

Behavioral Change Approaches to Sleep Disturbance in Cancer Patients: The History and the Road Ahead

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Dear Editor,

We are writing to bring the readers' attention to the evolving perspectives in the treatment of sleep disturbance among cancer patients through behavioral change induction, rather than merely relying on medication. Sleep disturbance negatively affects these patients' quality of life (1) and therapists increasingly need to understand the role of behavioral interventions in managing sleep problems, which are among distressing symptoms affecting this population.

Sleep disturbance in cancer patients has been underappreciated in clinical practice, where a lot of attention is given to medication-based approaches. Pharmacological interventions have become the routine regimen in most settings for cancer patients, including benzodiazepines and other sedative medications. While these pharmacotherapies provide temporary relief, they often fail to address the underlying conditions and lead to side effects such as dependency and daytime drowsiness (2). Consequently, researchers laid the groundwork for exploring non-medicinal and behavioral strategies, which have become prominent over the last two decades, to be described below in brief.

The first avenue in behavioral change approaches has been the sleep hygiene education, including sleep environment optimization and establishing regular sleep routines. Some findings have revealed modest improvements in sleep quality (3), but other results varied with adherence levels of the participants. This aligns with our realistic understanding that lifestyle modifications can only complement more structured behavioral therapies in promoting better sleep outcomes

The second significant behavioral intervention developed for this purpose was the cognitive behavioral therapy for insomnia (CBT-I). It focuses on altering the thoughts and behaviors that contribute to insomnia, thereby facilitating more sustainable sleep patterns (4). It not only improves sleep quality but also alleviates associated anxiety and improves overall well-being (5). A randomized controlled trial (RCT) demonstrated that CBT-I led to greater improvements in sleep quality than the routine care, with cancer survivors reporting decreased insomnia severity scores (6). Another comprehensive study unveiled significant improvement in sleep quality and reduced insomnia severity among patients receiving tailored CBT-I interventions compared to those undergoing standard care (7). This further underscores the importance of customizing behavioral approaches to meet the unique needs of individual patients.

In addition to CBT-I, mindfulness and relaxation techniques have emerged as a powerful tool for addressing sleep disturbance, by emphasizing present-moment awareness and acceptance in order to help mitigate the psychological distress associated with sleep disturbance in cancer patients. A meta-analysis demonstrated significant improvements in both sleep quality and overall psychological distress among cancer patients who participated in mindfulness-based interventions (8). Mindfulness-based interventions also appear to be promising in treating cancer patients' sleep problems and reducing their anxiety symptoms (9). Another relevant approach stressed the exercise interventions by adding degrees of physical activity into cancer patients' life. Previous research highlighted positive correlations between exercise and improved



sleep outcomes, with aerobic activities showing particularly beneficial effects (10).

Finally, integrative approaches (e.g., yoga therapy) are recommended for combined modalities in fostering better sleep. A systematic review concluded that participants engaging in regular yoga practice reported significant enhancements in sleep quality and related distress levels (11). This multifaceted approach not only enhances sleep but also contributes to overall physical and psychological health, addressing patients' holistic well-being.

While behavioral change approaches have evolved significantly in recent years, treatment of sleep disturbance in cancer patients still remains a complicated problem. Therefore, it is essential to acknowledge the ongoing need for more complementary approaches that prioritize behavioral interventions. The shift from a solely pharmacological focus to a more integrated approach underscores a growing recognition of the complexities surrounding sleep disturbance and the necessity for tailored and personalized solutions that address an individual's unique circumstances (12). In addition, further research and clinical application of these approaches will not only enhance the quality of life for cancer patients but also pave the way for a more nuanced understanding of managing sleep-related complications in this vulnerable population. We hope this letter emphasizes the necessity of developing new routes in developing and implementing behavioral change approaches to improve the management of sleep disturbance among cancer patients.

Conflict of Interest

None.

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