



MAY 2023

Published research snapshots

The following is a list of research article summaries that Greo published in April 2023 in the Research Snapshot programme. Snapshots are organised according to priorities indicated by the Gambling Commission.

SNAPSHOTS OF NEWEST RESEARCH (FEB 2023–APR 2023)3

YOUNG PEOPLE	3
INDUSTRY-BASED HARM MINIMISATION	4
MARKETING AND MESSAGING	5
PATTERNS OF PLAY	6
UNDERSTANDING PROBLEM GAMBLING	7
GAMBLING REGULATION, RESEARCH, AND POLICY	8
GAMBLING TYPES	9

SNAPSHOTS OF OTHER TOPICAL RESEARCH (DEC 2022 AND OLDER)

GAMBLING-RELATED HARMS.....	10
INDUSTRY-BASED HARM MINIMISATION	11
MARKETING AND MESSAGING	12
COVID-19	13

UPCOMING RESEARCH SNAPSHOTS.....14

SNAPSHOTS OF NEWEST RESEARCH (FEB 2023–APR 2023)

YOUNG PEOPLE

Examining networks of problematic gambling symptoms in young adults



February 2023
Hungary

- **Purpose:** To examine cross-sectional networks of problematic gambling symptoms in young adults and assess whether such networks could be reproduced using data gathered from different years; and, to explore a longitudinal network of problem gambling symptoms.
- **Methodology:** The researchers looked at data gathered from 335 young adults (49.97% female) who were born between 1984 and 2000, and reported gambling in the past year. The data was from the first two waves of the Budapest Longitudinal Study.
- **What you need to know:** Evidence for the replication of cross-sectional networks is limited. Being “criticised by others” was the most central symptom in Wave 1 but the least central in Wave 2. “Financial problems” were the most central symptom in Wave 2 and the second most central in the first wave. Therefore, the symptoms across the cross-sectional networks showed only partial agreement with each other in terms of centrality. The longitudinal network showed that the presence of “health problems” due to gambling and “tolerance” in the first wave positively predicted multiple symptoms in the second wave. For example, “tolerance” predicted “recognises one has a problem”, “criticised by others”, and “financial problems” in Wave 2.
- **How you can use this research:** This research can be used to better understand how gambling impacts the networks of symptoms in young people who gamble.

Longitudinal study on gambling and problem gambling severity among emerging adults in Britain



January 2023
United Kingdom

- **Purpose:** To examine how gambling activities and gambling-adjacent activities (i.e., loot boxes) are associated with problem gambling among emerging adults.
- **Methodology:** The researchers examined data from 2,080 emerging adults (16 to 24 years old) who participated in the Emerging Adults Gambling Survey. They collected data in July/August 2019 and again in July/October 2020. The aim was to track gambling behaviour over time.

- **What you need to know:** Among emerging adults in Britain, gambling on online horse/dog races and other non-sports events, betting on skins, and electronic gambling machines (both slots and those formerly known as fixed odds betting terminals) were associated with higher problem gambling scores.
- **How you can use this research:** The results indicate that while policy attention should focus on gambling and gambling-adjacent activities, electronic gambling machines in land-based venues are still important forms of gambling to monitor.

INDUSTRY-BASED HARM MINIMISATION

Developing an online gambling harm detection system in France



February 2023
France, Canada

- **Purpose:** To develop an online gambling harm detection system in France. The researchers investigated whether different machine learning algorithms could predict self-reported risk of gambling problems over the past two months.
- **Methodology:** Between December 2015 and March 2016, the French Online Gambling Regulatory Authority (ARJEL; now replaced by ANJ) invited people to participate in an online survey. The participants' gambling data were obtained from the gambling operators. The researchers identified machine learning algorithms that could detect risk of experiencing gambling harm using demographic and behavioural data. They then tested four machine learning algorithms using the data.
- **What you need to know:** The models based on vector support machines (a type of machine learning algorithms) were best at classifying people at moderate-to-high risk of harm (Problem Gambling Severity Index scores of 5 or greater) and people at high risk (Problem Gambling Severity Index scores of 8 or greater).
- **How you can use this research:** This study can inform operators and policy makers about harm reduction methods for online gambling.

Understanding stakeholders' perceptions of barriers to voluntary self-exclusion in Germany



February 2023
Germany

- **Purpose:** To explore the opinions of both people who gamble and gambling providers on the process of self-exclusion in Germany.
- **Methodology:** Three groups of stakeholders were interviewed: people who gambled, governmental casino providers, and commercial gambling providers.
- **What you need to know:** Overall, participants in all three groups agreed that voluntary self-exclusion could be a protective measure, but it had limitations. Participants discussed the importance of recognising and addressing gambling problems early on. But they disagreed on the reasons for the low uptake of voluntary self-exclusion. Participants also disagreed on the ideal minimum duration of voluntary self-exclusion.
- **How you can use this research:** Gambling providers and policy makers can use this research to strengthen the effectiveness of voluntary self-exclusion programmes.

MARKETING AND MESSAGING

The relationship between sports sponsors and gambling



February 2023
United Kingdom

- **Purpose:** To examine how the effect of sponsorship in terms of 'articulation' and 'congruence' influences people's gambling attitude and behaviour. 'Articulation' refers to a sponsor's attempts to explain its relationship with a sponsored event. 'Congruence' is the relatedness, similarity, or relevance of the sponsor to the event being sponsored.
- **Methodology:** The researchers asked 518 adults from the United Kingdom to evaluate the posters of a commercial gambling provider and a sponsor considered to be congruent with sports. The participants completed several questionnaires about their attitudes towards each sponsor's brand, gambling attitudes, and gambling behaviours.
- **What you need to know:** Articulation within the posters did not influence participants' gambling attitudes. However, when the commercial gambling provider was considered to be congruent with the sports event and sincere in its sponsorship, this promoted more favourable attitudes towards the commercial gambling providers and more willingness to bet. These results demonstrate the potential risks of commercial communication by commercial gambling providers.

- **How you can use this research:** This research has implications for sponsorship of sports events. Policy makers can use this research to evaluate the role of gambling sponsorship in sports.

The impact of gambling-related advertising: An umbrella review



February 2023
United Kingdom

- **Purpose:** To summarise research evidence on the impact of gambling advertising on gambling-related harms.
- **Methodology:** The authors conducted an umbrella review of previous systematic reviews. Five reviews met the inclusion criteria. Three additional reviews were also identified using website searches or through recommendations by a topic expert.
- **What you need to know:** The reviews found evidence of a 'dose-response effect'. People who are exposed to more gambling advertising are more likely to feel positively about gambling. They are more likely to feel that gambling is a normal activity. They are also more likely to intend to gamble. People who are at higher risk of gambling-related problems are more aware of and more exposed to gambling advertising. Children and adolescents who see more gambling advertising have a high recall of the advertising and the brands being advertised. Those at risk of gambling problems also report a desire to gamble when viewing such advertising.
- **How you can use this research:** Policy makers can use this review to inform public health harm prevention strategies. These strategies can include policies that limit exposure to advertising, especially among children and vulnerable groups.

PATTERNS OF PLAY

Operant learning and gambling behaviour



February 2023
Australia, United Kingdom

- **Purpose:** To highlight the importance of considering the complexities of human responses in operant conditioning. Operant conditioning is a method of learning that uses rewards and punishment to modify behaviour.
- **Methodology:** The authors reviewed academic articles about gambling, operant conditioning, and slot machine games. Their goal was to highlight the considerations that must be applied when generalising models of animal learning to human behaviour.

- **What you need to know:** Overall, people's responses seem to be driven by their understanding of schedules. They may also hold inaccurate views and beliefs about the nature of gambling outcomes. Moreover, people's behaviour is influenced by their motivations and goals. The fear of missing out and anticipated regret are individual differences that require further research on how they may influence gambling behaviour. The researchers believe that new frameworks need to be developed that can capture additional features of human behaviour such as these that are not included in animal models.
- **How you can use this research:** The researchers believe that future research should attempt to dispel incorrect views that people who gamble may have about schedules of reinforcement. Furthermore, research could examine how these factors may inform gambling policies and regulations.

UNDERSTANDING PROBLEM GAMBLING

[A comparison of gambling involvement, motives, severity, and personality traits by gambling mode](#)



February 2023
Canada

- **Purpose:** To compare people who gamble in only online, only offline, and mixed-mode contexts in terms of their gambling involvement and severity of problem gambling; and, to compare the three subgroups in terms of their motives for gambling and personality traits.
- **Methodology:** In total, 517 participants between 18 and 81 years of age (average age 37 years; 49.7% women) completed an online survey on Qualtrics.
- **What you need to know:** Mixed mode gamblers engaged in a wider range of gambling types than people who gambled online only and people who gambled offline only. Mixed mode gamblers also had more severe problem gambling than people who gambled offline only and people who gambled online only. Mixed mode gamblers were more likely to gamble to enhance positive feelings and for socialisation than people who gambled offline only and people who gambled online only.
- **How you can use this research:** Policy makers and gambling providers can use this research to inform the creation and improvement of new and existing harm minimisation strategies.

The majority of gambling problems in Australia are caused by electronic gaming machines (EGMs)



February 2023
Australia

- **Purpose:** To evaluate and compare the relative risk of available forms of gambling in Australia; and, to examine the relative contribution of each form on the total burden of harm of gambling problems in the Australian population.
- **Methodology:** The researchers analysed data from six state-based gambling prevalence surveys and one national survey in Australia. The total number of participants was 71,103. Among them, 40,268 participants had gambled in the previous year.
- **What you need to know:** They found that electronic gambling machines contributed to over 50% of gambling problems in Australia. They also found that casino table games were equally as risky as electronic gambling machines. Casino games, however, were found to contribute less to gambling problems due to low participation. These results suggest that electronic gambling machines have the greatest burden of harm on the population. This research can be used to inform gambling policy.
- **How you can use this research:** This research can be used to inform gambling policy and public approaches to reducing gambling harm (e.g., reduce availability of electronic gambling machines, restrict certain game features that increase risk, and implement features that may prevent excessive spending). The researchers suggested that electronic gambling machine regulation should be a primary focus of action in Australia. More innovative policy ideas relating to electronic gambling machines should be tested due to the uneven impact of this form of gambling.

GAMBLING REGULATION, RESEARCH, AND POLICY

Alcohol and gambling industries use similar strategies to favourably influence policy decisions



February 2023
United Kingdom

- **Purpose:** To compare the corporate political activity strategies used by alcohol and gambling industries in the United Kingdom.
- **Methodology:** The researchers compared written responses to two House of Lords inquiries from the alcohol and gambling industries in the United Kingdom.

- **What you need to know:** The researchers found that industry responses framed the problem and the solution in similar ways. Responses from both industries argued that harms are only experienced by a few people and that most people gamble or drink responsibly. These responses also argued that the evidence of harms is overstated. They argued that any solution needs to be local and targeted, rather than a population-level solution.
- **How you can use this research:** Policy makers and researchers can use this research to help them recognise industry narratives.

GAMBLING TYPES

Examining the relationship between real-money gambling and simulated gambling



February 2023
Germany

- **Purpose:** To examine the links between simulated gambling and real-money gambling. Specifically: 1) whether people who engage in simulated gambling games are more likely to engage in real money gambling games (and vice versa); 2) whether there is a link between problem gambling rates and frequency of simulated gambling; and 3) whether the link between simulated gambling and real money gambling is different based on the type of gambling engaged in.
- **Methodology:** The researchers used data from the E-Games survey (Electronic Gam(b)ling: Multinational Empirical Survey) in Germany. A total of 5,191 participants who had gambled in the last 12 months using real money were included in the survey results. These participants might have also participated in simulated gambling.
- **What you need to know:** Participants who engaged in simulated gambling had lower age, education, and income than those who did not engage in simulated gambling. There was a link between simulated gambling and real money gambling participation. Participants who frequently engaged in real money gambling were more likely to frequently participate in simulated gambling. Participation in all forms of real money gambling was linked to higher simulated gambling frequency. Participants who engaged in real money gambling through horse racing and eSports betting were most likely to also participate in simulated gambling. There was a strong link between participation in simulated gambling and problem gambling.
- **How you can use this research:** Policy makers can use this research to advocate for public health approaches for simulated gambling and real money gambling prevention and intervention.

SNAPSHOTS OF OTHER TOPICAL RESEARCH (DEC 2022 AND OLDER)

GAMBLING-RELATED HARMS

CRIME

The presence of betting shops is linked to increased likelihood of crime in England



January 2023
United Kingdom

- **Purpose:** To examine the relationship between betting shops and crime in England.
- **Methodology:** The researchers used data to examine if betting shops and crime clustered together from the following sources: Police-recorded crime data (from 2015 and 2019); Gambling Commission list of all licenced gambling locations in the UK; Point-of-Interest data (from 2019) including locations of bus stops and food and drink places (e.g., cafes, fast food, pubs, and restaurants); Education deprivation data (for 2015 and 2019); 10 types of police recorded crime; and Neighborhood data from the 2011 UK Census.
- **What you need to know:** The presence of a betting shop increased the likelihood of all types of crime examined in the study. The presence of betting shops had the strongest impact on shoplifting, theft from other people, public disorder, and antisocial behaviour when compared with other types of crime. It is important to note that the relationship between betting shops and crime is complex and this research in no way suggests causality.
- **How you can use this research:** Policy makers can use this research to inform a public health approach that includes interventions that take into account the association between betting shops and crime.

PSYCHOLOGICAL DISTRESS AND SUICIDE

Factors associated with suicidal behaviours among people with gambling disorder



January 2023
Iran, United Kingdom, Australia

- **Purpose:** To estimate the prevalence of suicidal ideation and lifetime suicide attempts among people with gambling disorder.

- **Methodology:** The authors selected articles published between 1995 and 2022. In the end, 39 studies were retained for the review and meta-analysis.
- **What you need to know:** There was a 31% prevalence rate for suicide ideation, a 17% prevalence rate for suicide plans, and a 16% prevalence rate for suicide attempts among people with gambling disorder. Also, people in the following groups were more likely to report suicide ideation and/or attempt: people with chronic physical illness, who had debt, were older than 35 years old, had a history of sexual abuse, experienced depression, mood disorders, and alcohol use disorders.
- **How you can use this research:** This study is intended for researchers, clinicians, and public health staff who are interested in the link between suicidal behaviours and gambling disorder.

INDUSTRY-BASED HARM MINIMISATION

Examining “markers of harm” in people who bet on sports online



January 2022
United States

- **Purpose:** To evaluate nine markers of harm (such as spend from the norm, frequency of gambling, etc.) in two samples of people who bet on sports. The researchers investigated whether a given marker is: 1) too rare or common to people at risk of gambling harm; (2) redundant with other markers; 3) too unstable to differentiate temporary instances of excessive gambling from stable patterns; or 4) only weakly associated with extreme gambling behaviours.
- **Methodology:** The researchers used two UK sports betting datasets from bwin, a gambling website owned by Entain. One dataset was collected between 2005 and 2007, and the second dataset was collected between 2015 and 2017. The 2005 dataset included 33,248 participants (7.6% women), while the 2015 dataset included 16,087 participants (8.8% women).
- **What you need to know:** The percentage of people who exceeded the no-risk threshold was well below 1% for any marker of harm on an average day in either dataset. Male gender and younger age were not related to higher average risk scores. Additionally, the researchers observed that people who were in the top 6% in terms of number of bets displayed the highest risk scores. People who exceeded the no-risk threshold were more likely to report a proxy of gambling harm (e.g., account closure). People with higher risk scores showed more fluctuation in their risk scores. These results imply that the highest

level of risk that a user has ever exhibited is more important than the level of risk that they usually exhibit.

- **How you can use this research:** This research can inform gambling operators and regulators about the usefulness of the “markers of harm” system. The researchers provided suggestions for improving the system. For example, some markers might be given more weight as they are more strongly related to the proxies of gambling harm.

MARKETING AND MESSAGING

[Finnish and Swedish gambling operators' social media presence from 2017 to 2020](#)



November 2022
Finland, Sweden

- **Purpose:** To explore: 1) the extent to which gambling operators in Finland and Sweden are active on social media; 2) the typical social media content posted by the operators targeting their national audiences; and 3) how audiences interact with the content in terms of likes, shares, and comments.
- **Methodology:** The researchers analysed 13,241 posts from 2017 to 2020 using four social media platforms (Facebook, Instagram, Twitter, and YouTube).
- **What you need to know:** Overall, this research demonstrated that the use of social media is common for gambling operators. Twitter was the most used social media platform during the study period. Moreover, around 60% of all posts were accessible for all social media users, including minors. Age restriction was not applied to the Twitter posts. On the other hand, around 95% of the Finnish Facebook posts and 100% of the Finnish Instagram posts were blocked from minors. Posts with responsible gambling messages were around 9 to 12% in Finland. In Sweden, there was a large increase of such posts from 2% to 35% between 2017 and 2020.
- **How you can use this research:** This research can be used to better understand the relationship between gambling regulation and the portrayal of gambling on social media.

COVID-19

Self-perceptions of the impact of the COVID-19 pandemic on gambling behaviour in Quebec, Canada



December 2022
Canada

- **Purpose:** To examine the impact of the COVID-19 pandemic on people who gamble from their own perspectives.
- **Methodology:** Participants were 724 adults who lived in Quebec (Canada) and who gambled at least once in the last year. They completed a survey that included an open-ended question about how participants would describe the impact of the pandemic on their gambling. The current study focused on the responses to this question.
- **What you need to know:** Participants described changes in their gambling behaviour. Many increased their gambling. These changes had an emotional impact as well as a financial impact. Some participants did not feel that their increase in gambling had a negative impact on them, but others described major harms. Participants also described factors that had driven the changes in their gambling behaviour.
- **How you can use this research:** Practitioners and public health can use this research to better understand how the pandemic has affected people who gamble.

UPCOMING RESEARCH SNAPSHOTS

GAMBLING-RELATED HARMS

MONEY AND DEBT

- Crisis, what crisis? The effect of economic crises on spending on online and offline gambling in Spain: Implications for preventing gambling disorder (2023)

PARTNERS, FAMILIES, AND FRIENDS

- Marital status and gambling disorder: A longitudinal study based on national registry data (2023)
- Understanding gambling in the United Kingdom: A qualitative study on the experiences of gamblers' families (2023)

PSYCHOLOGICAL DISTRESS AND SUICIDE

- Changes in severity of problem gambling and subsequent suicide attempts: A longitudinal survey of young adults in Great Britain, 2018–20 (2023)
- Trauma and gambling: A scoping review of qualitative research (2023)

TREATMENT AND SUPPORT

- Acceptance and commitment therapy for co-occurring gambling disorder and posttraumatic stress disorder in veterans: A narrative review (2023)
- Efficacy of a novel online integrated treatment for problem gambling and tobacco smoking: Results of a randomised controlled trial (2023)
- Efficacy of cognitive-behavioural therapy in improving the quality of life of people with compulsive gambling, a systematic review (2023)

PREVENTION AND EDUCATION

- Preventive gambling programmes for adolescents and young adults: A systematic review (2023)

INDUSTRY-BASED HARM MINIMISATION

- Corporate social responsibility in the gambling industry: A systematic review and conceptual framework (2023)
- Designing improved safer gambling messages for race and sports betting: What can be learned from other gambling formats and the broader public health literature? (2023)

- How does the phrasing of house edge information affect gamblers' perceptions and level of understanding? A registered report (2023)
- Players gonna pay: Characterising gamblers and gambling-related harm with payments transaction data (2023)
- Qualitative experience of self-exclusion programmes: A scoping review (2023)
- Setting a hard (versus soft) monetary limit decreases expenditure: An assessment using player account data (2023)
- The efficacy of voluntary self-exclusions in reducing gambling among a real-world sample of British online casino players (2023)
- Using machine learning to retrospectively predict self-reported gambling problems in Quebec (2023)

MARKETING AND MESSAGING

- Being good while being bad: How does CSR-communication on social media serve the gambling industry? (2022)
- Gambling advertising and incidental marketing exposure in soccer matchday programmes: A longitudinal study (2023)

PATTERNS OF PLAY

- A large-scale prospective study of big wins and their relationship with future involvement and risk among actual online sports bettors (2023)
- Engineered highs: Reward variability and frequency as potential prerequisites of behavioural addiction (2023)

YOUNG PEOPLE

- Income inequality and the odds of online gambling among a large sample of adolescents in Canada (2023)
- 'That's why it's gambling, because you don't know what you find in it!' Perceptions of the relationship between gaming and gambling among young adult gamers (2023)

UNDERSTANDING PROBLEM GAMBLING

- Autism and gambling: A systematic review, focusing on neurocognition (2023)

- Not “just for fun”: Gambling, substance use, and the transdiagnostic role of emotion regulation (2023)
- Problem gambling in Germany: Results of a mixed-mode population survey in 2021 (2023)

GAMBLING REGULATION, RESEARCH, AND POLICY

- Blocking measures against offshore online gambling: A scoping review (2023)

GAMBLING TYPES

- Clinical correlates of sports betting: A systematic review (2023)
- Cryptocurrencies as gamblified financial assets and cryptocasinos: Novel risks for a public health approach to gambling (2023)
- Elite professional online poker players: Factors underlying success in a gambling game usually associated with financial loss and harm (2023)
- Safer esports for players, spectators, and bettors: Issues, challenges, and policy recommendations (2023)

GAMBLING SETTING

- Examining the spatial spillover of gambling regulation in the Czech Republic (2023)

COVID-19

- Impacts of the COVID-19 pandemic on gamblers in Canada: Qualitative analysis of responses to an open-ended question (2022)