Do memory associations predict problem gambling behaviours?

What this research is about

Outcome expectancies (OEs) are beliefs about the consequences of a behaviour. OEs can be positive or negative. For example, a gambler might think that gambling will lead to feelings of excitement (positive) or feelings of shame (negative). In gambling research, OEs are measured with explicit and implicit cognitive tasks. Explicit measures often involve self-reports from gamblers. They require gamblers to think and reflect about their own gambling. Implicit measures tap into thoughts that do not require an individual's conscious awareness. It is believed that any outcome that has previously happened while gambling will automatically prompt a related response from memory. For example, the outcome, “I have fun”, might prompt gamblers to respond with an action related to gambling. These memory associations between gambling and an outcome might exist without an individual being aware of them.

This project involved 2 studies that investigated the role of memory associations in problem gambling. Both studies used the Gambling Behaviour Outcome Association Task (G-BOAT) as an implicit measure of gambling OEs. The G-BOAT was used to assess how readily gambling behaviours came to mind when gamblers were presented with positive outcomes that might be related to gambling. Study 1 examined memory associations between gambling and positive outcomes. It also explored whether such memory associations led to more gambling involvement and gambling problems. Study 2 examined how the G-BOAT and other implicit and explicit measures of positive gambling OEs predicted gambling frequency.

What you need to know

This project involved 2 studies. Study 1 examined whether memory associations between gambling and positive outcomes led to problem gambling. The Gambling Behaviour Outcome Association Task (G-BOAT) presented gamblers with outcomes that might be related to gambling. For example, “I have fun” was a positive outcome that might be related to gambling. The G-BOAT was used to assess how readily gambling behaviours came to mind when gamblers were presented with these positive outcomes. Results showed that those with more severe gambling problems and spent more time and money on gambling responded with more gambling behaviours to the positive outcomes.

Study 2 compared G-BOAT with other implicit and explicit measures of gambling outcome expectancies (OEs). Implicit memory associations on the G-BOAT and positive OEs on an explicit measure each predicted gambling frequency. That is, people who spent more time and money on gambling had more implicit and explicit expectations about positive outcomes from gambling.

What the researcher did

Study 1: Participants were 95 gamblers from the community. They completed several measures. The Problem Gambling Severity Index (PGSI) was used to measure problem gambling behaviour. The Gambling Behaviour Outcome Association Task (G-BOAT) assessed implicit memory associations. During the G-BOAT, participants read outcome phrases and responded quickly with the first 2 behaviours or actions...
that came to mind. Ten outcomes were positive and potentially related to gambling, such as “I have fun.” The other 11 outcomes were not related to gambling, such as “pleasing relatives”. The Gambling Timeline Followback (G-TLFB) measured time and money spent gambling in the past 90 days.

Study 2: Participants were 61 regular adult gamblers. They completed various measures, including the G-BOAT as in Study 1. The Gambling Expectancy Questionnaire (GEQ) was used to measure explicit gambling OEs. Participants indicated their belief as to how likely an outcome (e.g., “I get rich” or “I get excited”) was to happen because of gambling. The Affective Priming Task assessed implicit gambling OEs. In this task, participants viewed a picture (gambling or not gambling-related) on a computer, followed by a blank screen, and then an OE word (positive or negative). The positive OE words included “fun” and “winning”. Participants responded to the words by clicking a button on their keyboard as quickly as possible. The task measured reaction time, or the time between the presentation of the word and the keyboard click. Finally, participants indicated how often they gambled in the past 2 months.

What the researcher found

Study 1: Participants with more severe problem gambling were more likely to respond with gambling-related behaviours to the positive outcomes on the G-BOAT. Also, participants who spent more time and money gambling were more likely to associate positive outcomes on the G-BOAT with gambling-related responses. Thus, those more involved in gambling had more implicit memory associations between gambling and positive outcomes. Study 2: Participants who associated positive outcomes on the G-BOAT with gambling-related behaviours also reported more positive OEs on the GEQ. Also, those who associated positive outcomes on the G-BOAT with gambling-related words had faster reaction time to positive gambling-related words on the Affective Priming Task. These results suggest that the G-BOAT relates with two existing measures of gambling OEs. Further, memory associations on the G-BOAT predicted how much an individual gambled. More positive OEs on the GEQ also predicted how much one gambled. Thus, people who spent more time and money gambling had more expectations about positive outcomes from gambling, both implicitly and explicitly.

How you can use this research

The findings suggest that memory associations may lead to or affect gambling behaviours. Clinicians and treatment providers should aim to reduce positive gambling OEs – both explicit OEs and implicit memory associations between gambling and positive outcomes. Researchers should further explore the use of G-BOAT as an implicit measure, particularly with problem gamblers who are seeking treatment.

About the Researcher

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