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Using account-based data to identify behavioural patterns of people who binge gamble

What this research is about

Gambling disorder is defined as maladaptive gambling that reoccurs and results in harms, such as financial and psychosocial problems. There are two forms of gambling disorder: persistent (i.e., continuous) and episodic. Episodic gambling, or binge gambling, happens when people experience a temporary loss of control over gambling that results in harm. But when the episode is over, people abstain from gambling and do not feel a drive to resume gambling. Symptoms of problem gambling also reduce between gambling episodes. There are no definitions of binge gambling in terms of the frequency of gambling episodes, intensity of gambling, or gambling habits.

Previous research on binge gambling used data from interviews or surveys. There were no studies using account-based player tracking data to examine specific aspects or markers of harm associated with binge gambling. The purpose of this study was to examine behavioural patterns that could be linked to binge gambling using real-world account-based data.

What the researchers did

The researchers used an anonymized dataset provided by an online casino operator in the UK. The dataset included information for each person who created their account before January 2023 and who placed at least one bet between January and June 2023. There were 150,895 customers who met these criteria. The dataset included information about the types of games played and details about each game that was won for each account. The dataset also included information about all monetary deposits and withdrawals for each account. The dataset included data from January 1, 2023, to June 30, 2023.

What you need to know

Binge gambling happens when people experience a temporary loss of control (i.e., a gambling episode) that results in harm. The purpose of this study was to examine behavioural patterns that could be linked to binge gambling. Anonymized data were examined in this study. This dataset was provided by an online casino operator in the UK. The dataset included account information from 150,895 people who created their account before January 2023 and placed at least one bet between January and June 2023. The researchers calculated 14 tracking variables that assessed gambling intensity and impulsivity. They used these variables to identify six clusters of people based on their gambling behaviour. Two clusters gambled on a relatively low number of days from January to March, but had a high gambling intensity on those days compared to the other four groups. These clusters could match the habits of people who binge gamble. Most people displayed similar gambling behaviour between April and June. Between 17 and 29% of people in the two clusters stopped gambling entirely between April and June 2023.

The researchers calculated 14 player tracking variables that could be used to identify behavioural patterns of binge gambling. These variables assessed gambling intensity and impulsivity. Gambling intensity was measured using the volume of deposits, gambling frequency, and volume of the amount of money bet. Impulsivity was measured by number of deposits per day and per session, and percentage of sessions that ended with a low balance (less than £5). Impulsivity

was assessed because it could lead to chasing losses, a marker of problem gambling.

The researchers analyzed data from January to March 2023 to identify groups of people who were similar in terms of account activity. They then analyzed data from April to June to see if those groups remained stable (i.e., similar).

What the researchers found

On average, people included in this study were 39 years old. About 46% were female. On average, they had 16 gambling sessions across 10 days of playing. There were about seven days between two gambling days. On average, these people bet £0.72 per game and deposited £32. The researchers found six clusters of people. The researchers examined the clusters further to determine which cluster might be most likely to include people who binge gambled.

The researchers identified two clusters (Cluster 2 and Cluster 5) that gambled on a relatively low number of days but had a high gambling intensity on those days, compared to the other four clusters. Cluster 2 consisted of 22,364 people, while Cluster 5 had 12,523 people. The researchers believe that these two clusters could match the habits of people who binge gamble. On average, people in Cluster 2 deposited £51.98 per deposit between January and March. Those in Cluster 5 deposited £44.66 per deposit between January and March. These were higher amounts per deposit than any other cluster. Cluster 2 and Cluster 5 also had the highest average bet per game than any other cluster (£1.20 and £1.18 per game, respectively). The average amount of money bet per gambling day for Cluster 2 and Cluster 5 (£1,021 and £827, respectively) was higher than any other cluster.

But people in these two clusters did not deposit frequently when active. It also looked like they could stop gambling before their account reached a low balance. This seemed to contradict the assumption that people who binge gamble have intermittent episodes of uncontrolled gambling.

The researchers found that most people maintained the same gambling behaviour in the following three months (i.e., between April and June 2023). As such, they were assigned to the same cluster in the later time period. In Cluster 2, about 17% of people stopped gambling altogether between April and June 2023. In Cluster 5, about 29% of people stopped gambling altogether between April and June 2023.

How you can use this research

This study shows that it is possible to use account-based data to identify binge gambling behaviour. Interventions can then be developed to support people who binge gamble.

About the researchers

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Citation

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