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Published research snapshots

The following is a list of research summaries that Greo published in October 2022 in the Research Snapshot programme supporting the Gambling Commission’s National Strategy to Reduce Gambling Harms. Snapshots are organised according to topics in the National Strategy, and other priorities indicated by the Gambling Commission.

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SNAPSHOTS OF NEWEST RESEARCH (AUG 2022–OCT 2022)

GAMBLING-RELATED HARMS

PARTNERS, FAMILIES, AND FRIENDS

The transmission of gambling and substance use problems through families



December 2022
United States

- **Purpose:** To examine the relationship between exposure to addictive behaviours as a child and later development of gambling disorder; and, to examine if there was an influence from family or household members' alcohol, drug use, and other addictive behaviours.
- **Methodology:** The researchers used data from an epidemiological study in the United States (3499 adults). The family history method was used to assess exposure to familial gambling.
- **What you need to know:** The researchers found that having a member of the household who engaged in gambling or substance uses increased participants' likelihood of gambling or using substances. This in turn increased the likelihood that they would experience problems related to their own gambling or substance uses. The results showed both intergenerational (i.e., from generation to generation) and intragenerational (i.e., between members of one generation) influences.
- **How you can use this research:** This study could be useful for researchers and clinicians interested in how gambling problems, and other addictive behaviours, can be transmitted through families.

A review of interventions to prevent or reduce harm from online gambling and electronic gaming machines



August 2022
Denmark

- **Purpose:** To review randomised controlled trials which examined interventions to prevent or reduce harm from online gambling or electronic gaming machines.
- **Methodology:** The authors identified 18 studies on interventions aimed to reduce harm or to prevent further increase in gambling behaviour, problems, or erroneous thoughts.
- **What you need to know:** The majority of studies were found to have some concerns or a high risk of bias. The studies varied in terms of content, setting, participants, and outcome

measures. In total, they examined 33 active interventions of five types: limiting gambling access, providing feedback, interventions based on psychotherapy, providing education, and priming people with analytical thinking. However, no conclusion could be made regarding the effects of any intervention type.

- **How you can use this research:** This review can inform future research on interventions to reduce and prevent gambling harm.

INDUSTRY-BASED HARM MINIMISATION

Gambling despite being enrolled in a national multi-operator self-exclusion programme



August 2022
Sweden

- **Purpose:** To assess the prevalence rate of self-exclusion using Spelpaus among people who were seeking treatment for gambling disorder; and, to examine how common it was for people to breach their self-exclusion.
- **Methodology:** The authors reviewed hospital charts from a gambling treatment facility in southern Sweden. A total of 85 patients applied for treatment from January 1 to September 1, 2021. Amongst them, 74 patients attended at least one appointment and had full data available in their health records
- **What you need to know:** The authors found that 81% of patients had enrolled in Spelpaus. Notably, 68% still gambled while enrolled in Spelpaus. Most were able to do so through unlicensed gambling operators (68%) or by using someone else's ID (22%).
- **How you can use this research:** Policy makers could use this study to improve or strengthen the effectiveness of self-exclusion programmes. Clinicians could use this study to inform their treatment of people with gambling disorder. People with gambling disorder will likely require further interventions beyond participation in self-exclusion programmes.

GAMBLING TYPES

The link between loot boxes and problem gambling in Mainland China, and opinions regarding probability disclosures and pity-timers



August 2022
United Kingdom, China

- **Purpose:** To examine the relationships between loot box purchasing, problem gambling, recent gambling participation, and impulsiveness among participants from the People's Republic of China.
- **Methodology:** An online survey was completed by 879 adults (18 years or older) who played video games and lived in Mainland China.
- **What you need to know:** People who spent more on loot boxes were slightly more likely to have gambled in the last year. Also, spending more on loot boxes was related to slightly higher impulsiveness. But the researchers could not conclude whether loot box spending was linked with problem gambling. The researchers discussed why the relationship between loot boxes and gambling might be weaker in the People's Republic of China than in Western countries.
- **How you can use this research:** Policy makers can use this research to support customised policies for mitigating loot box-related harms beyond probability disclosures.

COVID-19

The impact of mental health and social motivations for gambling and gaming during COVID-19



August 2022
Finland

- **Purpose:** To investigate the impact of anxiety related to COVID-19 on gaming and gambling problems, as well as on other mental health issues; and, to examine the role of social motivations for gaming and gambling.
- **Methodology:** A total of 1530 Finnish adults answered several online questionnaires about their mental health, COVID-19 related anxiety, and gaming and gambling problems.
- **What you need to know:** The authors found that COVID-19 related anxiety increased mental health issues. People who experienced more mental health issues during the

pandemic were more likely to experience gambling and gaming problems if they were socially motivated to gamble and play games.

→ **How you can use this research:** This research could be useful for clinicians and researchers interested in the impact of COVID-19 on gaming and gambling.

SNAPSHOTS OF OTHER TOPICAL RESEARCH (JUN 2022 AND OLDER)

TREATMENT AND SUPPORT

Factors that predict discontinuing online treatment for problem gambling



August 2022
Finland

- **Purpose:** To examine factors that predicted discontinuing online treatment for problem gambling at three different phases: pre-treatment, before halfway, and before the end of treatment.
- **Methodology:** Data were from 1,139 Finnish adults who registered in the Peli poikki programme between 2019 and 2021. Peli poikki is an online cognitive behavioural therapy that lasts eight weeks. It involves weekly contact with a therapist.
- **What you need to know:** The researchers found that people were more likely to discontinue treatment if they were younger, had lower education, had more severe gambling problems, were not ready to change their gambling behaviour, had spent longer time on the waiting list, and had fewer good social relationships.
- **How you can use this research:** The findings of this study could inform the Peli poikki programme and other online treatments for problem gambling. For example, treatment programmes might want to target participants' level of readiness to change and quality of social relationships.

A systematic review of online communities and gambling behaviour



July 2022
Finland

- **Purpose:** To examine: (1) the role of online communities and groups in gambling behaviours; and (2) the link between online communities/groups and problem gambling.
- **Methodology:** The authors conducted a systematic literature review. They found 17 articles, published between 2017 and 2022, that met their inclusion criteria.
- **What you need to know:** Overall, online communities are used for a variety of reasons (e.g., discussing gambling experiences and problems, sharing tips, celebrating wins with others). Online discussion forums are also sources of support for people who gamble and their significant others. Active users of online gambling communities are more likely to be at-risk or have problem gambling. But a greater sense of belonging to offline groups can buffer the effect of online gambling community participation.

- **How you can use this research:** Policy makers and practitioners can use this article to support the creation of online communities that encourage users to reduce gambling behaviours.

INDUSTRY-BASED HARM MINIMISATION

Use of responsible gambling tools to prevent and reduce gambling harm: A Norwegian study



July 2022
Norway

- **Purpose:** To examine demographic and gambling characteristics that predict the use of various safer gambling tools.
- **Methodology:** Data came from 5,878 participants who responded to a Norwegian prevalence survey in 2019.
- **What you need to know:** The results showed that few people used safer gambling tools. Use of safer gambling tools ranged from 0.8% (contacting help services) to 23.2% (pre-commitment to loss limits). People with moderate-risk or problem gambling were more likely to have used all eight safer gambling tools. Other demographics (e.g., age, gender) and gambling characteristics (e.g., gambling on low risk vs. higher risk games) also had an impact.
- **How you can use this research:** The findings of this study can inform gambling operators and regulators on the use of safer gambling tools.

MARKETING AND MESSAGING

Exploring the link between gambling marketing and unplanned gambling spend in Britain



December 2022
United Kingdom

- **Purpose:** To examine the link between unplanned gambling spend and factors such as marketing awareness, among emerging adults and people who regularly bet on sports in Britain.

- **Methodology:** The researchers used data from two British online surveys. The first survey involved emerging adults aged 16 to 24 years old. The second survey involved adults who regularly bet on sports.
- **What you need to know:** In both samples, almost a third of participants said that marketing caused them to have unplanned gambling spend. Among people who experienced problem gambling, almost 9 in 10 said that marketing prompted unplanned gambling spend. Thus, the severity of problem gambling was linked to unplanned gambling spend. Receiving at least one form of direct marketing in the past month and following a gambling brand on social media were also linked to unplanned gambling spend. Being aware of marketing in the last month was not linked with unplanned gambling spend.
- **How you can use this research:** Policy makers can use this research to support restrictions on gambling marketing. Restrictions on marketing may reduce gambling-related harm.

YOUNG PEOPLE

Teachers' attitudes towards students' gambling in the United Kingdom



August 2022
United Kingdom

- **Purpose:** To understand teachers' awareness of and attitudes towards adolescent gambling in the United Kingdom.
- **Methodology:** The researchers recruited primary and secondary school teachers from UK mainstream schools. A total of 157 UK school teachers completed an online survey (20% were men, 38% were women, and 42% unspecified).
- **What you need to know:** Few teachers could correctly estimate the prevalence of gambling and problem gambling among youths (ages 11 to 14 and 15 to 18). Teachers thought that adolescent gambling was less serious than all other high-risk behaviours, except for drinking and driving. Teachers had fewer conversations with students about gambling than about other issues, except for drinking and driving. Teachers were also less confident in their ability to address gambling issues than alcohol and drug problems.
- **How you can use this research:** Policy makers and school administrators could use this research to increase teacher training around problematic youth gambling.

The impact of shame and guilt on how emerging adults cope with gambling problems



July 2022
Canada

- **Purpose:** To test whether 1) problem gambling would be associated more strongly with shame than guilt; 2) shame would be associated with avoidant coping strategies whereas guilt would be associated with nonavoidant coping strategies; and 3) shame would explain the relationship between problem gambling and avoidant coping strategies.
- **Methodology:** The researchers used survey data that had been collected in 2017 at a Canadian university. Participants of the survey were university students. Only data from those who were aged 18 to 24 years and had gambled were analysed (391 participants, 59.6% women, 39.9% men, and 0.5% binary).
- **What you need to know:** Results showed that problem gambling was more strongly associated with shame than guilt. Unexpectedly, shame was not strongly associated with the use of avoidant strategies to cope with gambling loss. Guilt was weakly associated with nonavoidant coping strategies and had weak to moderate association with avoidant coping strategies. For people with problem gambling, shame was linked to the use of avoidant coping and guilt was linked to the use of nonavoidant coping.
- **How you can use this research:** The findings of this study could be used to design better self-exclusion and treatment interventions.

UNDERSTANDING PROBLEM GAMBLING

A review of gambling disorder subtypes



June 2022
United States

- **Purpose:** To evaluate how valid and clinically useful the Pathways model and other models are. The Pathways model proposes three pathways in the development of gambling disorder based on three subtypes: 1) People who gamble as a result of learning processes and irrational beliefs about gambling; 2) People who have a history of mood disorders, negative family or childhood experiences, or other vulnerabilities; and 3) People who are prone to impulsive and antisocial behaviours and may struggle with substance use and personality disorders.

- **Methodology:** The authors conducted a systematic review of recent studies that subtyped people with gambling disorder.
- **What you need to know:** The authors identified 38 studies. Fourteen studies supported the Pathways model, with several studies proposing some changes. Twenty-four studies used other subtyping models. The authors concluded that there is evidence to support the Pathways model. Other subtyping models that emphasise symptom severity and co-occurring mental health disorders could also be incorporated into the Pathways model. However, there are several limitations to current research evidence.
- **How you can use this research:** This review can inform researchers and clinicians. It may help in the development of a measure for subtyping or interventions based on subtypes.

The impact of impulsivity on the relationship between disordered gambling and attentional bias



June 2022
Canada

- **Purpose:** To examine whether people with disordered gambling and a high level of impulsivity pay more attention to gambling cues than other cues.
- **Methodology:** Participants were 75 adults who gambled on electronic gaming machines regularly. They completed an eye-tracking task to measure attentional bias. Participants also completed several questionnaires measuring impulsivity and disordered gambling.
- **What you need to know:** Two aspects of impulsivity, negative and positive urgency, influenced the impact of disordered gambling on attentional bias. For participants with more severe gambling problems, those with a higher level of negative urgency showed larger attentional bias to electronic gaming machine images. The same was true for positive urgency.
- **How you can use this research:** This study may inform clinical practice and research. It suggests that distress tolerance and mindfulness-based interventions may be useful for people with high levels of negative and positive urgency.

Development of a tool that assesses risk factors of adolescent problematic gambling



January 2022
Spain

- **Purpose:** To create a tool that assesses risk factors for problem gambling in adolescents.
- **Methodology:** The authors surveyed 2716 adolescents aged 13 to 17 years old in southeastern Spain. The participants completed the Early Detection of Gambling among At-Risk Adolescents (EDGAR-A) Scale. This scale was created by the researchers to assess four risk factors: normative perception, risk perception, accessibility, and parental attitudes towards gambling.
- **What you need to know:** The authors found that the EDGAR-A Scale distinguished well between adolescents who engaged in gambling frequently and those who did not gamble at all. The results provided support for the EDGAR-A Scale as a useful tool to detect problematic gambling in adolescents.
- **How you can use this research:** This research could be useful for clinicians and researchers with an interest in adolescent gambling. With further research, the EDGAR-A Scale might be used in prevention and intervention strategies.

Motivations to gamble among Polish older men who had retired



June 2022
Poland

- **Purpose:** To explore gambling motivations among Polish men who had retired. The study also explored which motivations were the most common and if the motivations differed between older men with and without problem gambling.
- **Methodology:** The research team interviewed 44 older men aged 55 to 83 years. All men had retired and gambled regularly (at least once a week) for at least six months prior to the interview.
- **What you need to know:** The research team identified ten gambling motivations, which were grouped into five categories. The most common motivations were in the self-gratification category, especially sensations and entertainment. However, challenge was a motivation in this category that was rarely mentioned. Older men without problem gambling were also motivated by social reasons, but not older men with problem gambling. Older men with problem gambling more frequently cited financial reasons, coping with problems, and passing time or acting out of habit.

- **How you can use this research:** This study could inform problem gambling prevention and treatment programmes for older men.

GAMBLING REGULATION, RESEARCH, AND POLICY

Moving gambling harm prevention policies “upstream”: The role of policy makers and researchers



July 2022
Spain

- **Purpose:** To argue that “responsible gambling” has enjoyed wide support because it is relatively simple to adopt as compared to more complex frameworks that aim to address the “root causes” of gambling.
- **What you need to know:** The authors discuss the characteristics of policy making and research communities to explain why prevention policies have seen little change over the last two decades. The authors argue for a need to move gambling harm prevention “upstream” to address the root causes of the problem. They also suggest improving communication of research as a means of influencing policies and actions.
- **How you can use this research:** This research is intended for policy makers, researchers, and other stakeholders who have an interest in gambling harm prevention.

The inequality in gambling spending: Evidence from an online survey with people who gamble regularly on sports



July 2022
United Kingdom

- **Purpose:** To examine the extent to which people with moderate risk and problem gambling accounted for a greater amount of spending on different gambling activities.
- **Methodology:** The researchers examined data collected at two timepoints in 2020 and 2021 for a British longitudinal study with people who gambled regularly on sports. The Problem Gambling Severity Index (PGSI) was used to assess the risk of problem gambling.
- **What you need to know:** At both timepoints, people with a PGSI score of 3 or higher spent substantially more on gambling than those with a score less than 3. There were some differences by activity. Casino games relied most heavily on people with a gambling problem for profits, whereas lotteries were the least dependent.

- **How you can use this research:** This study suggests a need to reform the economic model that underlies certain sectors of the gambling industry to reduce spending among people who are most harmed by gambling. The findings could inform policy makers, regulators, and the gambling industry.

GAMBLING TYPES

Gambling motivations for esports betting and skin gambling: Links to gambling frequency, problems, and harm



July 2022
Australia

- **Purpose:** To examine gambling motivations for esports cash betting, esports skin betting and skin gambling; and, to examine which gambling motivations are linked with greater gambling frequency, problems, and harm.
- **Methodology:** A total of 736 participants (with an average age of 29, 80% men) completed an online survey. Participants had to have participated in esports cash betting, esports skin betting, or skin gambling in the last six months.
- **What you need to know:** Financial gain and enhancement (i.e., excitement) were the main reasons people engaged in all three products. Motivations to acquire skins were unique to esports skin betting and skin gambling. Higher levels of problem gambling and harm were linked to gambling to escape or improve mood for all three products. Motivations related to financial gain were linked to problem gambling only for esports skin betting and skin gambling.
- **How you can use this research:** The findings of this study could inform future research and clinical practice. Practitioners could tailor treatment and prevention efforts to address different motivations for esports betting and skin gambling.

Differences between people who purchase and earn loot boxes in Overwatch



July 2022
Canada

- **Purpose:** To examine loot box related harms due to purchasing versus earning loot boxes; and, if there were individual differences between people who earned loot boxes through game play and those who purchased loot boxes, including in terms of problem gambling.

- **Methodology:** The researchers compared two samples of people who played Overwatch. One sample consisted of 135 people who bought loot boxes in the last four weeks. The other sample consisted of 117 players who earned loot boxes in the last four weeks.
- **What you need to know:** The researchers found that those who bought loot boxes experienced greater harms related to video game spending. They also had greater risky loot box use, were more impulsive in the non-planning domain, and were more reactive towards loot box outcomes in terms of arousal and urge. But those who earned loot boxes had greater gambling-related harms, were more impulsive in the motor domain, and showed more emotional value to loot boxes. There were no differences in problem video-gaming between the two groups.
- **How you can use this research:** This study suggests that potential harms related to loot box engagement should be assessed on a game-by-game basis.

A comparison of loot box regulations from a public health perspective



July 2022
United Kingdom

- **Purpose:** To discuss why regulation of paid loot boxes should take a public health approach. It also compares current self-regulation of the video game industry and the legal approaches taken by various countries.
- **What you need to know:** Only a few countries have taken steps to regulate loot boxes. For example, Belgium has technically “banned” paid loot boxes. In China, video game companies have to include a disclosure of the probabilities of receiving potential rewards. Other countries, including the United Kingdom, are taking a wait-and-see approach. Industry self-regulation has also been adopted. But this seems to have lower rates of compliance than national legal regulation. This article suggests that other public health approaches to loot box regulation can be considered. For example, placing limits on loot box spending and modifications to loot box design.
- **How you can use this research:** This article is intended for policy makers and those advocating for loot box regulations.

Loot box probability disclosure statements in iPhone games in China



July 2021

China, United Kingdom, Australia

- **Purpose:** To examine the prevalence of paid loot boxes in the People's Republic of China (PRC) and the proportion of games with loot boxes that had probability disclosures; and, how companies interpreted the probability disclosure regulations in the PRC.
- **Methodology:** The researchers used App Annie (an analytics company) to select the 100 highest-grossing iPhone games on the PRC Apple App Store in mid-2020.
- **What you need to know:** Loot boxes were found in 91 of the 100 highest-grossing iPhone games in the PRC. Loot boxes were also found in over 90% of games that were rated as suitable for children aged 12+. Probability disclosures were not found for 4.4% of games that had loot boxes. Companies included probability disclosures in different ways. Some companies included disclosures both in-game and on the games' official website. But few companies (5.5%) included the disclosures in the most visible way possible (i.e., automatically displayed on the in-game loot box purchase page).
- **How you can use this research:** The researchers suggested that policy makers should require video game companies to use a uniform disclosure format that is visible and accessible.

Loot box spending in video games – relationship to gambling and wellbeing



July 2022

United Kingdom, Norway

- **Purpose:** To examine if there was a relationship between loot boxes and problematic gambling; and, what the effect of loot boxes was on mental wellbeing.
- **Methodology:** The authors recruited people over the age of 18 (2728 participants from 51 countries) who play video games to complete an online survey about problem gambling symptoms, disordered gaming symptoms, and money typically spent on loot boxes, other in-game spending, other digital spending, and gambling.
- **What you need to know:** Loot box spending was related to problem gambling symptoms and disordered gaming symptoms; people who spent more money on loot boxes reported more symptoms of problem gambling and disordered gambling. However, loot box spending was not related to mental well-being or psychological distress.

→ **How you can use this research:** This study could be useful for researchers and policy makers interested in loot boxes and their relationship with mental well-being, distress, and problematic gambling symptoms.

UPCOMING RESEARCH SNAPSHOTS

GAMBLING-RELATED HARMS

DEFINING, MEASURING, AND MONITORING GAMBLING-RELATED HARM

- Assessing potential brief screening questions for use within different social care-related contexts to identify individuals experiencing gambling-related harms: A scoping review (2022)
- Legacy gambling harms: What happens once the gambling stops? (2022)

MONEY AND DEBT

- Cryptocurrency trading and its associations with gambling and mental health: A scoping review (2022)

TREATMENT AND SUPPORT

- Exposure therapy for gambling disorder: Systematic review and meta-analysis (2022)
- Gambling and Gambling Problem Perception Questionnaire as a tool to evaluate professionals' attitudes towards problem gamblers and training programmes in Japan (2022)
- Gambling disorder and stigma: Opportunities for treatment and prevention (2022)
- Making change: Attempts to reduce or stop gambling in a general population sample of people who gamble (2022)
- Pharmacological interventions for the treatment of disordered and problem gambling (2022)

PREVENTION AND EDUCATION

- In search of lower risk gambling levels using behavioural data from a gambling monopolist (2022)

MARKETING AND MESSAGING

- Assessing the bets advertised on Twitter by gambling operators and gambling affiliates – an observational study incorporating simulation data to measure bet success (2022)
- How do gambling providers use the social network Twitter in Germany? An explorative mixed-methods topic modeling approach (2022)

PATTERNS OF PLAY

- Winning and losing in online gambling: Effects on within-session chasing (2022)

INDUSTRY-BASED HARM MINIMISATION

- Attitude towards deposit limits and relationship with their account-based data among a sample of German online slots players (2022)
- How structural changes in online gambling are shaping the contemporary experiences and behaviours of online gamblers: An interview study (2022)
- Loyalty programme rewards increases willingness to use responsible gambling tools and attitudinal loyalty (2022)
- Self-exclusion from gambling: A toothless tiger? (2022)

YOUNG PEOPLE

- Adolescents who play and spend money in simulated gambling games are at heightened risk of gambling problems (2022)
- Drugs and alcohol get talked about, why not betting? Young men's qualitative insights about strategies to prevent gambling harm (2022)
- 'Immediate access ... everywhere you go': A grounded theory study of how smartphone betting can facilitate harmful sports betting behaviours amongst young adults (2022)
- School factors associated with past month gambling among a large sample of adolescents (2022)
- The prevention of adolescent problem gambling through probabilistic reasoning: Evidence of the intervention's efficacy (2022)

UNDERSTANDING PROBLEM GAMBLING

- Cognitive distortions and problem gambling in sports gambling (2022)
- Development and psychometric properties of a new patient-reported outcome instrument of health-related quality of life specific to patients with gambling disorder: The Gambling Quality of Life Scale (GQoLS) (2022)
- Development and validation of a prediction model for online gambling problems based on players' account data (2022)
- Individual differences and predictors of general awareness in problem gambling (2022)

- Interactive effects of problem-gambling severity, gender and alcohol consumption on electronic gaming machine behaviour (2022)
- Problematic gambling behaviour in a sample with substance use disorder: The role of attachment style and alexithymia (2022)
- Separating problem gambling behaviours and negative consequences: Examining the factor structure of the PGSI (2022)
- Testing the bifactor model of the Financially Focused Self-Concept Scale (2022)
- The relationship between gambling disorder, stressful life events, gambling-related cognitive distortions, difficulty in emotion regulation, and self-control (2022)

GAMBLING REGULATION, RESEARCH, AND POLICY

- Drafting video game loot box regulation for dummies: A Chinese lesson (2022)

ETHNIC MINORITIES

- Gambling disorder in minority ethnic groups (2022)

GENDER

- Gambling among LGBTQIA2S+ populations: A scoping review (2022)

GAMBLING TYPES

- Measuring loot box consumption and negative consequences: Psychometric investigation of a Swedish version of the Risky Loot Box Index (2022)
- Probability disclosures are not enough: Reducing loot box reward complexity as a part of ethical video game design (2022)
- Sports betting around the world: A systematic review (2022)

COVID-19

- Expenditure on paid-for gambling advertising during the national COVID-19 'lockdowns': An observational study of media monitoring data from the United Kingdom (2022)