

Internet-Based CBT Lowers Insomnia Severity

BY MARY ANN MOON

A cognitive-behavioral therapy intervention delivered via the Internet significantly reduced insomnia severity and contributed to overall sleep improvement in a study of 44 adults, according to a report in the Archives of General Psychiatry.

The 9-week intervention reduced the number of nighttime awakenings and improved sleep efficiency to a similar degree as has been reported for face-to-face CBT, self-help bibliotherapy, group therapy, telephone therapy, and pharmacotherapy, said Lee M. Ritterband, Ph.D., of the University of Virginia Health System, Charlottesville, and his associates.

"An effective and inexpensive Internet intervention would expand treatment options for large numbers of adults with insomnia, especially those whose geographical location prohibits access to relevant care, and could be a substantive first-line treatment choice," they noted. Although traditional CBT is one of the most effective treatments for insomnia, its availability is "severely limited," in part because of a lack of trained clinicians, the uneven geographical distribution of trained clinicians, and the cost of treatment.

Dr. Ritterband and his colleagues assessed the feasibility and efficacy of a fully automated Internet-based intervention called SHUTi (Sleep Healthy Using the Internet).

SHUTi provides instruction on going to bed only when sleepy, getting out of bed when unable to sleep, and returning only when sleep is imminent. The program advises patients to avoid sleep-incompatible activities in the bedroom such as watching television, to forgo daytime napping, and to arise at the same hour every day. Patients also are instructed to improve their

sleep hygiene by avoiding nicotine, caffeine, and alcohol before bedtime. SHUTi also addresses "unhelpful" beliefs and thoughts, such as the notion that people absolutely need 8 hours of sleep every night or excessive concern about the consequences of insomnia.

Participants fill out the Insomnia Severity Index (ISI) online and complete weekly sleep diaries. That information is then used to individually tailor recommendations for the coming week, all of which is computed automatically using algorithms developed specifically for SHUTi.

The intervention uses graphics and animation as well as text, and it includes quizzes, brief games, and vignettes to deliver information, Dr. Ritterband and his colleagues said (Arch. Gen. Psychiatry 2009;66:692-8).

They compared insomnia outcomes between 22 insomnia patients randomly assigned to the SHUTi intervention and 22 control patients who were wait-listed to participate in the program.

The mean age of participants was 45 years; they had had sleep problems for an average of more than 10 years, and at the time of enrollment they reported disruptive sleep more than 5 nights per week.

The intervention group showed marked improvement in insomnia severity at the conclusion of the program as well as 6 months later, while the control group showed little change. Sixteen of the intervention subjects (73%) were judged to be in remission by ISI score, compared with none of the control subjects.

"It is important to highlight that the treatment effect sizes found using this Internet intervention, which was delivered with no human support and at a relatively low



The Sleep Healthy Using the Internet (SHUTi) intervention advises patients to arise at the same hour every day.

cost, are comparable to those found in face-to-face studies," the investigators said.

They also pointed out that this intervention might expand treatment options for adults whose geographical location prohibits access to care.

However, Dr. Ritterband and his colleagues added that their study sample was "small, relatively homogeneous, well educated, and restricted to individuals with primary insomnia and no comorbidities. Future studies should enroll larger and more heterogeneous samples to improve the generalizability of the findings."

No relevant conflicts of interest were reported. The study was supported by a grant from the National Institute of Mental Health, National Institutes of Health. ■

Sleep Disturbances May Provide Entry Into PTSD Care

BY SUSAN LONDON

SEATTLE — Returning military veterans who have posttraumatic stress disorder often also have sleep disturbances that may provide an alternative, stigma-free entry into medical care, Anne Germain, Ph.D., said at the annual meeting of the Associated Professional Sleep Societies.

About 1.6 million people have been deployed to Afghanistan and Iraq as part of the current combat operations in those countries, noted Dr. Germain, an assistant professor of psychiatry at the University of Pittsburgh.

Roughly one-third have been deployed multiple times.

"We know that the risk of PTSD increases with each deployment," she said. "So whatever estimates we have right now for PTSD, we are likely to see an increase with the number of deployments and duration of tours."

Deployment has been associated with an increased prevalence of PTSD, Dr. Germain noted.

For example, 5% of Army personnel meet criteria for PTSD before deploying to Iraq, compared with almost 13% after their return (N. Engl. J. Med. 2004;351:13-22).

Three other psychiatric disorders— anxiety, depression, and alcohol misuse—also become more prevalent after deployment.

"All of these disorders are associated with stigma," she observed. "Despite the military's best effort to destigmatize mental health difficulties post deployment, a lot of people will refuse or be very hesitant to seek care for these conditions."

However, all of the disorders are also associated with sleep disturbances, including insomnia, irregular sleep-wake



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DR. GERMAIN

schedules, and hypersomnia.

"Sleep disturbances may actually provide an entry into care that is not stigmatizing, that is more socially acceptable, that gets people to seek help first," she said.

"And once they are in treatment, maybe we can address these other psychiatric difficulties."

When it comes to the pathogenesis of PTSD and sleep disturbances in returning military personnel, research has implicated both physical and psychological exposures during deployment, according to Dr. Germain.

Her team is specifically investigating the role of blast exposure in a new study that has thus far enrolled 25 military veterans returning from Iraq or Afghanistan who reported sleep difficulties.

Preliminary analyses showed the returnees were an average age of 28 years, and 92% were men. Forty percent had been exposed to a blast during their deployment.

The prevalence of PTSD was higher in the group exposed to blasts than in the nonexposed group (90% vs. 67%).

The groups had nearly equal, moderate levels of insomnia as measured by mean scores on the Insomnia Severity Index, or ISI (16.5 vs. 16.0), and the same poor sleep quality as measured by mean scores on the Pittsburgh Sleep Quality Index, or PSQI (10.7 vs. 10.7).

"These veterans are well within the realm for clinically significant sleep disturbance," she observed. "Those are levels of sleep disturbances that we treat."

However, the blast-exposed group had a higher level of disruptive nocturnal behaviors, such as nightmares of traumatic events or dream enactments involving kicking or punching, as measured by mean scores on the PSQI Addendum (PSQI-A), which assesses sleep disturbances associated with PTSD (6.6 vs. 3.9).

"What this means is unclear at this time," Dr. Germain commented. "But

it's definitely something that we want to follow up, because the treatments for these types of sleep disturbances are very different from those that we typically use for insomnia, for example."

Blast-exposed and -nonexposed returnees were similar in terms of sleep diary and polysomnography measures. However, she noted, the polysomnography data might have been confounded by the high prevalence of PTSD.

"When veterans with PTSD sleep in the sleep lab, they sleep much better. They feel safe; there is somebody watching them," she explained.

"So usually they catch up on sleep a little bit, and their sleep efficiency is better."

Dr. Germain cautioned that definitive study results will require a larger sample size, as well as follow-up to assess the course of the sleep disturbances and PTSD, and the impact of treatment in the blast-exposed and -nonexposed groups.

"I'm especially interested in looking at how sleep may play a role in the development of some of those mental health difficulties or adjustment difficulties—not just PTSD, but other difficulties, too, such as depression—and in looking at the role of sleep in recovery as well," she said.

Dr. Germain reported that she had no conflicts of interest in association with her presentation. ■