Online Program Significantly Improves Insomnia in Younger Cancer Survivors

Participants also reported improvements in quality of life

June 22, 2020 By Dana-Farber Cancer Institute

Online Program Significantly Improves Insomnia in Adolescent and Young Adult Cancer Survivors, Study Finds

Adolescents and young adults (AYA) who have survived cancer often continue to suffer from insomnia long after treatment ends, interfering with a range of daily activities. In a study published today by Pediatric Blood and Cancer, researchers at Dana-Farber Cancer Institute show that an online program developed specifically for AYA cancer survivors can significantly alleviate insomnia and improve overall quality of life.

The program, which consists of six, 20-30 minute sessions, shows how sleep habits that may have helped patients cope with their intensive cancer treatments can become obstacles to healthy sleep as survivors move beyond treatment. Its automated format makes it particularly well-suited to the moment, as telehealth and online programs that are already adopted by many hospitals and clinics, are becoming even more widely used as a result of the COVID-19 crisis.

“Cognitive-behavioral therapy for insomnia (CBT-I), which helps patients understand the behavioral and thought patterns that lead to long-term troubles with falling or staying asleep, has been shown to be very effective in adult cancer survivors. However, it has not been widely tested in the AYA survivor group. We wanted to explore whether a CBT-I program, specifically tailored to AYA survivors and available online, could be helpful in this population,” said Eric Zhou, PhD, who conducted the study with Dana-Farber colleague Christopher Recklitis, PhD, MPH.

“People who survived cancer as adolescents or young adults face a variety of sleep-related issues unique to their age group,” Zhou commented. “These include the constraints placed on young people’s sleep schedules by their parents or disruptive roommates. Teens and young adults also undergo normal developmental changes in circadian timing, naturally going to bed later and sleeping later than younger children and older adults. Insomnia treatments for AYA cancer survivors need to take account of these factors, as well as addressing their long-term cancer-related issues such as pain or fatigue.”

The insomnia intervention tested in the study is known as SHUTi (Sleep Healthy Using the Internet)

was developed by researchers at the University of Virginia and adapted for AYA cancer survivors by Zhou and Recklitis. The interactive program uses text, images, and video to explain how insomnia develops and how it can be overcome. In adapting the program, Dana-Farber researchers replaced vignettes – brief stories of individuals struggling with insomnia – from the original version with ones more relatable to young people.

The program discusses how sleep behaviors that helped patients weather cancer treatment can become maladaptive when they return to normal life. “During treatment, people may stay in bed because they’re not feeling well or haven’t gotten enough sleep. They may take naps and their sleep at night can be fragmented,” said Zhou. As people move into recovery, these habits can make it difficult to resume healthy sleep patterns.

“SHUTi trains people to recalibrate their sleep so their sleep habits are no longer addressing the problems they experienced during treatment and are, instead, focused on improving long-term sleep,” Zhou remarked.

In the study, 22 AYA cancer survivors – mean age 20.4 years – with insomnia enrolled to use the specially adapted SHUTi. As part of the program, participants kept a sleep diary, tracking when they slept, and entered the information into SHUTi, which adjusted its sleep recommendations accordingly.

At eight and 16 weeks after starting to use SHUTi, participants reported a significant lessening in insomnia severity, daytime sleepiness, and fatigue, and an overall improvement in quality of life.

“Our results demonstrate that an internet-delivered CBT-I program targeting AYA cancer survivors reduced their insomnia and improved their quality of life,” Recklitis remarked. “Notably, our participants’ insomnia severity continued to get better after the intervention had ended, suggesting that the continued to make sleep-related decisions that helped their sleep even after they had finished using the program.”

Support for the study was provided by a Psychosocial Launch Grant from Alex’s Lemonade Stand Foundation.

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