypnosis Intervention

The data from the measurement of respondents' fatigue levels before and after five-finger hypnosis can be seen in Tables 2 and 3.

Table 2. Fatigue Levels Before Five-Finger Hypnosis

Variable	Mean	Median	Modus	SD	Min-Max
Fatigue level	31.83	31	25, 26, 27, 29, 31, 32	4.98	25-42

Table 2 shows that the average level of participant fatigue was 31.83, with a median of 31, mode values of 25, 26, 27, 29, 31, 32, a standard deviation of 4.98, a minimum value of 25, and a maximum of 42.

Table 3. Fatigue Levels After Five-Finger Hypnosis

Variable	Mean	Median	Modus	SD	Min-Max
Fatigue level	25.27	24.5	20	4.53	18-34

Table 3 shows that the average level of respondent fatigue is 25.27, median 24.5, mode value 20, standard deviation 4.53, minimum value 18, and maximum 34.

Normality Test and Paired Sample T-Test Analysis

The normality test data and the results of the inferential analysis with the Paired Sample T-Test using IBM SPSS 25 software can be seen in Tables 4 and 5.

Table 4. Normality Test

Variable	Shapiro-Wilk		
	Statistic	df	p-value
Level of fatigue before five-finger hypnosis	0.945	36	0.074
Level of fatigue after five-finger Hypnosis	0.952	36	0.124

Table 4 shows that the p-value of the normality test for the level of fatigue before five-finger hypnosis was 0.074 or greater than 0.05, which means that the data is usually distributed. The p-value of the normality test for the level of fatigue after five-finger hypnosis was 0.124 or greater than 0.05, which means that the data is also normally distributed.

Table 5. Paired Sample T-Test Analysis

Variable	Mean (SD)	Mean Difference (SD)	CI-95%	p-value
Level of fatigue before five-finger hypnosis (n=36)	31.83 (4.98)	6.55 (1.52)	6.04 - 7.06	0.000
Level of fatigue after five-finger hypnosis (n=36)	25.27 (4.53)			

Table 5 shows that the mean difference (sd) is 6.55 (1.52), which means that the level of fatigue in chronic kidney failure patients undergoing HD in the hemodialysis room of the Bhayangkara Lumajang Hospital has decreased significantly after receiving five-finger hypnosis therapy intervention. This decrease indicates that the intervention effectively reduces the fatigue often experienced by chronic kidney failure patients undergoing hemodialysis. Table 5 also shows that the significance value is 0.000; because the significance value of 0.000 is smaller than 0.05, it means that there is a significant effect between five-finger hypnosis therapy on the level of fatigue. The results of data analysis using the Paired Sample T-Test showed that the difference between the pretest and post-test was statistically significant, which confirms that the observed changes were not coincidental. Moreover, this means that the hypothesis set by the researcher can be accepted so that it can be interpreted that there is an effect of five-finger hypnosis on the level of fatigue reduction in patients with chronic kidney failure in the hemodialysis room of the Bhayangkara Lumajang Hospital. The more often the intervention is given, the more significant the reduction in fatigue that can be expected, which shows the cumulative benefits of this therapy for patients undergoing hemodialysis routinely.

DISCUSSION

Table 2 shows that the mean value of the participant's fatigue level before the five-jar hypnosis intervention was 31.83, with a standard deviation 4.98. Chronic kidney failure is when kidney function gradually decreases, causing disturbances in metabolism and the body's electrolyte fluid balance (Deabes & Essa, 2024). Kidney damage that occurs inhibits the kidneys' ability to filter waste and harmful substances from the blood. Over time, this damage worsens and causes a gradual decline in kidney function (Gwozdinski et al., 2020). In chronic kidney failure, hemodialysis therapy becomes a lifelong necessity to increase the patient's life expectancy (Maesaroh et al., 2020). However, hemodialysis can cause side effects in the form of extreme fatigue (Brys et al., 2021). Some factors that cause fatigue in patients undergoing hemodialysis include low hemoglobin levels, which can cause symptoms such as difficulty breathing, physical weakness, and fatigue. In addition, hemodialysis duration exceeding 5 hours can cause physical stress, and changes in blood pressure that occur during the procedure can cause uncomfortable symptoms such as muscle cramps, nausea, vomiting, anxiety, dizziness, fatigue, and restlessness. Another factor is InterDialysis Weight Gain (IDWG), an increase in fluid volume reflected in weight gain and used to measure fluid intake during the interdialytic period (Putri, 2024).

The author's observation results revealed that the high prevalence of fatigue in chronic kidney failure patients in the hemodialysis room of Bhayangkara Lumajang Hospital was caused by a combination of these factors, such as low hemoglobin levels. When hemoglobin levels are low, the blood's capacity to transport oxygen decreases. As a result, body tissues and organs do not get enough oxygen supply to function optimally. So, this forces the body to work harder to meet energy needs, which then causes fatigue, weakness, and decreased physical endurance. Without adequate oxygen, muscles, and organs cannot produce enough energy through aerobic metabolism, so the body tires more quickly even though only doing light activities. In more severe cases, lack of oxygen can cause shortness of breath, dizziness, and decreased concentration, worsening fatigue. The long duration of hemodialysis is also a factor that causes respondents to experience fatigue. During a hemodialysis session, excess fluid is removed from the body. This process can cause a decrease in blood pressure and electrolyte imbalance, which can cause weakness and fatigue after therapy (Loutradis et al., 2021).

Patients with chronic kidney failure tend to experience anemia because damaged kidneys cannot produce enough erythropoietin, a hormone that stimulates the production of red blood cells (Hazin, 2020). Long-duration of dialysis can worsen anemia and increase fatigue. In addition, the dialysis process requires significant mental and physical energy (Chan et al., 2024). Patients must undergo procedures that take up to several hours per session, which can cause fatigue due to discomfort, emotional stress, and long periods of standing still. Most respondents over 40 (as listed in Table 1, where 64% of respondents are over 40) also increase the fatigue risk. As age increases, it tends to decrease, including the process of cell and tissue recovery, resulting in the body's energy being drained more quickly after therapy. In addition, patients over 40 years of age often have comorbidities, such as hypertension, diabetes mellitus, and heart disease, which can worsen their physical condition and increase fatigue. These comorbidities add to the body's burden of adapting to metabolic changes due to CKD and hemodialysis, so energy availability is increasingly reduced.

Fatigue is an unpleasant subjective feeling involving a sensation of tiredness, weakness, and decreased energy (Tornero-Aguilera et al., 2022). This condition is a significant complaint in dialysis patients, with a prevalence reaching 60-97%. If not treated immediately, fatigue can cause physiological and psychological changes in patients (Ahmad et al., 2023; Maisel et al., 2021). According to the author, the importance of managing fatigue in hemodialysis patients is not only from the physical side but must also include psychological aspects. Holistic interventions, such as five-finger hypnosis, can be an effective alternative to overcome fatigue. Given the high prevalence of fatigue and its significant impact, interventions to reduce fatigue should be an integral part of the care of chronic kidney failure patients undergoing hemodialysis, especially for those over 40 years of age. This approach can help reduce fatigue while improving the patient's quality of life.

The results of the study presented in Table 3 show that after receiving five-finger hypnosis therapy, the average score of respondents' fatigue levels was 25.27, with a standard deviation of 4.53. fatigue is one of the most common symptoms reported by patients undergoing hemodialysis. This fatigue includes physical and emotional aspects, including feelings of weakness, decreased energy, and inability to perform daily activities (Kurniyawan et al., 2024). Several studies have shown that relaxation therapy can effectively reduce fatigue by reducing muscle tension, improving breathing control, and reducing anxiety levels (Kurnianto et al., 2022). In particular, the Five-Finger Hypnosis Technique can create a relaxation effect by directing the patient's focus to achieve calm and reduce stress (Leo et al., 2024).

This method creates conditions in which the body and mind can better respond to chronic kidney failure patients' physical and emotional stress. The results of this study confirm the importance of five-finger hypnosis therapy as part of a fatigue management strategy in hemodialysis patients. The fact that there was a decrease in fatigue levels suggests that this technique can significantly improve patient's quality of life by supporting non-pharmacological methods in patient care. The author also sees that five-finger hypnosis therapy offers the additional benefit of being able to be performed independently by patients after training, making it an easily accessible and cost-effective solution.

The results of the study listed in Table 5 show that the data analysis using the Paired Sample T-Test test showed a significance value of 0.000, which is less than 0.05, meaning that there is a significant effect between five-finger hypnosis therapy and fatigue levels. Fatigue in chronic kidney failure patients undergoing hemodialysis is one of the most common nursing problems and requires special treatment. This fatigue is often caused by various factors, including the accumulation of toxins in the body, electrolyte imbalance, and emotional burden due to chronic diseases that require lifelong treatment (Sahu & Modi, 2024).

Relaxation methods, such as five-finger hypnosis therapy, are effective in reducing muscle tension, boredom, and anxiety, which can worsen fatigue in patients (Azizah et al., 2023). This technique creates a state of relaxation through self-hypnosis, which helps reduce stress, improve respiratory control, and normalize physiological responses such as blood pressure and heart rate (Seitz et al., 2024). Five-finger hypnosis therapy is carried out twice a day, with a duration of between 10 and 15 minutes (Pratiwi et al., 2022). The implementation is scheduled in the morning and evening (Annisa & Cing, 2022). The results of this study indicate that five-finger hypnosis therapy has excellent potential as a non-pharmacological intervention that can be applied in the care of patients

with chronic kidney failure. Its effectiveness in reducing fatigue, a common symptom that dramatically affects patients' quality of life, emphasizes the importance of integrating this method into nursing practice in hemodialysis units. In addition, because this technique is simple and can be done by patients themselves after adequate training, this therapy offers an easily accessible solution for fatigue management. Five-finger hypnosis therapy not only helps patients cope with their physical conditions but also provides important psychological support, especially for those who experience stress and anxiety due to the chronic conditions they face.

CONCLUSION

The intervention of five-finger hypnosis therapy has been proven to significantly reduce fatigue levels in chronic kidney failure patients undergoing hemodialysis at Bhayangkara Lumajang Hospital. The significant effect was demonstrated through a marked reduction in fatigue scores after the therapy, with statistical analysis confirming the intervention's effectiveness at a high confidence level. These findings highlight the potential of this non-pharmacological approach as an effective strategy to alleviate fatigue and improve the quality of life for hemodialysis patients.

Further research is needed to explore the broader applicability and long-term impact of five-finger hypnosis therapy. Future studies should consider larger sample sizes, extended durations, and diverse settings to validate these findings and assess the sustainability of the therapy's benefits over time. Such investigations will provide more comprehensive insights into the therapy's effectiveness and potential integration into standard care practices for chronic kidney failure patients. The use of five-finger hypnosis therapy offers a promising avenue for addressing fatigue in hemodialysis patients. By incorporating innovative, patient-centered interventions like this, healthcare providers can enhance supportive care strategies and improve overall outcomes for individuals with chronic kidney disease.

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