C0046

Direct-to-patient health promotion to reduce sedative-hypnotic use (YAWNS NB study)

Summary

- Sedative-hypnotics, commonly known as "sleeping pills", are often prescribed to seniors for insomnia despite the risk of serious side effects (e.g., memory problems, mobility issues that could lead to falls).
- New Brunswick seniors use sleeping pills 2.5 times more regularly than the Canadian average of 8%.
- Cognitive-behavioural therapy for insomnia (CBTi) is recommended over medications. It improves sleep while reducing sleeping pill use. However, few seniors in New Brunswick know about CBTi.
- The *Your Answers When Needing Sleep in New Brunswick* (YAWNS NB) program aimed to reduce long-term sleeping pill use, promote CBTi, and improve sleep.
- The project compared the effectiveness of two mailed CBTi information packages with treatment-as-usual (TAU):
  1. EMPOWER: Shown to reduce sedative use in a previous study in Montreal, the EMPOWER package included 2 booklets: *You may be at risk* (sedative medications); and *How to get a good night's sleep without medication*.
  2. Sleepwell: The Sleepwell package included a cover letter and 2 booklets: *How to stop sleeping pills*; and *How to get your sleep back* (CBTi techniques and resources).
  3. TAU: No information package was sent.
- 565 adults (362 women, 203 men) aged 65+ (M = 72.1 ± 5.7 years) with long-term use of sleeping pills (M = 11.4 ± 9.1 years) participated in this study.
- Participants' first languages were English (75%), French (22.5%) or another language (2.5%).

HSPP Focus Area	Increasing independence, quality of life, and promoting healthy lifestyles
Project Start & End Date	April 2020 – March 2024
Organization/Agency	Dalhousie University
Location	Province of New Brunswick
Principal Investigator(s)	Dr. David Gardner, Dr. Andrea Murphy

Indicator	Impact / Outcome / Result	Quote

Prevention	**Stopping sleeping pill use after 6 months**
	• More Sleepwell participants (26.2%) stopped taking sleeping pills than the TAU group (7.5%, $p < .001$).
	• More EMPOWER participants (20.3%) stopped taking sleeping pills than the TAU group (7.5%, $p < .001$).
	• The difference between Sleepwell and EMPOWER (26.2% vs. 20.3%) was not significant ($p = .18$).
	• Collectively, the packages were effective across genders, ages, and first-spoken languages.
	• 33% of those who stopped taking sleeping pills experienced withdrawal symptoms, most commonly short-term insomnia (29.4%).
	  ○ Less than 10% had mental or physical health effects.
	  ○ 6.4% rated their withdrawal as "severe".
	  ○ 9.6% had symptoms for longer than 4 weeks.
	Reducing sleeping pill dose (by at least 25%) at 6 months
	• More Sleepwell participants (20.4%, $p < .001$) had a dose reduction of at least 25% compared to TAU (12.8%), while EMPOWER participants did not (14.4%, $p = .651$).
	• The difference between Sleepwell and EMPOWER was not significant (20.4% vs. 14.4%, $p = .13$).
		After 35 years of taking sleeping pills, a 77-year-old YAWNS study participant used the Sleepwell booklets to gradually reduce his dose over many months until he fully stopped using them: *"I want to convince people that by stopping taking this medication, it's a gift that you're giving. You're going to feel better. You're not going to feel that automatically, [but] you are going to feel that one [day]… It did me good. I am sure that it could do good for many."*

Indicator	Impact / Outcome / Result
Prevention	**Combined stopping and reducing sleeping pill use at 6 months** Sleepwell (46.6%) was superior to both EMPOWER (34.8%, $p = .019$) and the TAU group (20.3%, $p < .001$).
Sleep quality	**Falling asleep and sleep efficiency at 6 months** • Sleepwell participants fell asleep 26.1 minutes faster than those using EMPOWER ($p < .001$) and 27.7 minutes faster than the TAU group ($p < .001$). • Sleepwell participants had greater sleep efficiency compared to EMPOWER ($p = .001$, 5.8% difference) and the TAU group ($p = .002$, 5.7% difference). **Insomnia severity and sleepiness at 6 months** • Sleepwell and EMPOWER both helped to reduce severity of participants' insomnia compared to the TAU group ($p < .001$). • Sleepwell participants had less daytime sleepiness than the TAU group ($p = .001$). **CBTi use over 6 months** • Sleepwell participants used more CBTi techniques and resources than EMPOWER and TAU participants ($p < .05$ for all measures).
Return on Investment (ROI)	**Cost-benefit analysis** • People who use sleeping pills are at a higher risk of falls. Falls have an estimated annual healthcare cost of $15,830 per person in Canada. • Sleepwell costs approximately $20 per person. It leads to reduced sleeping pill use improved sleep. Avoiding falls and other serious sleeping pill harms with Sleepwell will save the healthcare system money. • If 16,623 older adult long-term sleeping pill users received the Sleepwell package, it is expected that there would be 67 fewer falls. Annually, the program would cost $332,460 and save $735,159 in healthcare costs.

Methods and Comparison

- Participants randomly received Sleepwell, EMPOWER, or no package (TAU) by mail. After completing their 6 months participation, TAU participants were mailed the Sleepwell information package.
- The study compared the sleeping pill use and measures of sleep, insomnia and daytime sleepiness among the three groups over 6 months: Sleepwell (n = 191); EMPOWER (n = 187); TAU (n = 187).

Conclusions and Lessons Learned

- New Brunswick seniors who received behaviour change information packages by mail were less reliant on sleeping pills after 6 months. Stopping sleeping pills after an average of 11 years of use is feasible and unlikely to be associated with long-lasting or severe negative effects.
- Overall, Sleepwell was more effective than EMPOWER, which could be related to the greater number of CBTi resources and techniques used by Sleepwell recipients.
- Sleepwell is a low effort, effective and scalable intervention that can be used to help reduce or stop the use of sleeping pills among seniors. This can reduce the risk of serious side effects while improving daytime functioning and sleep outcomes for older adults experiencing insomnia.

Recommendations

- As first-line therapy for insomnia, CBTi should be promoted and access increased. This can be aligned with direct-to-patient interventions aimed at reducing sleeping pill use.
- The YAWNS project team recommends that the Sleepwell material be included as the center piece of a provincial sleep health promotion campaign for older adults in New Brunswick.
- Developing and promoting a sleep campaign will require support and facilitation from government, the health sector support, non-governmental groups, and health care provider organizations. Awareness of the campaign can mediated by traditional and social media.

Next Steps

- Increase the reach and development of Sleepwell (mysleepwell.ca) with Health Canada funding.
- With stakeholders, co-develop a province-wide sleep health campaign featuring Sleepwell resources.

Disclaimer

Financial contribution from

Public Health Agency of Canada | Agence de la santé publique du Canada