
Mindful Night-to-Day

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Why We Did This Study

Patients with blood cancers (like leukemia and lymphoma) often have trouble sleeping, feel very tired, experience pain, and feel stressed during and after treatment. These symptoms are common and can make each other worse - for example, poor sleep can increase fatigue and pain during the day, and daytime symptoms can make it harder to sleep at night. Ongoing sleep problems can also affect how well cancer treatment works. While there are programs that use mindfulness (paying attention to the present moment without judgment) to help with sleep, none have been designed specifically for

blood cancer patients who deal with these multiple symptoms at once. Mindfulness-Based Therapy for Insomnia (MBTI) is a promising program that combines mindfulness principles and skills with evidence-based behavioral sleep strategies. MBTI is well-suited to the challenging symptom and treatment burden experienced by blood cancer patients but to date, has only been tested in healthy people without cancer. Adaptations to MBTI content, format, and delivery are likely necessary to better suit the unique experience of blood cancer patients. This study aimed to adapt MBTI to address sleep problems as well with fatigue, pain, and stress symptoms that further interfere with sleep in blood cancer patients (Mindful Night-to-Day). Specifically, the researchers wanted to test whether this new program was practical to deliver and whether patients found it helpful.

Who Participated in This Study?

The study took place at Duke University Health System. First, 10 patients with blood cancer and 6 oncology clinicians took part in focus groups to help shape the program. Then, 5 patients tested an early version. Finally, 32 patients enrolled in the main pilot trial. To be eligible, patients needed a blood cancer diagnosis (such as acute myeloid leukemia, acute lymphoblastic leukemia, non-Hodgkin lymphoma, multiple myeloma, or myelodysplastic syndrome) and to be within 8 weeks of leaving the hospital after treatment. They also needed to report sleep problems and at least one other bothersome symptom (fatigue, pain, or stress). Among the 37 total participants in user testing and the pilot, about 57% were female, 78% were White, and the average age was about 49 years.



What Were the Results?

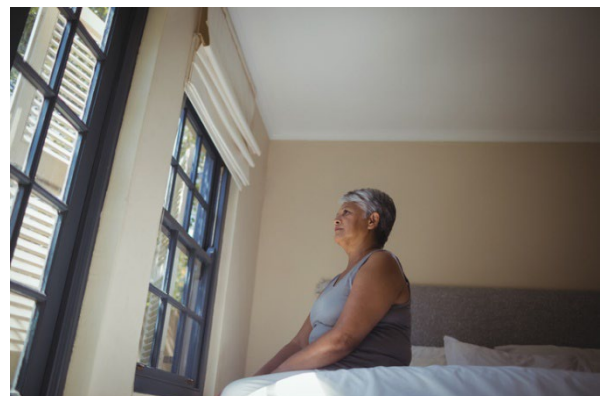


Mindful Night-to-Day involved six, 45-60 minute sessions that were delivered by a clinical psychologist remotely over Zoom across about eight weeks. Session content integrated training in mindfulness principles (acceptance, letting go) and meditation (body scan, walking meditation) with behavioral sleep and symptom

management skills to address the multi-symptom burden experienced by blood cancer patients. The program met all goals for being practical and well-received. Researchers enrolled 32 patients in 12 months, ahead of their 15-month target. Very few participants dropped out (only 8.1%), and about 84% completed all 6 sessions. Participants rated the program highly, with an average satisfaction score of 3.52 out of 4.00. Sleep problems improved greatly - average insomnia symptom severity scores dropped by more than half, from 13.45 at the start to 6.26 after the program. Most other symptoms also got better, including fatigue, pain, anxiety, depression, and pre-sleep stress. Participants also showed improvements in mindfulness skills and confidence in managing their symptoms. These benefits were still present one month after the program ended, and some outcomes (like pain and distress) continued to improve even further over that time.

What Do These Results Mean?

This study shows that the Mindful Night-to-Day program is a promising way to help blood cancer patients who are struggling with poor sleep, tiredness, pain, and stress after treatment. Patients were willing to join the study and stick with the program, which suggests it fits well into their lives during a



difficult time. The improvements in sleep and other symptoms are encouraging and suggest the program may help patients feel better during recovery. However, this was a small study with no comparison group, so the researchers cannot be sure the improvements were caused by the program alone. A larger study comparing this program to usual care is needed to confirm its benefits. The researchers also noted that most participants were White, so future studies should include more diverse groups.
