

The Effect of Mindfulness Meditation on Pain, Sleep Quality, and Self-Esteem in Patients Receiving Hemodialysis in Jordan

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Abstract : Hemodialysis negatively affects physical and psychological health. Pain, poor sleep quality, and low self-esteem are highly prevalent among patients with end-stage renal disease (ESRD) who receive hemodialysis, significantly increasing mortality and morbidity of those patients. Mind-body interventions (MBI), such as mindfulness meditation, have been recently gaining popularity that improved pain, sleep quality, and self-esteem in different populations. However, to our best knowledge, its effects on these health problems in patients receiving hemodialysis have not been studied in Jordan. Thus, the purpose of the study was to examine the effect of mindfulness meditation on pain, sleep quality, and self-esteem in patients with ESR receiving hemodialysis in Jordan. An experimental repeated-measures, randomized, parallel control design was conducted on (n =60) end-stage renal disease patients undergoing hemodialysis between March and June 2023 in the dialysis center at a public hospital in Jordan. Participants were randomly assigned to the experimental (n =30) and control groups (n =30) using a simple random assignment method. The experimental group practiced mindfulness meditation for 30 minutes three times per week for five weeks during their hemodialysis treatments. The control group's patients continued to receive hemodialysis treatment as usual for five weeks during hemodialysis sessions. The study variables for both groups were measured at baseline (Time 0), two weeks after intervention (Time 1), and at the end of intervention (Time 3). The numerical rating scale (NRS), the Rosenberg Self-Esteem Scale (RSES-M), and the Pittsburgh Sleep Quality Index (PSQI) were used to measure pain, self-esteem, and sleep quality, respectively. SPSS version 25 was used to analyze the study data. The sample was described by frequency, mean, and standard deviation as an appropriate. The repeated measures analysis of variance (ANOVA) tests were run to test the study hypotheses. The results of repeated measures ANOVA (within-subject) revealed that mindfulness meditation significantly decrease pain by the end of the intervention in the experimental group. Additionally, mindfulness meditation improved sleep quality and self-esteem in the experimental group, and these improvements occurred significantly after two weeks of the intervention and at the end of the intervention. The results of repeated measures ANOVA (within and between-subject) revealed that the experimental group, compared to the control group, experienced lower levels of pain and higher levels of sleep quality and self-esteem over time. In conclusion, the results provided substantial evidence supporting the positive impacts of mindfulness meditation on pain, sleep quality, and self-esteem in patients with ESRD undergoing hemodialysis. These results highlight the potential of mindfulness meditation as an adjunctive therapy in the comprehensive care of this patient population. Incorporating mindfulness meditation into the treatment plan for patients receiving hemodialysis may contribute to improved well-being and overall quality of life.

Keywords : hemodialysis, pain, sleep quality, self-esteem, mindfulness

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