

research snapshot

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Studying gambling behaviours through an online casino integrated with Amazon's Mechanical Turk

What this research is about

Gambling is a popular recreational activity. Most people gamble without problems. Some people develop problematic gambling behaviour and experience harm. Gambling is now recognized as an addictive behaviour. Unlike alcohol and other substances, gambling does not involve consuming psychoactive agents. As such, it is important to study how gambling behaviour is reinforced and leads to problem gambling. Yet, there are few studies that examine learning mechanisms in gambling.

The increasing popularity of online gambling allows the opportunity to study gambling in a real-life context. Online gambling is a popular form of gambling in many countries. This is the case for people with and without gambling problems.

The current study reports the development and initial validation of the Frescati Online Research Casino (FORC). FORC is a simulated online casino platform that mimics real online gambling sites. FORC allows researchers to control many aspects of gambling including outcomes and probabilities. FORC allows for the compromise between strictly controlled studies and studies that happen in real-world environments. FORC was also designed to integrate with Amazon's Mechanical Turk (AMT). AMT is a popular crowdsourcing site used to recruit participants.

What the researchers did

The researchers hired a professional web development company to design FORC. FORC is compatible with smartphones, tablets, and computers. FORC features three gambling games. The first is an online roulette game that allows people to bet on red and black. The second is a three-reel online

What you need to know

Gambling is now recognized as an addictive behaviour. But unlike substances, gambling does not involve consuming a psychoactive agent. This makes it important to understand the mechanisms of learning that could help explain gambling disorder. The researchers created the Frescati Online Research Casino (FORC) to study online gambling behaviours. The FORC is a simulated online casino platform that mimics real online gambling. FORC allows researchers to control various aspects of gambling. FORC has three types of gambling: (i) roulette, (ii) slot machine, and (iii) a simple card game. FORC was also designed to be integrated with Amazon's Mechanical Turk (AMT).

The researchers tested if the FORC worked the way that was intended. They also tested if participants on AMT produced high-quality data on FORC as well as on self-report measures. A total of 101 participants were recruited from AMT. Only 6% of participants seemed to provide poor behavioural data on FORC. The game mechanics on FORC worked as was designed. Findings on the self-report questionnaires were also as expected.

slot machine. The third is a simple card game not modelled on any existing casino card games. Researchers can set features like the number of trials, starting balance, bet sizes, and visual theme as appropriate for their studies. FORC also allows for messages to be presented and can be used to test responsible gambling strategies.

A total of 102 participants were recruited from AMT to test whether FORC worked in the way that was intended. The researchers also tested if participants on AMT would provide high-quality data. Data quality was tested in several ways. The first was whether participants responded in a repetitive way to the card game. Repetitive responding was taken as a sign of poor quality data since people should show some variation in their responses. The researchers also tested random gambling outcomes in the FORC slot machine to see if it mimicked the mechanisms of real-world slot machines. For example, the return rate of the slot machine was set to 0.7 credits. This means that for every 10 credits that were bet on the slot machine, participants would lose an average of 3 credits. The researchers tested two different versions of the slot machine. Lastly, the researchers examined the quality of self-report data including the Problem Gambling Severity Index (PGSI).

What the researchers found

For the response variation on the card game, only 6 participants were found to show repetitive responding. The remaining 95 participants showed good quality data. The game mechanics on the slot machine worked as intended. Participants lost 2.911 credits per turn on average. This would have been a perfect -3 credits if there was a perfect half and half split between the two versions of the slot machine that were tested.

The relationship between PGSI and gambling behaviours was as expected. People who did not gamble in the past year had lower PGSI scores. Higher PGSI scores were associated with a greater number of gambling types and higher frequency of gambling. The PGSI showed good consistency in responses. Similar to other studies, the PGSI was found to measure a single overall dimension of problem gambling.

How you can use this research

This research can be used in future studies that assess learning mechanisms in gambling. Researchers can also use FORC to plan studies that contain strong research procedures without sacrificing applicability to real-world settings.

About the researchers

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Citation

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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.

Learn more about GREO by visiting greo.ca or emailing info@greo.ca.

