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Efficiency of Breathing Practices on Sleep Quality of Cancer Patients: A Systematic Review

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ABSTRACT

Introduction: Mindfulness, a non-pharmacological relaxation technique, focuses on inhaling and exhaling. By enhancing parasympathetic activity and reducing sympathetic dominance, mindfulness aims to promote relaxation. The purpose of investigating the effectiveness of a technique on the sleep quality of cancer patients is to conduct clinical studies. The present study aimed to evaluate the effectiveness of breathing practices on sleep quality of cancer patients.

Search strategy: This systematic review adhered to PRISMA guidelines. A comprehensive search was conducted in PubMed, Web of Science, and Magiran for articles published between 2010 and 2024. Inclusion criteria encompassed studies focusing on the effects of breathing exercises on sleep quality. Exclusion criteria involved deviations from these parameters, the use of unsuitable study types, or publications outside the specified time frame. The initial search yielded 40 articles, of which 5 met the inclusion criteria. These selected studies were rigorously analyzed to evaluate the efficacy of breathing exercises on sleep quality.

Results: Review articles demonstrated the impact of cancer on the sleep quality of patients. Four studies reported significant improvements in sleep quality, such as more efficiency, duration, and reduced latency. However, in one study, this improvement could have been more significant. In one survey, sleep latency worsened despite improving efficiency and duration, but the change was not significant. These practices are feasible and safe for these patients and can improve respiratory function and mindfulness and reduce anxiety, fatigue, and inflammation. These findings support breathing practices as an effective non-pharmacological intervention for improving sleep quality in cancer patients.

Conclusion and Discussion: Despite inherent statistical variability across studies, breathing techniques emerge as a promising adjunctive strategy for managing sleep quality in cancer patients undergoing chemotherapy and radiotherapy. These techniques can potentially enhance patients' self-efficacy and overall well-being by ameliorating sleep disturbances. To optimize their sustained benefits, future investigations should investigate longer-term interventions, assessing the durability of outcomes associated with pranayama and deep breathing exercises over extended practice periods.

Keywords: Breathing exercises, Neoplasms, Sleep quality

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