

## Emotional reaction to gambling outcomes and hazardous gambling behaviour: Evidence from a simulated slot machine task

### What this research is about

Emotion dysregulation involves having difficulties managing emotional experiences or expressions. Previous research has identified emotion dysregulation as a risk factor for gambling-related harms. There are multiple facets to emotion dysregulation, one of which is emotional reactivity. Emotional reactivity refers to a tendency to have extreme emotional reactions to events or stimuli in the environment. It has been reported that emotional reactivity is higher among people who experience more gambling-related harms.

The purpose of this study was to examine emotional reactivity to gambling outcomes during a simulated slot machine task. This study examined how different gambling outcomes might influence emotion and choice behaviour (i.e., staying with the same slot machine or choosing a different one).

### What the researchers did

The researchers recruited participants through the online research platform Prolific using a two-stage process. First, they invited 251 participants to complete a screening survey with a single question about gambling frequency. A subset of 100 participants were then invited to complete a behavioural task. People who gambled more frequently were oversampled during this stage.

Participants were eligible for the study if they were between 18 and 65 years old and fluent in English. They also had to have unimpaired or adequately corrected eyesight. After excluding 6 participants who failed the attention checks, the final sample included 94 participants aged 20–64 years. There

### What you need to know

This study examined emotional reactivity to gambling outcomes during a simulated slot machine task. The researchers examined how different gambling outcomes influence emotion and choice behaviour (i.e., staying with the same slot machine or choosing a different one). A total of 94 adults aged 20–64 years completed 72 simulated slot-machine trials. On each trial, participants chose which one of two simulated slot machines to gamble on. After each trial, participants rated their current emotion using an emotion slider ranging from extremely unhappy (0) to extremely happy (1).

Participants had more positive emotional reactions when they won. They had more negative emotional reactions when they lost or when they had near-wins, near-losses, or neutral outcomes. Participants with higher scores on the Problem Gambling Severity Index (PGSI) had stronger emotional reactions to all outcomes. Participants were more likely to choose the same machine again after wins and near-wins. They were less likely to choose the same machine after losses and near-losses. PGSI scores did not affect whether participants chose the same machine again, regardless of outcome types.

were 52 men, 39 women, and 3 who did not report a binary gender.

Participants first completed a demographic survey as well as the Problem Gambling Severity Index (PGSI). They then completed the behavioural task which involved a 25-minute slot machine task.

The slot machine task involved 72 trials, which were divided into four blocks of 18 trials each. On each

trial, participants chose which one of two simulated slot machines to gamble. Each machine cost a 'coin' to play. Participants were given 150 coins at the start of the task and were told that their goal was to collect as many coins as possible. They were also told that the coins could be cashed in at the end of the task for an extra monetary bonus.

There were five outcome types: a win (+20 coins), a loss (-20 coins), a near-win (no payout), a near-loss (no payout), or a neutral outcome (no payout). The two machines had the same likelihood of producing different outcome types on each trial. The researchers set a specific trial sequence, where each participant would win 8 trials, lose 8 trials, and have 8 near-wins, 8 near-losses, and 32 neutral outcomes.

At the beginning of each block and after every trial, participants rated their current emotion using an emotion slider, which ranged from extremely unhappy (0) to extremely happy (1).

The researchers also noted participants' likelihood of choosing the same machine again on a subsequent trial (i.e., choice behaviour).

### What the researchers found

The researchers found that participants had positive emotional reactions when they won on a trial. Participants had negative emotional reactions when they lost or when they had near-wins, near-losses, or neutral outcomes. Near-wins produced stronger negative emotional reactions than neutral outcomes, whereas near-losses produced slightly stronger positive emotional reactions than neutral outcomes.

Participants with higher PGSI scores (indicating more hazardous gambling behaviour) tended to have stronger emotional reactions to all outcome types; that is, they had stronger positive emotional reactions to wins and stronger negative emotional reactions to the other outcomes.

Participants were more likely to choose the same machine again after wins and near-win outcomes. But they were less likely to choose the same machine after losses and near-loss outcomes. PGSI scores did not moderate the effect of outcome type

on whether participants chose the same machine again.

### How you can use this research

Clinicians and therapists can use the findings to tailor interventions to improve emotion regulation among people experiencing problem gambling.

### About the researchers

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