

research snapshot

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Chatbot-based intervention may help reduce problem gambling

What this research is about

Problem gambling can lead to significant harms. About 0.7–6.5% of people may have problem gambling. Cognitive behavioural therapy (CBT) can help reduce problem gambling. CBT helps people to identify gambling triggers. CBT also helps people to change unhelpful thoughts. But, only 10% of people with gambling problems seek help.

Internet treatments (without therapist contact) may be helpful for people who do not seek face-to-face treatment. One study showed that Internet intervention without therapist contact helped reduce problem gambling. But this study had some limitations. First, the study had a waitlist control. Waitlist control is when participants are put on a waiting list. Their outcomes are then compared to those who receive the intervention. Waitlist control can exaggerate the benefits of the intervention. Second, almost half of the participants dropped out.

In this study, the researchers developed an automated chat program (chatbot). This program was developed to have low dropout. The researchers then conducted a randomized controlled trial to see if the chatbot can help reduce problem gambling.

What the researchers did

The researchers recruited participants through online advertisements. Most participants found the study through Google or Yahoo. The study was advertised to Japanese people searching for help to stop their problem gambling. Participants had to be over 18 years old. They also had to score 3 or higher on the Problem Gambling Severity Index (PGSI). A total of 254 participants were recruited. Data from 197

What you need to know

The researchers created an automated chat program called GAMBOT. GAMBOT was developed to help people with problem gambling and used cognitive behavioural therapy principles. GAMBOT sent messages to participants via a messaging app based on pre-determined rules. It did not include any therapist contact. Participants were randomly assigned to the GAMBOT or assessment only control condition for four weeks. Data were analyzed from 197 participants. All participants reported reducing their problem gambling. No differences between groups were found for the primary measure of problem gambling (the Problem Gambling Severity Index). But, participants in the GAMBOT condition reported lower scores on another measure (the Gambling Symptom Assessment Scale). Most (77%) participants used GAMBOT throughout the four weeks. These results suggest that GAMBOT may help reduce problem gambling without therapist contact.

participants were used. 56 participants were removed due to technical problems.

Participants were randomly assigned to either a rule-based chatbot named GAMBOT or an assessment only control condition. GAMBOT was developed by the researchers. GAMBOT sent messages via a messaging app daily at around 9 pm for four weeks. The messages were based on CBT and included monitoring, feedback, and skills. GAMBOT responded to participants based on pre-determined rules. In the control condition, participants received messages

every two weeks. The messages assessed problem gambling in the past two weeks.

Problem gambling was measured using the PGSI. The Gambling Symptom Assessment Scale (GSAS) was also used to measure problem gambling. Participants were also asked about frequency and money spent gambling in the past month. These measures were completed at baseline and four weeks later. The researchers also looked at how much participants interacted with GAMBOT. Participants were also asked if they would recommend GAMBOT from 0 to 10. A score of 9–10 would be considered promoters. A score of 7–8 would be passive users. A score of 6 or below would be detractors.

Participants did not know if they received the intervention or control. The researchers and the statistician also did not know what condition participants were assigned to.

What the researchers found

All participants reduced their problem gambling as measured by the PGSI. Participants assigned to GAMBOT did not have lower scores than controls. Also, no differences were found in the frequency and money spent in the past month. But, participants assigned to GAMBOT had lower scores on the GSAS following the intervention.

Most (77%) participants assigned to GAMBOT used it throughout the four weeks. On average, they responded to GAMBOT 22.6 out of 27 days. The 28th day was a post-assessment. 18 people were considered as promoters of GAMBOT. 18 were passive users, and 51 were detractors. Willingness to recommend GAMBOT was comparable to the average reported for the health food industries in Japan.

How you can use this research

This research can be useful to clinicians, researchers, and people seeking help for problem gambling. Researchers can build on this research to increase the effectiveness of GAMBOT or other chatbot based interventions.

About the researchers

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About Gambling Research Exchange (GREO)

Gambling Research Exchange (GREO) has partnered with the Knowledge Mobilization Unit at York University to produce Research Snapshots. GREO is an independent knowledge translation and exchange organization that aims to eliminate harm from gambling. Our goal is to support evidence-informed decision making in safer gambling policies, standards, and practices. The work we do is intended for researchers, policy makers, gambling regulators and operators, and treatment and prevention service providers.

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