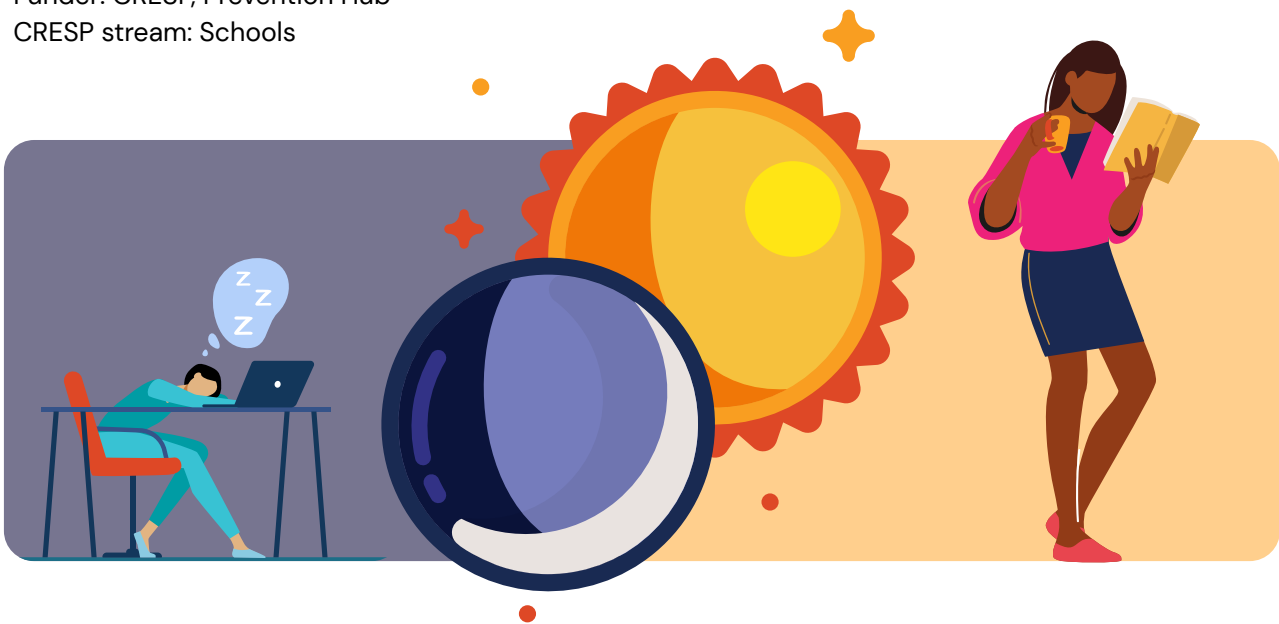


July 2023

Fresh Start: improving sleep and mental health among university students

Funder: CRESP, Prevention Hub
CRESP stream: Schools



Research aims

This CRESP-funded program of work focuses on sleep, mental health and suicidality in university students. It contributes to a broader program of Black Dog Institute research into sleep and mental health among young people, which includes the development and evaluation of a digital app called [Sleep Ninja](#). Fresh Start expands this focus on sleep health into a young university student population with a four-module, group-based, clinician-led intervention based on Cognitive Behaviour Therapy for Insomnia (CBT-I).

Overview

Most young people do not get the recommended good quality sleep they need each night^{1,2}. Poor sleep is associated with a range of negative consequences, including memory impairment and poor decision making, and is also a significant risk factor for the onset of mental health problems, particularly depression³.

In 2016, Black Dog Institute researchers developed Sleep Ninja, a smartphone app designed to help young people adopt healthy sleep behaviours. Based on CBT-I, the app is comprised of six modules that teach users how to create an appropriate sleep environment, set up regular sleep-wake schedules, and prepare their minds and bodies for sleep. This program of work led to the development of the Fresh Start program in 2021.

Lived experience input

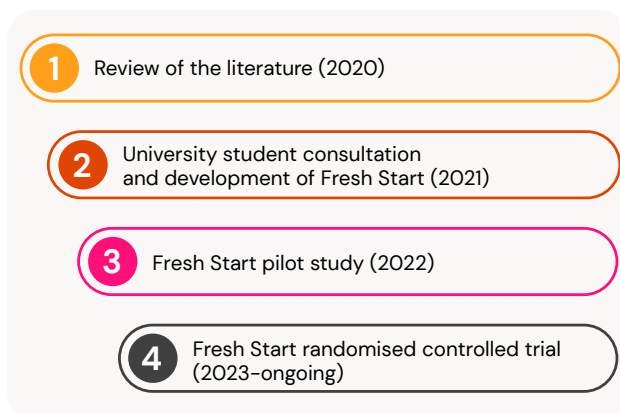
Fresh Start was informed by consultation with 30 university students with lived experience of sleep problems, described in Phase 2.

¹ Lund, H. G., Reider, B. D., Whiting, A. B., & Prichard, J. R. (2010). Sleep Patterns and Predictors of Disturbed Sleep in a Large Population of College Students. *J. Adolesc. Health*, 46, 124-132.

² Taylor, D. J., Bramoweth, A. D., Grieser, E. A., Tatum, J. I., & Roane, B. (2013). Epidemiology of Insomnia in College Students: Relationship with Mental Health, Quality of Life, and Substance Use Difficulties. *Behav. Ther.*, 44, 339-348

³ Hertenstein E., Feige B., Gmeiner T., Kienzler C., Spiegelhalter K., Johann A., Jansson-Fröjmark M., Palagini L., Rücker G., Riemann D., Baglioni C. (2019). Insomnia as a predictor of mental disorders: A systematic review and meta-analysis. *Sleep Med Rev.* 43:96-105.

Program timeline



Research activities

Phase 1: Review of the literature (2020)

The research team conducted a systematic review and meta-analysis of psychological programs to improve sleep in university students. This research revealed that CBT-I strategies are effective for young adults, but few involve sufficient tailoring for university student samples.

Phase 2: University student consultation and development of Fresh Start (2021)

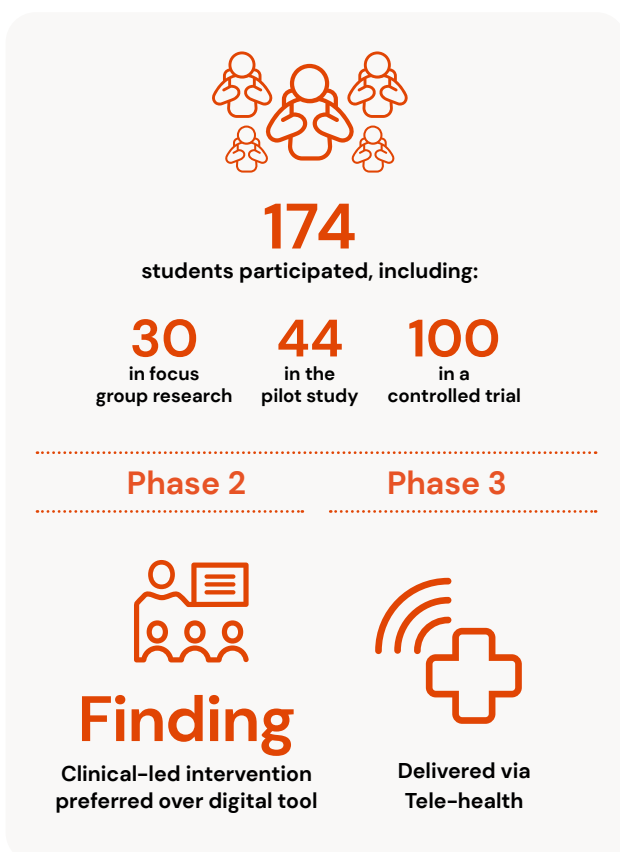
Based on the findings of the systematic review, the research team began investigating opportunities to develop a psychological insomnia intervention for university students. Thirty students attended a series of focus groups and expressed a preference for a clinician-led intervention, rather than a digital tool. They also described opportunities to tailor the existing Sleep Ninja program to better suit the student lifestyle (Tadros, Li, Upton, Newby & Werner-Seidler, in press.). These consultations led to the development of the four-module, group-based, clinician-led Fresh Start program.

Phase 3: Fresh Start pilot study (2022)

Forty-four students participated in a pilot study of Fresh Start, which was delivered via telehealth. Study results confirmed that the intervention was acceptable and feasible and that it had preliminary effects on sleep and mental health (paper in preparation).

Phase 4: Fresh Start randomised controlled trial (2023-ongoing)

The research team launched a randomised controlled trial of Fresh Start among 100 university students. The trial, which is ongoing, will evaluate the effectiveness of the Fresh Start intervention among its target audience, and assess effects on sleep, mental health and suicidality.



Impact

Intervening to improve young people’s sleep supports individuals to adopt healthy sleep behaviours that can improve their mental health and wellbeing. This body of work makes an important contribution to the research evidence that supports sleep interventions as a tool to reduce risk for mental illness, including depression, anxiety and suicidality. This program aligns with a growing evidence-base that recognises the importance of sleep in health and wellbeing.

Research team



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Scientia Professor Helen Christensen

Publications

Werner-Seidler, A., O'Dea, B., Shand, F., Johnston, L., Frayne, A., Fogarty, A. S., & Christensen, H. (2017). A smartphone application for adolescents with sleep disturbance: Development of the Sleep Ninja. *Journal of Medical Internet Research Mental Health*, 4, e28. [doi/10.2196/mental.7614](https://doi.org/10.2196/mental.7614)

Werner-Seidler, A., Johnston, L., & Christensen, H. (2018). Digitally-delivered cognitive-behavioural therapy for youth insomnia: A systematic review. *Internet Interventions*, 11, 71-78. [doi/10.1016/j.invent.2018.01.007](https://doi.org/10.1016/j.invent.2018.01.007)

Werner-Seidler, A., Wong, Q., Johnston, L., O'Dea, B., Torok, M. & Christensen, H. (2019). Pilot evaluation of the Sleep Ninja: A smartphone-application for adolescent insomnia symptoms. *BMJ Open*, 9, e026502. [doi/10.1136/bmjopen-2018-026502](https://doi.org/10.1136/bmjopen-2018-026502)

Werner-Seidler, A., Li, S.H., Spanos, S., Johnston, L., O'Dea, B., Torok, M., Ritterband, L., Newby, J., Mackinnon, A., Christensen, H. (2023). The effects of a sleep-focused smartphone application on insomnia and depressive symptoms: A randomised controlled trial and mediation analysis. *Journal of Child Psychology & Psychiatry*. <https://doi.org/10.1111/jcpp.13795>

Tadros, M., Li, S.L., Upton, E., Newby, J., & Werner-Seidler, A. (in press; 2023). A qualitative investigation into university student preferences for a psychological intervention designed to improve sleep. *Journal of Medical Internet Research: Human Factors*.

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The Centre of Research Excellence in Suicide Prevention (CRESP) is a collaborative program led by Black Dog Institute that aims to reduce the suicide rate in Australia.