

Development of a cognitive behavioural therapy-based mobile app for gambling disorder—Change 4 Better (C4B)

What this research is about

Among people who struggle with problem gambling, over 90% choose to reduce or quit gambling on their own. This is in part due to stigma, shame, and lack of access to treatment. For people who do enter professional treatment, cognitive behavioural therapy (CBT) is a common treatment with a large evidence base. However, training clinicians to follow CBT manuals as intended can be costly and time-consuming.

Interventions offered through mobile apps can be a helpful tool for people with gambling disorder (GD), whether they choose self-help or professional help. In the current study, the authors describe the development of a mobile app that provides cognitive and behavioural strategies to help people change their gambling behaviour, called Change for Better (C4B). The authors also provide a brief description of an ongoing clinical trial to evaluate if C4B can be used as an adjunct therapy to standard treatment for adults seeking help for GD.

What the researchers did

Change for Better (C4B) is a new mobile-based intervention for GD. It was adapted from the Computer Based Training for Cognitive Behavioral Therapy (CBT4CBT), a mobile-based intervention for substance use disorders. CBT4CBT is an app designed to foster cognitive and behavioural strategies to help people recognize, avoid, and cope with triggers for substance use. It teaches core CBT concepts and practices such as:

- Identifying triggers
- Coping with cravings and strong emotions
- Problem solving

What you need to know

This article describes the development of a mobile app that provides cognitive and behavioural strategies to help people change their gambling behaviour, called Change for Better (C4B). This mobile-based intervention was adapted from a cognitive behavioural therapy (CBT) app for substance use disorders. The C4B app includes many core components of CBT. Currently, the app is being evaluated in a randomized control trial to determine its use and effectiveness as an adjunct therapy for adults seeking treatment for gambling disorder.

- Decision making
- Challenging thoughts
- Drug refusal

The CBT4CBT app was developed through literature reviews, consulting with clinicians and researchers, and feedback from people in recovery from substance use disorders. The intention behind the app was to extend the care received in formal treatment. Nine independent randomized control trials have proven the efficacy of the CBT4CBT app.

Structure and format of C4B

The C4B app presents 10 modules to be completed one at a time in a fixed order. These modules address motivations to gamble, recognition and avoidance of triggers, pattern recognition, coping with urges, gambling myths, decision making, problem solving, and communication (e.g., how to refuse to gamble under social pressures). There are additional modules that discuss substance use, mental health, financial management, and dealing with relapse.

Each module contains the following components:

- Check-in on user progress in previous modules.
- Explanation of a core CBT skill and demonstration through a scripted “movie” with fully developed characters and storylines.
- Reinforcement of the skill through an interactive assessment.
- A practice assignment.
- Brief testimonial videos from people with lived experience of GD, describing how the skill had been useful to them.
- A brief knowledge assessment with true/false questions about the key ideas of the module.

Content development and app features

Much of the content in the C4b app was sourced from CBT manuals and studies for GD treatment. The movies in the app were developed in part from interviews with 8 clinicians and 21 people with lived experience. The clinicians tended to be female (63%), older (average age of 63), and were all white. Those with lived experience were mostly male (67%), white (86%), and middle-aged (average age of 49).

These interviews provided insight for the creation of movies with realistic scenarios that capture the progression of GD, strengths and vulnerabilities, and strategies for recovery. The characters in these movies were written to appeal to a broad variety of people with different experiences.

Additional interviews with another group of 6 people with lived experience explored the app’s usability, functionality, and likeability. Most of these participants were male (67%) and middle-aged (average age of 49); all were white.

Through this feedback, the C4b app now includes features such as reminders, motivational statements, calendar tracking, feedback reports, and quick access to activities. Awards and badges can be earned to encourage use.

The authors are currently conducting a randomized control trial to evaluate C4B’s use and efficacy for people seeking help for GD. The trial compares standard treatment with C4B and standard treatment as usual. This trial is

preregistered on clinicaltrials.gov, with the national clinical trial number NCT06963931.

How you can use this research

This article can inform researchers and clinicians interested in mobile-based interventions for GD.

About the researchers

Brian D. Kiluk, Melissa Gordon, Jennifer M. Loya, Li Yan McCurdy, Jennifer J. Park, and Tami L. Frankforter are associated with the Yale School of

Medicine in New Haven, Connecticut, United States.

Marc N. Potenza is associated with the Yale Child Study Center, Yale School of Medicine, Wu Tsai Institute, Yale University, and Connecticut Mental Health Center in New Haven, as well as the Connecticut Council on Problem Gambling in Connecticut, United States. For more information about this study, please contact Brian Kiluk at brian.kiluk@yale.edu.

Citation

Kiluk, B. D., Gordon, M., Loya, J. M., McCurdy, L. Y., Park, J. J., Frankforter, T. L., & Potenza, M. N. (2025). Change 4 Better (C4B): Development of a mobile app providing cognitive behavioral therapy skills for gambling disorder. *Cognitive and Behavioral Practice*. Advance online publication. <https://doi.org/10.1016/j.cbpra.2025.10.005>

Study Funding

This study was funded in part by Mohegan Sun Casino, which had no involvement in the app development or writing of the manuscript.

About Greo Evidence Insights

Greo Evidence Insights is an independent, non-profit organization specializing in research, knowledge mobilization, and evaluation in the health and well-being sectors. Greo transforms research and insights into actionable strategies to prevent and reduce harm related to gambling, gaming, technology use, and substance use. To learn more about funding for Research Snapshots visit [our website](https://www.greo.org).

