Quarterly Research Briefing 02/12 (May 2012)

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Prepared by:

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Quarterly research briefing 02/12

Introduction

1. The purpose of this briefing note is to provide both the Board and all Commission employees with a short summary of significant research that has either been published recently, or is due to be published in the near future. This, and future, research briefings will be shared with the Responsible Gambling Strategy Board (RGSB) and the National Lottery Commission (NLC).

2. Copies of the full research documents featured in this briefing, or more detailed summaries, are available on request.

Overview and key themes

3. There appears to be a continuing focus in recent research on the gambling behaviour of young people and the accuracy of problem gambling screening tools. Of particular interest this quarter is the Gambling Commission’s report; Developing a short-form of the PGSI. Commissioners are also invited to note the publication of the NLC’s research into the NLCLip mini-screen and the RGF/Responsible Gambling Trust-funded longitudinal study of adolescent gambling behaviour (ALSPAC).

Recent/current research

Gambling Commission research

4. Developing a short-form of the PGSI
Volberg & Williams (2012)

5. This paper presents the results of an analysis of the Gambling Commission’s trial of a three-item problem gambling mini-screen (derived from the PGSI) in a telephone omnibus survey. The authors separately analysed the performance of the mini-screen in three samples; the Commission’s omnibus surveys, the British Gambling Prevalence Surveys, and a clinically assessed sample of gamblers drawn from two international studies. The data from these samples was used to; calculate prevalence rates based on the full PGSI and the mini-screen, assess the overall performance of the new measure, and examine how the measure performed across major demographic groups. The project provides the Gambling Commission with advice on the feasibility and suitability of the new measure for use in tracking the prevalence of problem gambling in the general population.

Main findings

- The results of the analysis confirm that the new measure is a valid brief assessment instrument for problem gambling.

- Using a cut-off of 3 or more provides a reasonable approximation of the ‘true’ rate of problem gambling as determined by both clinical assessment and the full PGSI screen.

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1 The questions/items were selected based on their performance in the BGPS 2007 and were: (1) Have you bet more than you could really afford to lose?, (2) Have people criticised your betting, or told you that you have a gambling problem, whether or not you thought it is true?, (3) Have you felt guilty about the way you gamble or what happens when you gamble?

2 For each item of the mini-screen respondents can score: 0 (never), 1 (sometimes), 2 (most of the time) or 3 (almost always), resulting in a total possible maximum score of 9.
• Using a cut-off of one or more provides an excellent approximation of the ‘true’ rate of at-risk, problem and pathological gambling as determined by clinical assessment.

• While the PGSI short-form has utility in approximating the true rate of problem gambling in the population, it is not appropriate for clinical assessment or screening, and should not be used to track changes in the sociodemographic characteristics of problem gamblers in the population.

• The authors recommend that the new brief assessment instrument should be fielded in the omnibus survey (and potentially other surveys) as a relatively low-cost means to monitor problem gambling prevalence.

6. Survey data on gambling participation, year to March 2012
Gambling Commission (2012)

7. This report presents the findings of two separate, but complementary, sets of questions commissioned by the Gambling Commission in omnibus surveys conducted by ICM Research. The first set of questions measures participation in all types of gambling activity, including by remote means (n=4,000); the second set measures participation in remote forms of gambling (n=4,000). The annual figures in the report are produced by averaging the results of the previous four quarterly surveys. These reports are published on a quarterly basis.

Main findings

All gambling participation (including by remote means)

• 58.1% of the 4,000 adults surveyed said they had participated in at least one form of gambling in the previous four weeks. This figure of 58.1% compares with the 2011 calendar year figure of 57.3%, the 2010 calendar year figure of 55.5% and the 2009 calendar year figure of 55.2%.

• The most popular gambling activity was National Lottery tickets (48.0% of respondents), followed by National Lottery scratchcards (13.0%) and tickets for society or other good cause lotteries (10.6%). Betting on horse races, gambling on fruit or slot machines, and private betting with family, friends or colleagues were the next most popular activities (4.3%, 3.4%, and 3.3% respectively).

• Those participating in gambling were more likely to be male than female, and were more likely to be aged over 45.

Remote gambling participation

• 12.2% of the 4,000 adults surveyed said they had participated in at least one form of remote gambling in the previous four weeks. Around half of these had participated just in National Lottery products.

• This figure of 12.2% compares with the 2011 calendar year figure of 12.4%, the 2010 calendar year figure of 11.1%, the 2009 calendar year figure of 10.5%, the 2008 calendar year figure of 9.7%, the 2007 calendar year figure of 8.8% and the 2006 calendar year figure of 7.2%.

• The growth in participation in remote gambling is explained very largely by increased online participation in the National Lottery. If those only playing
National Lottery products remotely are excluded, 5.4% of respondents had participated in remote gambling in the year to March 2012, compared with the figure of 6.1% in 2011, 5.7% in 2010, 5.7% in 2009, 5.6% in 2008, 5.2% in 2007 and 5.1% in 2006.

**Responsible Gambling Trust research**

8. **Avon Longitudinal Study of Parents and Children (ALSPAC) Gambling behaviour in adolescents aged 17 years** Emond, Doerner & Griffiths (2012)

9. The Avon Longitudinal Study of Parents and Children (ALSPAC) is an ongoing cohort study in the South West of England investigating the interaction between genetic and environmental influences on health and development. When the young people in the study were 17 years old (n=3,750) information was collected on their gambling attitudes and behaviours via the completion of computer-administered gambling questionnaires in research clinics and online.

**Main findings**

- A third of all respondents had participated in gambling activities in the past year (28% of females and 40% of males).

- The most common activities were buying national lottery tickets (27%), private betting (21%) and buying scratchcards (20%), followed by playing on fruit machines (17%) and betting on dog races (9%). Virtual gaming or participating in online betting or gambling was reported by 11% of respondents. Only 6% reported gambling in casinos.

- The characteristics associated with regular (i.e. at least weekly) gambling were; male gender, lower maternal social class, lower level of maternal education, family living in renting accommodation, and whether a partner lives at home.

- After adjustment for gender, maternal social class and family home ownership status, the demographic factors remaining independently associated with regular gambling were maternal education and living in rented accommodation.

- In the final adjusted model, binge drinking, daily cigarette smoking and high sensation seeking scores were independently associated with regular gambling.

- The vast majority of respondents (91%) did not report any problems associated with gambling. However, approximately a quarter (27%) of past-year gamblers had some degree of problem according to the PGSI.

- Nine respondents (0.74% of past-year gamblers) were classed as problem gamblers and 322 (26% of past-year gamblers) were classified as being at-risk.

- Problem and at-risk gamblers were almost twice as likely to be males than females, to be born into families with a mother over 35 years with low educational qualifications, with three or more older siblings, and to live in rented rather than owner-occupied accommodation.
• 26% of problem and at-risk gamblers had mothers who had also previously reported problematic gambling behaviours (compared to 20% among other gamblers).

• After adjustment, the factors independently associated with problem gambling were low IQ and binge drinking.

• A group of at-risk gamblers (n=111, 9%) who gambled at least weekly was identified, and categorised as 'high risk', this group showed even stronger associations with cigarette, alcohol and substance use.

• Problem, at risk, and regular gamblers showed high scores on all aspects of the Gambling Related Cognitions Scale, such as the perceived ability to predict or control gambling outcomes, 'illusion of control' score, the gambling expectancies score, and the inability to stop gambling score.

**Gambling behaviour of young people**

10. **Gambling in Asian Communities in Great Britain**
Forrest & Wardle (2011)

11. This paper examines the prevalence of gambling and problem gambling among people of Indian, Pakistani, and Bangladeshi cultural backgrounds living in Great Britain. Information was gathered from the British Gambling Prevalence Surveys in 2007 and 2010, and a similar survey of children aged 11 to 15 years\(^\text{3}\). The authors found that in both adult and child Asian populations, gambling participation is low relative to the white/white British ethnic group, yet problem gambling prevalence was significantly higher, including among women. As Asians who do gamble are unusually prone to experiencing problems, the authors argue that there are important implications for public health policies such as the provision of information and help in minority languages.

12. **Childhood impulsive behavior and problem gambling by adulthood: a 30-year prospective community-based study**

13. This cohort study investigated the association between impulsive and shy/depressed behaviours at age seven and the development of life-time problem gambling by adulthood (as measured by the South Oaks Gambling Screen administered during the adult follow-up study). The results showed that children who exhibited impulsive behaviours at age seven were three times more likely to report problem gambling in adulthood compared to their non-impulsive counterparts. However, the analyses did not find any significant association between childhood shy/depressed behavior and problem gambling in adulthood. The authors conclude that impulsive behaviors at age seven are a specific and significant risk factor for later problem gambling.

14. **Gambling-Related Harms Among Adolescents: A Population-Based Study**
Raisamo, Halme, Murto & Lintonen (2012)

15. This Finnish study used a national sample of adolescents (12-18 year olds, n=4,556) to examine self-experienced harms related to gambling and the relationship between

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\(^3\) Although not specified in the abstract it is assumed that this refers to the *British Survey of Children, the National Lottery and Gambling 2008-9*.
reported harms and gambling behavior. The authors argue that their findings suggest that it is important to consider the nature and extent to which gambling may contribute to the different types of harms when planning youth gambling prevention and harm reduction strategies.


17. This paper presents results from a cross-sectional study of the entire adolescent student population (aged 12–19, n=2,017) of the Greek island of Kos and their parents, on the relationship between their internet gambling and parental practices, including aspects of psychological bonding and online security measures. The results indicate that gender, parenting practices (as perceived by the adolescents) and distinct patterns of adolescent internet activities are among the best predictors for internet gambling. Security practices exercised by the parents failed to make an impact on the extent of internet gambling. The authors suggest that this demonstrates the need for specific measures to tackle internet gambling especially as the provision of simple education on the dangers of the internet do not appear to be sufficient.

Problem gambling screens


19. This paper reports on the results of applying a short screen for problem gambling, called NLCLiP, to a national sample of British schoolchildren under the age of 16 (n=8,958). The NLCLiP consists of three questions and was included in the supervised self-completion questionnaire employed in the British Survey of Children, the National Lottery and Gambling 2008-09, which was conducted in British schools between November 2008 and February 2009.

Main findings

- In its current form, NLCLiP can, with reasonable accuracy, estimate the rate of prevalence of problematic and non-problematic gambling in a general population of children.

- However, NLCLiP does not reliably discriminate between problem and at-risk gamblers, and does not provide a reliable basis to identify cases of problem gambling.

- The authors conclude that the NLCLiP is a potentially useful tool for regulators to assess changes in the prevalence of problematic and non-problematic gambling among children over time.

20. Validity of the Problem Gambling Severity Index Interpretive Categories Currie, Hodgins & Casey (2012)

21. This study used Canadian population data (n=25,000) to conduct a comprehensive validity and reliability analysis of the four Problem Gambling Severity Index (PGSI) gambler types; ‘non-problem’, ‘low-risk’, ‘moderate-risk’ and ‘problem’. The results

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(1) In the past 12 months, how often have you found yourself thinking about gambling or planning to gamble? (2) In the past 12 months how often have you tried to cut down how much you gamble? (3) In the past 12 months, how often have you lied to your family, friends, or anyone else about how much you gamble?
suggest that the temporal stability of PGSI subtypes over a 14-month interval was modest but adequate. The authors found strong evidence for the validity of the ‘non-problem’ and ‘problem’ gambler categories, however the low-risk and moderate-risk categories showed poor discriminant validity using the existing scoring system. The authors suggest that the validity of these categories can be improved with a simple modification to the scoring system.

22. **An evaluation of the factor structure of the Problem Gambling Severity Index**
   Boldero & Bell (2012)

23. This study used both confirmatory factor analysis (CFA) and item response theory (IRT) modelling to assess the PGSI’s psychometric properties for a sample of Australian college students (n=366). The results of the study suggest that the accuracy of the PGSI as a screening measure would be enhanced if the 12-items scale was used and that responses to items were weighted.

**Other research**

24. **After the Ban of Slot Machines in Norway: A New Group of Treatment-Seeking Pathological Gamblers?**
   Torild, Bu & Skutle (2012)

25. This study examined the changes in demographical and clinical features of treatment-seeking pathological gamblers (n=99), and their gambling preferences before and after the ban of slot machines in Norway from July 2007. The authors found that, after the ban, the mean age of treatment seekers was significantly lower. In addition, significantly more were highly educated, in regular employment, and married. Internet gambling and a sport betting game called ‘Odds’ were the most common activities. Gambling problems had become more severe, and with more significant consequences, with the sample displaying heavier alcohol consumption and increased suicidal thoughts and attempts. The authors argue that the slot machine ban changed the characteristics of treatment-seeking gamblers which has significant implications for treatment strategies.

26. **Gambling Prevention Program Among Children**
   Todirita & Lupu (2012)

27. This paper compares the influence of a specific primary prevention programme with rational emotive education (REE) on young people’s knowledge about gambling games. Participants (n = 81, age 12–13) either received specific information about games using interactive software, or a programme of Rational Emotive Education. All participants completed a questionnaire at the beginning of the study and after 10 weekly interventional meetings. The results obtained indicated that the use of the interactive software significantly improved subjects’ knowledge about gambling and corrected their perceptions about how games work. The results of the study also suggest that specific primary prevention tools for changing erroneous conceptions is more efficient than using REE on its own.

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5 Discriminant validity tests whether concepts or measurements that are supposed to be unrelated are, in fact, unrelated
6 Confirmatory Factor Analysis is used to test whether measures of a construct are consistent with a researcher’s understanding of the nature of that construct.
7 Item Response Theory is used in the field of psychometrics to inform the design, analysis, and scoring of tests, questionnaires and similar measurement instruments. It is based on the application of mathematical models to testing data.
8 Rational Emotive Education (REE) is a preventive-interventional mental health program through which children and adolescents can learn positive rational mental health concepts and the skills to apply these concepts.
Parhami, Siani, Rosenthal & Fong (2012)

The study investigated the relationship between three specific sleep complaints and gambling behavior, using the data from the US National Comorbidity Survey—Replication (NCS-R). The study found that almost half of respondents with problem gambling behavior (45.9%) and two thirds (67.7%) of respondents with pathological gambling behavior reported at least one sleep complaint. Respondents with pathological gambling were significantly more likely to report at least one sleep complaint, to report all sleep complaints, and to report any individual complaint compared to respondents with no gambling pathology. The relationship between problem gambling and sleep complaints was more modest.

29. **Gambling by Ontario casino employees: gambling behaviours, problem gambling and impacts of the employment**
Guttentag, Harrigan & Smith (2012)

This paper examines casino employee gambling by analysing surveys (n=934) and interviews (n=21) completed by employees from five casinos in Ontario, Canada. The gambling behaviours of employees were found to relate to various workplace influences (exposure to gambling; exposure to patrons; exposure to the work environment, and the existence of training, restrictions, and resources) and employment variables (length of employment, previous industry experience, and department). Additionally, employees exhibited problem gambling rates over three times greater than those of the general population. These higher rates were explained primarily by employees who increased their gambling after commencing employment and employees who were attracted to their jobs because of prior gambling involvement.

30. **‘They are working every angle’. A qualitative study of Australian adults’ attitudes towards, and interactions with, gambling industry marketing strategies**
Thomas, Lewis, McLeod & Haycock (2012)

This Australian study, utilised semi-structured qualitative interviews with past-year gamblers (n=100) to explore the ways in which individuals conceptualise and respond to gambling marketing strategies. Respondents described the ‘multi-layered’ ways in which gambling was marketed and expressed concern about the role of marketing in normalising gambling for some groups. Male participants indicated that they felt ‘bombarded’ and ‘targeted’ by sports betting marketing. Most women and older men actively resisted gambling marketing strategies. Older women, younger men, moderate and high risk gamblers and those from low socio-economic backgrounds were particularly influenced by incentivisation to gambling (e.g. free meals and drinks at venues, or free bets on online betting sites).

31. **The use of messages in altering risky gambling behaviour in experienced gamblers**
Jardin & Wulfert (2012)

The present study examined the relationship between gambling-related irrational beliefs and risky gambling behavior. High-frequency gamblers (n=80) were randomly assigned to four conditions and played a chance-based computer game in a laboratory setting. During the game a pop-up screen repeatedly displayed either accurate or inaccurate messages concerning the game, neutral messages, or no messages. The results indicate that accurate messages that correctly described the randomness of the game decreased risky gambling behavior. Participants in the latter three conditions did not differ significantly from one another and all showed riskier gambling behavior than participants in the group which received accurate messages. The results suggest that harm minimisation strategies that help individuals maintain a rational perspective while gambling may protect them from unreasonable risk-taking.
Psychology of gambling

36. The following studies focus on the psychological aspect of gambling, copies of which are available on request.

- Impaired self-awareness in pathological gamblers (Brevers, Cleeremans, Bechara, Greisen & Kornreich, et al)
- A Preliminary study of the neural correlates of the intensities of self-reported gambling urges and emotions in men with pathological gambling (Balodis, Lacadie & Potenza)
- Arousal and gambling mode preference: a review of the literature (Baudinet & Blaszczynski)
- Predicting and understanding undergraduate students' intentions to gamble in a casino using an extended model of the theory of reasoned action and the theory of planned behavior (Lee)
- No regrets? Mood and the anticipation of emotions in problem gambling (Tochkov)
- Alexithymia and gambling: a risk factor for all gamblers? (Bonnaire, Bungener & Varescon)