

# British Gambling Prevalence Survey 2010



*Authors:* Heather Wardle, Alison Moody, Suzanne Spence, Jim Orford, Rachel Volberg, Dhriti Jotangia, Mark Griffiths, David Hussey and Fiona Dobbie.

*Prepared for:* The Gambling Commission

**British Gambling Prevalence Survey 2010**

# British Gambling Prevalence Survey 2010



*Authors:* Heather Wardle, Alison Moody, Suzanne Spence,  
Jim Orford, Rachel Volberg, Dhriti Jotangia, Mark Griffiths,  
David Hussey and Fiona Dobbie

GAMBLING  
COMMISSION

*Prepared for:* The Gambling Commission

© National Centre for Social Research 2011

The text of this document (this excludes, where present, the Royal Arms and all departmental and agency logos) may be reproduced free of charge in any format or medium providing that it is reproduced accurately and not in a misleading context.

The material must be acknowledged as National Centre for Social Research copyright and the document title specified. Where third party material has been identified, permission from the respective copyright holder must be sought.

Any enquiries regarding this publication should be sent to us at [info@natcen.ac.uk](mailto:info@natcen.ac.uk)

This publication is also available on <http://www.official-documents.gov.uk/>

ISBN: 9780108509636

Printed in the UK for The Stationery Office Limited  
on behalf of the Controller of Her Majesty's Stationery Office

ID: 2407699 02/11

Printed on paper containing 75% recycled fibre content minimum.

Designed by Davenport Associates

# Contents

Foreword	7
Acknowledgements	8
Executive summary	9

## **1 Introduction** 15

1.1 Background and aims	15
1.2 Overview of survey design	16
1.3 Caveats	17
1.4 Report conventions	17
Endnotes	18

## **2 Gambling participation** 19

2.1 Definition of gambling and gambling participation	19
2.2 Gambling participation in the past year	20
2.3 Gambling participation in the past week	23
2.4 Comparisons with 1999 and 2007	25
2.5 Relationship between different gambling activities	29
2.6 How people gamble	31
Endnotes	35

## **3 Profile of gamblers** 37

3.1 Introduction	37
3.2 Past year gambling by socio-demographic characteristics	37
3.3 Past year gambling by socio-economic characteristics	43
3.4 Comparison of past year, regular and weekly gamblers	52
Endnotes	54

## **4 Gambling involvement** 55

4.1 Introduction	55
4.2 Questions, definitions and measurement	55
4.3 Gambling frequency	56
4.4 Gambling frequency by mode of access	60
4.5 Comparisons of gambling frequency with 2007	62
4.6 Gambling volume among regular gamblers	63
4.7 Self-reported changes in gambling involvement	69
Endnotes	71

## **5 Problem gambling** 73

5.1 Introduction	73
5.2 The DSM-IV	73
5.3 The PGSI	74
5.4 Caveats	74
5.5 Problem gambling prevalence in 2010, according to the DSM-IV	75
5.6 Problem gambling prevalence in 2010, according to the PGSI	79
5.7 Comparisons of the DSM-IV and PGSI	83
5.8 Problem gambling prevalence over time: comparisons with 1999 and 2007	84
5.9 Comparisons with other national prevalence surveys	86
Endnotes	86

<b>6</b>	<b>Profile of problem gamblers</b>	89
6.1	Introduction	89
6.2	Problem gambling by socio-demographic, health, lifestyle and familial characteristics	89
6.3	Problem gambling by gambling activity	94
6.4	Factors associated with problem gambling	97
	Endnotes	100
<b>7</b>	<b>Profile of at-risk gamblers</b>	101
7.1	Introduction	101
7.2	Prevalence of at-risk gambling	102
7.3	At-risk gambling by socio-demographic, health, lifestyle and familial characteristics	103
7.4	Factors associated with at-risk gambling	108
	Endnotes	111
<b>8</b>	<b>Reasons for gambling</b>	113
8.1	Introduction	113
8.2	Development of the Reasons for Gambling Questionnaire (RGQ)	113
8.3	Reasons for gambling by age and sex	115
8.4	Factor analysis of the Reasons for Gambling Questionnaire	119
8.5	Summary	125
	Endnotes	125
<b>9</b>	<b>Attitudes to gambling</b>	127
9.1	Development of a short Attitudes Towards Gambling Scale (ATGS-8)	127
9.2	Scoring the ATGS-8 scale	127
9.3	Attitudes towards gambling among the population	128
9.4	Attitude scores by socio-demographic characteristics	129
9.5	Attitudes towards gambling by gambling behaviour	130
9.6	Comparisons between 2007 and 2010	131
9.7	Summary	132
	Endnotes	133
	Appendix 1 <b>Characteristics of the sample</b>	135
	Appendix 2 <b>Methodology</b>	143
A2.1	Introduction	143
A2.2	Questionnaire development and piloting	143
A2.3	Topic coverage	146
A2.4	Sample design	149
A2.5	Data collection procedures	150
A2.6	Survey response	151
A2.7	Data processing	153
A2.8	Weighting	153
A2.9	Scoring the problem gambling screening instruments	154
A2.10	Scoring the attitude scale	155
A2.11	Detecting changes in problem gambling between survey years	156
A2.12	Calculating gambling days per year, time spent gambling per month and money spent gambling	157
A2.13	Factor analysis for the Reasons for Gambling Questionnaire	158
A2.14	Data analysis and reporting	159
	Endnotes	159
	Appendix 3 <b>Questionnaire documentation</b>	161

# Foreword

On behalf of the Gambling Commission, I would like to welcome this report of the British Gambling Prevalence Survey (BGPS) 2010 and to thank the authors for producing a thorough study of gambling behaviour in Great Britain.

The BGPS 2010 is the third nationally representative survey of participation in gambling and the prevalence of problem gambling in Great Britain. It builds on the two previous surveys conducted in 1999 and 2007, providing a valuable basis for understanding the way people gamble in Britain. The BGPS 2010 is the first survey to have been carried out since the implementation of the Gambling Act 2005 on 1 September 2007; it therefore provides important information about changes observed since the introduction of the Act. The Gambling Commission has a duty to advise the Secretary of State on the prevalence, nature and effects of gambling and this survey report helps us fulfil that duty.

The Commission would like to thank the many contributors to this report, including the BGPS Steering and Advisory Groups whose input and advice helped to shape and refine the questionnaire. We also want to thank Professor Dean Gerstein and Professor John Strang for the thorough way in which they approached their peer reviews of the report. Both are eminent academics with interests in gambling and addictions research. And finally we would like to thank the 7,756 individuals who contributed to the work by taking the time to respond to the survey.

The data presented here provide the Commission with important information which will assist in fulfilling its function of regulating gambling in Great Britain. The existence now of three valuable data sets spanning a period of ten years and their availability to our stakeholders and the academic community provides an excellent research resource. We look forward to the further analysis, debate and research which the report will stimulate.



Brian Pomeroy  
Chairman  
Gambling Commission

# Acknowledgements

The production of any large scale social survey is a team effort; the British Gambling Prevalence Survey (BGPS) is no exception. The authors are indebted to a number of colleagues who have contributed to this study and to the production of this report. Our thanks are due to Kevin Pickering, Julia Hall and Victoria Brown for their help and assistance with the survey design and data analysis; to NatCen's Operations Department and Telephone Unit for overseeing the implementation of the survey fieldwork; to Richard Akers, Peyman Damestani and Iain Templeton for producing all project computing systems; to Paddy Costigan, Kerry Sproston and Victoria Wright for their time and support and last, but not least, to NatCen's field and telephone interviewers who collected the survey data on our behalf. We thank you.

We would also like to give thanks to our sponsors at the Gambling Commission, notably Kati Virtaal, Jessica Loveland and Ruth Callaghan, for their diligence and hard work. The BGPS Steering Group and Advisory Group provided useful advice, support, and constructive challenge in the planning stages of this study, for which we are extremely grateful.

A number of other colleagues kindly offered their support and advice throughout the planning stages of this project, including Peter Collins, David Forrest and Gerda Reith.

Finally, we would like to thank all the respondents who gave up their time to take part in the survey, without whom this report would not be possible.



# Executive summary

This report presents results from the British Gambling Prevalence Survey (BGPS) 2010. This is the third nationally representative survey of its kind; previous studies were conducted in 2007 and 1999. The aims of the BGPS 2010 were to provide data on participation in all forms of gambling in Great Britain, the prevalence of problem gambling, attitudes to gambling and to explore a range of associations with gambling behaviour.

The 2010 study is the first in this series to be conducted after the full implementation of the Gambling Act 2005. Therefore, a further objective was to, where possible, provide some comparisons pre and post implementation of the Gambling Act 2005. Overall, 7,756 people participated in this study.

## Participation in gambling activities (Chapter 2)

- Overall, 73% of the adult population (aged 16 and over) participated in some form of gambling in the past year. This equates to around 35.5 million adults. This represents a return to rates observed in 1999 (72%) and an increase from the rate observed in 2007 (68%).
- As noted in previous years, the most popular gambling activity was the National Lottery. In 2010, 59% of adults had bought tickets for the National Lottery Draw, a slight increase from the rates observed in 2007 (57%) but lower than rates observed in 1999 (65%).
- Excluding those who had only gambled on the National Lottery Draw, 56% of adults participated in some other form of gambling in the past year. Comparable estimates for 1999 and 2007 were 46% and 48%. This highlights a significant increase in past year participation on other gambling activities, such as an increase in betting on other events i.e., events other than horse races or dog races with a bookmaker (3% in 1999, 9% in 2010), buying scratchcards (20% in 2007, 24% in 2010), buying other lotteries tickets (8% in 1999, 25% in 2010), gambling online on poker, bingo, casino and slot machine style games (3% in 2007, 5% in 2010) and gambling on fixed odds betting terminals (3% in 2007, 4% in 2010).
- Only one activity showed a large decrease in popularity between survey years. This was football pools (4% in 2010, 9% in 1999). There were some small but significant decreases in the popularity of slot machines (13% in 2010, 14% in 2007 and 1999) and online betting (4% in 2007, 3% in 2010). For all other gambling activities, there was either no significant change between survey years or estimates varied with no clear pattern.
- In 2010, after the National Lottery, the most popular gambling activities were other lotteries (25%), scratchcards (24%), betting on horse races (16%), playing slot machines (13%) and private betting (11%).
- Less than one in ten people took part in each other activity. Estimates ranged from 9% who took part in bingo and betting on sports events to 1% who reported spread betting.
- The prevalence of playing poker in a pub tournament or at a club was measured for the first time in 2010. Overall, 2% of adults reported playing poker this way in the past year.
- Overall, the average number of different activities people participated in within the past year was 1.9 (2.3 for men; 1.6 for women). Male past year gamblers took part in three different activities per year on average (3.0) whereas female past year gamblers took part in just over two different activities (2.3).

## How people participated in gambling activities (Chapter 2)

- A core objective of the 2010 survey was to collect more detailed information about how people gamble.
- Overall, 14% of adults had used the internet to gamble in the past year. This included buying lottery tickets online, betting online, playing casino games, bingo or other slot machines style games and playing the football pools online.
- The 2007 survey used a more conservative definition of online gambling. This only included gambling online on casino, bingo or online slot machine style games, betting online or using a betting exchange. In 2010, 7% of adults participated in these activities, an increase from 6% in 2007. This increase was greater among women than men.
- Among past year gamblers, 81% reported that they gambled 'in-person' only, that is they gambled using any offline method, such as placing a bet in a betting shop, visiting a casino or bingo hall, buying lottery tickets or scratchcards in a shop and so on. 17% of past year gamblers had gambled both online and in-person. Only 2% of past year gamblers had gambled 'online only'.
- For most activities which can be participated in both online and offline, the vast majority of gamblers chose to take part in these 'offline'. However, two activities stood out as having a relatively high proportion of online activity; casino games and betting on other sports events. Among those who had played casino games in the past year, 39% had done so online. Likewise, 27% of past year sports bettors reported that they placed their bet online.

## Who participates in gambling activities (Chapters 2 and 3)

- Men were more likely than women to gamble overall (75% for men and 71% for women).
- Men were more likely than women to take part in most gambling activities. The exceptions were bingo (12% for women and 6% for men) and scratchcards (25% for women and 23% for men).
- Among women, past year gambling increased from 65% in 2007 and 68% in 1999 to 71% in 2010. Among men, past year gambling estimates were higher in 2010 than 2007 (75% and 71% respectively). However, the 2010 prevalence rates were not higher than those observed in 1999 (76%).
- As in previous years, gambling was associated with age. Past year gambling participation was lowest among the youngest and oldest age groups and highest among those aged 44-64.
- Past year gambling prevalence rates were highest among those who were either married or had been married (75%), respondents who were White/White British (76%), those whose highest educational attainment was GCSEs or equivalent (76%) or had other qualifications (78%), those from lower supervisory/technical households (79%), those in paid work (78%), those with the highest personal income (79% for the 4th income quintile and 76% for the highest income quintile) and those living in the East Midlands (80%).

## Gambling involvement (Chapter 4)

- An objective of the 2010 survey was to collect better information about how engaged people were with gambling (termed gambling involvement in this report). This includes measurement of gambling frequency, the number of activities undertaken and broad estimates of money and time spent gambling.
- 59% of people who participated in the National Lottery did so once a week or more often. Only football pools was undertaken with a similar level of frequency; 54% of people who play football pools reported doing this once a week or more often.
- There were five other activities which were undertaken at least once a month by half or more of all participants. These were bingo played in person (54%), casino games played on line (53%), spreadbetting (53%), fixed odd betting terminals (52%), and poker at a pub/club (50%).

- Taking participation in all gambling activities together, past year gamblers took part in gambling, on average, on 93.6 days per year. That is, they tended to gamble more than once a week, but not quite as often as twice a week.
- Past year male gamblers had a higher mean number of gambling days per year than female past year gamblers (115.2 days compared with 71.5 days respectively).
- Those who gambled both online and in-person did so more than twice as often (163.3 days) as those who gambled 'online only' (61.5 days) or 'in-person' only (79.5 days).
- Regular gamblers, those who gamble once a month or more often, were categorised into the following groups:
  - High-time only gamblers (i.e., those who spend a lot of time but not a lot of money gambling),
  - High-spend only gamblers (i.e., those who spend a lot money, but not a great deal of time gambling),
  - High-time/high-spend gamblers, and
  - Non high-time/non high-spend gamblers.
- Overall, 85% of regular gamblers were classified non high-time/non high-spend gamblers, 6% were high-time/high-spend gamblers and 4% each were high-time and high-spend gamblers.
- High-time only, high-spend only and high-time/high-spend gamblers tended to be younger than non high-time/non high-spend gamblers.
- The profile of high-time only gamblers consisted disproportionately of those with the poorest socio-economic indicators. For example, 7% were unemployed. (4 percentage points higher than unemployment rates observed for all regular gamblers (3%)). After the National Lottery, bingo was the most popular activity among this group. This group also displayed a relative preference for playing poker at a pub/club.
- High-spend only gamblers had a varied socio-demographic profile. This group had the highest proportions of graduates (35%) and those in paid employment (70%). Comparative to the high-time only and non high-time/non high-spend groups, this group showed a relative preference for betting on sports events and betting on horse races.
- High-time/high-spend gamblers, like high-time only gamblers, displayed the most adverse socio-economic profile. They were more likely to live in areas of greatest deprivation, live in low income households and be unemployed. This group showed a relative preference for betting on horse races, fixed odds betting terminals and playing casino games.
- All respondents were asked to report whether their gambling involvement had changed in the past year. Overall, 4% of adults reported that their gambling involvement increased, 13% reported that it decreased and 82% that it had stayed the same.
- The main reasons given for changing gambling involvement related to different opportunities to gamble, such as having more or less money, time or gambling opportunities than previously.

## Problem gambling (Chapters 5 and 6)

- Two measures of problem gambling were used: the DSM-IV and the PGSI.
- When examining changes in problem gambling prevalence, a number of considerations should be borne in mind. Tests to evaluate statistically significant differences (expressed as being significant at the 5% level or  $p < 0.05$ ) take into account the possibility that observed differences are the result of random sampling error. However, other underlying differences in the responding profile between survey years can also affect estimates.
- DSM-IV problem gambling prevalence was higher in 2010 (0.9%) than in 2007 and 1999 (0.6% for both years). This equates to around 451,000 adults aged 16 and over in Britain. The increase was significant at the 5% level. However, the p-value was 0.049, showing that this increase is at the margins of statistical significance. Some caution should be taken interpreting this result as there may be some other underlying factor affecting estimates between survey years. Where possible, differences between the responding samples were taken into account and the result remained significant at the 5% level

( $p=0.046$ ). Further surveys are needed to examine if this is evidence of an upward trend in problem gambling prevalence or simply random fluctuation in the data.

- Problem gambling prevalence rates as measured by the PGSI did not increase significantly between survey years. Estimates were 0.5% in 2007 and 0.7% in 2010 ( $p=0.23$ ). This equates to around 360,000 adults aged 16 and over in Britain. There is increasing evidence from the BGPS series that the DSM-IV and the PGSI screens are capturing slightly different people and different types of gambling-related problems.
- Problem gambling prevalence rates should be considered alongside the confidence intervals for these estimates. The confidence interval for the DSM-IV estimate was 0.7% and 1.2%. The confidence interval for the PGSI estimate was 0.5% - 1.0%. This equates to somewhere between 342,000 and 593,000 adults according to the DSM-IV and between 254,000 and 507,000 adults according to the PGSI.
- Problem gambling prevalence rates observed in Great Britain, measured by either the DSM-IV or the PGSI, were similar to rates observed in other European countries, notably Germany, Norway and Switzerland, and lower than countries like the USA, Australia and South Africa.
- Problem gamblers were more likely to be male, younger, have parents who gambled regularly and had experienced problems with their gambling behaviour and be a current cigarette smoker.
- DSM-IV problem gambling was also associated with being Asian/Asian British whereas PGSI problem gambling was associated with being unemployed and being in bad/very bad health.

## At-risk gambling (Chapter 7)

- Gambling behaviour is increasingly viewed as existing along a continuum, ranging from those who experience no problems with gambling, to those who experience some problems, to those who experience more problems and are classified as 'problem gamblers'.
- The PGSI includes classification of low risk and moderate risk gamblers; a PGSI score of 1-2 and 3-7 respectively.
- Overall, the prevalence of low risk gambling was 5.5% and moderate risk gambling was 1.8%. Men were more likely than women to be both low risk and moderate risk gamblers. This also means that the vast majority of people experience no problems from gambling (92%).
- At-risk (both low and moderate risk) gambling was associated with age, with rates being higher among younger adults and lower among older adults.
- Low risk gambling was associated with having parents who regularly gambled, being a current cigarette smoker, having fair health, drinking over 10 units of alcohol on the heaviest drinking day in the last week, having lower educational qualifications and living in low income households.
- Moderate risk gambling was associated with parental gambling behaviour, being a current cigarette smoker and being Black/Black British.
- There are some parallels with the range of factors associated with problem gambling. Men, younger adults, those whose parents regularly gambled and had experienced problems with their gambling behaviour and current cigarette smokers were all more likely to be at-risk or problem gamblers.

## Reasons for gambling (Chapter 8)

- A new 15-item scale for measuring reasons for gambling was developed for the 2010 survey.
- The majority of past year gamblers reported that they gambled for the chance of winning big money (83%), because it's fun (78%), to make money (59%) and because it's exciting (51%).

- Reasons for gambling were grouped into five broad areas: enhancement, recreation, social, coping and monetary reasons. Results are presented for regular (at least monthly) gamblers and show that reasons for gambling vary among different sub-groups. Men were more likely than women to report gambling for enhancement (i.e., for excitement or achievement) or coping (i.e., tension relief).
- Older gamblers were more likely than younger gamblers to report gambling for recreation or monetary reasons.
- Those who were Asian/Asian British or Black/Black British were more likely to gamble for enhancement or coping reasons than those who were White/White British.
- Reasons for gambling also varied by gambling behaviour. Those who had gambled on seven or more activities were more likely to report gambling for enhancement, recreation, social and coping reasons than those who gambled on fewer activities. However, they were less likely to report gambling for money than their counterparts who took part in one or two activities.
- Problem gamblers were also more likely than non-problem gamblers to report that they gambled for enhancement, recreation and social reasons. However, gambling for money was not a distinguishing factor between the two groups.

## **Attitudes to gambling** (Chapter 9)

- A shortened version of the Attitudes Towards Gambling Scale (ATGS-8) was developed for the 2010 survey. This contained eight attitude questions.
- The overall sample average for the total scale and for six of the eight questions indicated that attitudes to gambling that were more negative than positive. As in 2007, the average view was that gambling was more harmful than beneficial and should not be encouraged.
- Two exceptions to this showed that, as in 2007, the average person tended to support the view that people have a right to gamble and reject the idea of prohibition.
- Attitudes to gambling were more positive among men and among regular gamblers and were least positive among women, those who were Asian/Asian British or Black/Black British and among non-gamblers.
- Comparisons with 2007 show that overall attitudes to gambling in 2010 have become more positive. Although the overall viewpoint is still somewhat negative, it is less negative than previously; indicating that attitudes are changing.
- Attitudes to gambling have changed the most among those aged 55 and over, whose mean attitudes scores have become somewhat more positive and more in line with the attitudes of younger age groups. This corresponds with an increase in gambling participation among this age group.

**BLANK PAGE**

# 1 Introduction

## 1.1 Background and aims

The last decade has seen many changes in the British gambling landscape. The most notable changes during this period include growth in the availability of remote gambling (particularly via the internet), the introduction of fixed odds betting terminals into most bookmakers, an increase in the number of casinos, an increase in the prominence of poker (both online and offline), and the introduction of online betting exchanges. Traditionally, gambling in Great Britain was commonly available in a variety of environments including those dedicated primarily to gambling (for example, betting shops, casinos, bingo halls, amusement arcades). However, gambling is also common in environments where gambling is peripheral to other activities (for example, social clubs, pubs, sports venues), and in those environments where gambling is just one of many things that can be done (for example, buying lottery tickets or scratchcards in supermarkets, post offices, petrol stations and so on). However, most types of gambling can now be engaged in remotely via the internet, interactive television, and/or through internet-enabled mobile phones. The range of activities that can be played online vary from playing roulette or slot machines at an online casino, to buying lottery tickets using a mobile phone, or betting on a horse race via interactive television.

On 18 October 2004, a Gambling Bill was introduced into the British Parliament. Following consideration by the House of Commons and the House of Lords, it received Royal Assent on 7 April 2005, and became the Gambling Act 2005. Full implementation of the Act came into force on 1 September 2007. Under the Act, the Gambling Commission was created and replaced the former Gaming Board for Great Britain. The Gambling Commission regulates the gambling industry in Great Britain on behalf of the Department for Culture, Media and Sport (DCMS). The Gambling Commission's primary objectives in regulating gambling activities are:

- (a) to keep crime out of gambling,
- (b) to ensure that gambling is conducted fairly and openly, and
- (c) to protect children and other vulnerable people.

The Act also significantly updated gambling laws, including the introduction of a new structure of protections for children and vulnerable adults, as well as bringing the growing internet gambling sector within British regulation for the first time. There has, therefore, been a substantial change in the regulation of gambling in Great Britain since 2007.

The Gambling Commission sponsored this current survey, which is the third British Gambling Prevalence Survey (BGPS) to be conducted. The first two British Gambling Prevalence Surveys were conducted by the *National Centre for Social Research (NatCen)*, and carried out in 1999 and 2007.<sup>1,2</sup> The 2010 survey, also conducted by *NatCen*, is therefore the first survey to be carried out after the Gambling Act 2005 was fully implemented. As with the BGPS 2007, this report provides the Gambling Commission and the Government with important information about gambling behaviour in Britain. It also provides the first opportunity to examine the extent of any change in national gambling behaviour in the past decade.



The aims of the 2010 survey were to:

- Measure the prevalence of participation in all forms of commercial and private gambling
- Estimate the prevalence of problem gambling
- Investigate socio-demographic and other factors associated with gambling and with problem gambling
- Explore attitudes towards gambling
- Where appropriate, provide comparisons pre and post implementation of the Gambling Act 2005.

A number of changes were made for the 2010 survey. Firstly, for the first time in the BGPS series, all data were collected using computer-assisted methods, with individuals answering detailed questions about their gambling behaviour using computer-assisted self-interview (see Appendix 2 for more details). Secondly, more detailed objectives were agreed with the Gambling Commission. These included collecting greater depth of information on modes of access to gambling and introducing new questions aimed at measuring gambling involvement. Thirdly, other areas of importance were identified and appropriate questions added to the questionnaire. This included adding questions about reasons for gambling, which allowed us to explore not only what gambling activities the British population takes part in, but also why people participate in these activities.

In the previous 2007 survey, two problem gambling screening instruments were used. These were the DSM-IV criteria<sup>3</sup> for pathological gambling, and the Canadian Problem Gambling Severity Index.<sup>4</sup> These screens have been rigorously studied (including a psychometric evaluation of both screens conducted by the 2007 BGPS research team<sup>5</sup>) and are currently the most widely used internationally. Although both screens have some potential limitations, the decision was made to retain these two screens for the current survey so that comparisons could be made with the BGPS 2007 and, in the case of the DSM-IV, with the BGPS 1999 also.

This report provides the main results of the survey. Chapters 2 and 3 describe participation in gambling activities, Chapter 4 presents further information about gambling involvement. Chapters 5 and 6 present results on problem gambling and Chapter 7 presents information on the profile of at-risk gamblers. Chapter 8 discusses reasons for gambling and Chapter 9 presents analysis of attitudes towards gambling.

## 1.2 Overview of survey design

### 1.2.1 Sample and response

7,756 individuals participated in the survey. A random sample of 9,775 addresses from England, Scotland and Wales was selected from the Postcode Address File (PAF). Interviewers visited each address and attempted to gain a face to face interview with an adult at that address to collect information about the household. All adults, aged 16 and over, within co-operating households were eligible to take part and were asked to complete an individual questionnaire using computer-assisted self-interviewing. The individual questionnaires collected detailed information about the respondent's gambling behaviour and attitudes to gambling.

Interviews were achieved at 4,842 households (representing a response rate of 55% once non-residential addresses were removed from the sample). Individual questionnaires were completed by 7,756 out of 9,104 adults residing within co-operating households (an individual response rate of 85%). As a conservative estimate, the overall response rate was 47%. Please see Appendix 2 for further response analysis.

### 1.2.2 Weighting

Data were weighted to reflect the age, sex and regional distribution of the British population according to estimates by the Office of National Statistics. Further information about the survey methodology and weighting strategy is given in Appendix 2. A copy of the questionnaire is shown in Appendix 3.



### 1.3 Caveats

Where possible, we aimed to maintain maximum comparability with previous surveys in the BGPS series. However, modes of access to gambling and types of gambling available have become more varied since 1999. Therefore, we agreed with the Gambling Commission and the BGPS Steering Group<sup>6</sup> that whilst the ability to be able to make comparisons with previous surveys was important, it was also important to be able to provide full detail about the nature of gambling behaviour in Britain in 2010. This required a more complex questionnaire structure to be designed, one which was not appropriate for paper-based administration. Therefore, the mode of data collection in 2010 was computer-assisted for the first time. There were also numerous other advantages to using computer-assisted rather than paper-based self-completions, including the potential to improve data quality and to minimise item non-response. This represents a change within mode; instead of asking respondents to complete a paper questionnaire, they filled in their answers confidentially using a laptop.

However, many of the 1999 and 2007 survey protocols were replicated in the 2010 survey. For example, we used the same sampling strategy and sample stratifiers as previous studies. Nonetheless, as with any survey, possible biases may be introduced into the data by the method of data collection chosen. The 2010 gambling survey is no exception to this. Sources of potential bias include non-response biases (introduced by varying participation rates among sub-sections of the population) and social desirability or acceptability biases in responses to certain questions. Furthermore, all surveys in the BGPS series were studies of people living in private households. This, by definition, excludes a number of sub-groups of the population, such as homeless people, those living in institutions, and prisoners, which should be borne in mind when interpreting survey results.

Potential biases were carefully considered at the outset of the survey, and the survey methodology used attempted to overcome these potential areas of bias in a number of ways. For example, given the perceived sensitive nature of the problem gambling screens, these questions were administered using a confidential self-completion questionnaire to encourage honest reporting. For the 2007 survey, data from the 1999 survey were re-analysed and optimal stratifiers for the 2007 sample chosen based on this analysis to increase sample efficiency; this was repeated in 2010. Final data were weighted for non-response to account for differences in the sample profile compared to population estimates for Britain. Appendix 1 compares a number of key characteristics from the achieved 2010 sample against independent data to examine where areas of bias may be introduced due to response rate differences among sub-groups. Overall, this shows that for most key characteristics (such as age, sex, socio-economic status, marital status, ethnic group, and country of residence) the achieved BGPS 2010 sample is a close reflection of population estimates. However, this analysis also highlighted that the BGPS 2010 may slightly over-represent those in poor health and male cigarette smokers. These differences should be kept in mind when interpreting survey results. Where appropriate, caveats of this nature have been highlighted within individual chapters throughout this report.

### 1.4 Report conventions

- Unless otherwise stated, the tables are based on the responding sample for each individual question (i.e., item non-response is excluded). Therefore bases may differ slightly between tables.
- The group to whom each table refers is shown in the top left hand corner of each table.
- The data used in this report have been weighted. The weighting strategy is described in Appendix 2 of this report. Both weighted and unweighted base sizes are shown at the foot of each table. The weighted numbers reflect the relative size of each group of the population, not the number of interviews achieved, which is shown by the unweighted base.

- The following conventions have been used in the tables:
  - No observations (zero values)
  - 0 Non-zero values of less than 0.5% and thus rounded to zero
  - [ ] An estimate presented in square brackets warns of small sample base sizes. If a group's unweighted base is less than 30, data for that group are not shown. If the unweighted base is between 30-49, the estimate is presented in square brackets.
  - \* Estimates not shown because base sizes are less than 30.
- Because of rounding, row or column percentages may not add to 100% exactly.
- A percentage may be presented in the text for a single category that aggregates two or more percentages shown in the table. The percentage for that single category may, because of rounding, differ by one percentage point from the sum of the percentages in the table.
- Some questions were multi-coded (i.e., allowing the respondent to give more than one answer). The column percentages for these tables sum to more than 100%.
- The term 'significant' refers to statistical significance (at the 95% level) and is not intended to imply substantive importance.
- Only results that are significant at the 95% level are presented in the report commentary.

## Notes and references

- 1 Sproston, K., Erens, B., & Orford, J. (2000). *Gambling Behaviour in Britain, Results from the British Gambling Prevalence Survey*. London: National Centre for Social Research. This study was funded by GamCare.
- 2 Wardle, H., Sproston, K., Orford, J., Erens, B., Griffiths, M.D., Constantine, R., & Pigott, S. (2007). *The British Gambling Prevalence Survey 2007*. London: The Stationery Office. This study was funded by the Gambling Commission.
- 3 American Psychiatric Association (APA) (1994). *Diagnostic and statistical manual of mental disorders (4th edn)*. Washington DC: American Psychiatric Association.
- 4 Ferris, J., & Wynne, H. (2001). *The Canadian Problem Gambling Index user manual. Report to the Canadian Inter-Provincial Task Force on Problem Gambling*. Canada: The Canadian Centre on Substance Abuse.
- 5 Orford, J., Wardle, H., Griffiths, M.D., Sproston, K., & Erens, B. (2010). PGSI and DSM-IV in the 2007 British Gambling Prevalence Survey: Reliability, item response, factor structure and inter-scale agreement. *International Gambling Studies*, 10, 31-44.
- 6 The BGPS Steering Group consists of representatives from the Gambling Commission, the National Lottery Commission, the Department of Culture, Media and Sport and the Department of Health.

## 2 Gambling participation

### 2.1 Definition of gambling and gambling participation

An important objective of the British Gambling Prevalence Survey (BGPS) 2010 was to provide data on current levels of participation in gambling, and to compare this with rates observed in 1999 and 2007. For all gambling activities, participation was measured over two time periods: participation within the past year, and participation within the past week. These estimates are presented in this chapter for both men and women. The overall prevalence of gambling participation is also presented (that is, taking part in one or more activities in the past year or in the past week).

As in 1999 and 2007, respondents were shown a list of gambling activities and were asked whether they had participated in each activity in the past 12 months. 'Participation' was defined as having 'spent money' on the activity, so that it would include, for example, having a lottery ticket purchased on their behalf if the money used to buy the ticket was the respondent's own.

Each survey in the BGPS series has asked about participation in a slightly different format. In 1999 respondents were simply asked whether they had spent money on each activity in the past year or not. In 2007, respondents were asked to report greater detail about their yearly participation by saying *how often* they spent money on this activity in the past 12 months. In 2010, respondents were firstly asked whether they had participated in each activity or not, and if so, then how often they took part in each activity.<sup>1</sup> In this respect, the methods used in 1999 and 2010 are the most similar as, in the first instance, respondents simply had to report whether or not they had participated in each activity. As in 1999 and 2007, for every activity undertaken in the past 12 months, respondents were also asked whether they had participated in this activity in the past week.

In each survey, the list of activities differed according to the range of gambling activities known to exist at that time, and the distinctions that were considered important.<sup>2</sup> In 1999, 11 activities were listed, covering lotteries, scratchcards, fruit machines, betting with a bookmaker on various events, and various games (bingo and casino) played in person. In 2007, a further five activities were added to the list, reflecting the increasing prominence of online gambling (both games and betting), and the introduction of fixed odds betting terminals. In 2010, the list of activities was again revised to produce a new list of 16 gambling activities. The main change introduced for the 2010 survey was to broadly focus firstly on the activity itself (for example, bingo) and to treat different modes of access (i.e., bingo played in person at a bingo hall or social club, or bingo played online) as sub-types of the activity. For activities where this was appropriate, respondents were first asked whether they had undertaken the activity in the past 12 months, and, if so, whether they had taken part in person, online or both. For betting activities, respondents were asked to report how they had placed their bets. Answer options were online with a bookmaker, in person (either at the track or with a bookmaker), on the phone to a bookmaker or with a betting exchange. This approach gave greater detail on modes of access to different gambling activities, but was also designed to allow comparisons with 1999 and 2007 to be made. (A table comparing the activities included in the 1999, 2007 and 2010 surveys is presented in Appendix 2).

The 16 activities included in the list were intended to cover all types of gambling available in

Britain at the time of the survey. However, to allow for the possibility that an unfamiliar activity was missed by the research team, or that respondents may have missed or misunderstood an activity description, the option was provided for respondents to write in another form of gambling. Unlike previous years, all activities entered at this question could be coded to their correct gambling activity category. Therefore, the category of ‘other gambling activity’ is not presented in this report.

This chapter covers participation in individual gambling activities, and participation in gambling as a whole. Section 2.2 discusses participation in the past year, participation in the past week is covered in section 2.3, and comparisons between gambling participation in 1999, 2007 and 2010 are the focus of section 2.4. Finally, this chapter also provides detail on the relationship between different activities (in section 2.5), and how people accessed the various gambling activities (section 2.6).

## 2.2 Gambling participation in the past year

### 2.2.1 Participation overall and in each activity

Table 2.1 shows participation rates for each activity, among all adults in the survey, and among past year gamblers. Overall, 73% of adults aged 16 and over had gambled on one or more activity in the past year (referred to as ‘past year gamblers’ in the rest of this report). The National Lottery Draw was the most popular activity, with 59% of adults purchasing tickets in the past 12 months. The next most popular activities were other lotteries (25%) and scratchcards (24%), followed by betting on horse races (16%), playing slot machines (13%) and private betting (11%).

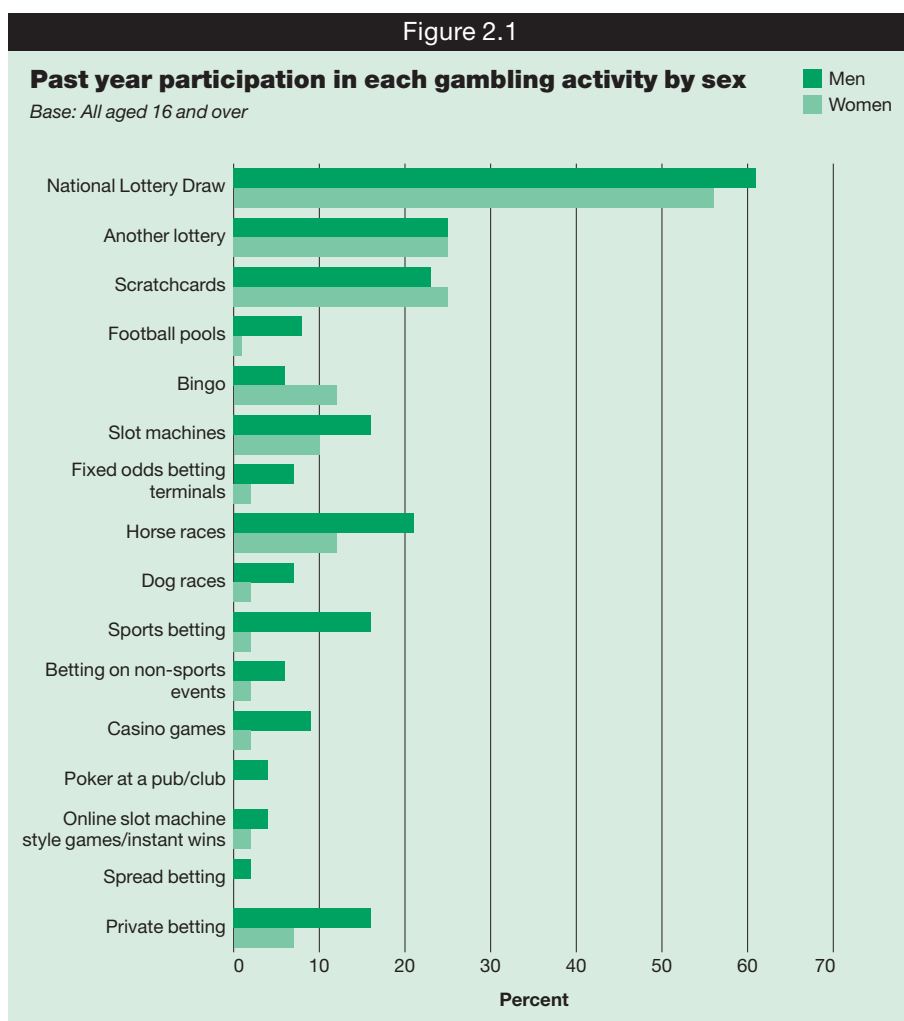


Table 2.1

**Gambling activities in the past year for all and for past year gamblers, by sex***All and past year gamblers aged 16 and over*

2010

Type of gambling activity	All		Total	Past year gamblers		Total
	Men	Women		Men	Women	
	%	%		%	%	
National Lottery Draw	61	56	59	81	79	80
Another lottery	25	25	25	33	36	34
Scratchcards	23	25	24	31	36	33
Football pools	8	1	4	10	2	6
Bingo <sup>a</sup>	6	12	9	7	17	12
Slot machines	16	10	13	21	14	18
Fixed odds betting terminals	7	2	4	10	2	6
Horse races <sup>b</sup>	21	12	16	27	17	22
Dog races <sup>b</sup>	7	2	4	9	3	6
Sports betting <sup>b</sup>	16	2	9	21	3	12
Betting on non-sports events <sup>b</sup>	6	2	4	8	3	6
Casino games <sup>c</sup>	9	2	5	11	3	7
Poker at a pub/club	4	0	2	5	1	3
Online slot machine style games/instant wins	4	2	3	5	3	4
Spread betting	2	0	1	2	0	1
Private betting	16	7	11	22	10	16
Any online betting <sup>d</sup>	6	2	4	7	2	5
Any other online gambling <sup>e</sup>	15	11	13	20	15	18
<b>Any gambling activity</b>	<b>75</b>	<b>71</b>	<b>73</b>	<b>100</b>	<b>100</b>	<b>100</b>
Bases (weighted) <sup>f</sup>	3796	3955	7751	2865	2799	5665
Bases (unweighted) <sup>f</sup>	3573	4177	7750	2704	3007	5711

<sup>a</sup> Includes bingo played at a club or online (the prevalence of playing bingo online was less than 1%).

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online (prevalence rates of playing casino games online in the last year was 3% overall).

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

Less than one in ten adults took part in each other activity: estimates were 9% for both bingo (including online bingo) and betting on sports events, 5% for playing casino games (including online) and 4% for betting on dog races, playing football pools, playing fixed odds betting terminals, and betting on non-sports events. The least popular activities were online slot machine style games (3%), playing poker at a pub or club (2%), and spread betting (1%).

More men than women (75% vs 71%) had gambled in the past year. As Figure 2.1 highlights, men and women also showed different activity preferences. Of the 16 activities listed, 13 were more popular among men than women. In particular, playing poker in a pub/club was nine times more popular among men than women, spread betting was eight times more popular and sports betting was seven times more popular. Men were between three to five times more likely than women to play football pools, fixed odds betting terminals, and casino games. Betting on dog races, betting on non-sports events and private betting were, at least, twice as popular among men than women.

Women were twice as likely to play bingo as men. Estimates were 12% for women and 6% for men. Women were also more likely than men to buy scratchcards (25% and 23% respectively). Participation in other lotteries was equally popular among men and women.

## 2.2.2 Participation in online betting and other online gambling

Table 2.1 also shows the proportion of adults who had placed bets online<sup>3</sup> in the past year (including betting on horse races, dog races, other sports and any other event with a bookmaker or betting exchange) and those who had used the internet to play the National Lottery (and its related products), other lotteries, bingo, football pools, casino style games, or online slot machine style games. Taking online betting and any other online gambling (as defined above) together, 14% of adults had used the internet to gamble in the past year. More men than women had gambled using the internet in the past year; estimates were 17% for men and 12% for women (table not shown).

In the past year, 4% of adults had bet online (Table 2.1). This was higher among men than women (6% vs 2%). The proportion of adults using the internet to gamble on non-betting activities is also shown in Table 2.1. A greater proportion of adults (13%) had used the internet to play the National Lottery (and its related products), other lotteries, bingo, football pools, casino style games, or online slot machine style games. Again, this was higher among men (15%) than women (11%).

In 2010, a key focus of the questionnaire was to gain better data about how people gambled. Therefore, more detailed questions were asked about mode of gambling. As shown above, the prevalence of gambling online was 14%. However, much of this is accounted for by those people who use the internet to purchase lottery tickets. The 2007 survey used a more conservative definition of online gambling, which only included those who bet online, used a betting exchange or gambled online on poker, bingo, slot machine style games or casino games as internet gamblers. Using this comparable definition, in 2010, 7% of adults (10% of men and 5% of women) gambled online on these activities (table not shown). Section 2.4.2 compares this with the equivalent figure in 2007.

## 2.2.3 Number of activities

Table 2.2 shows the number of gambling activities undertaken in the past year. Over a quarter (27%) of adults had not gambled on any activity in the past year and 25% had gambled on one activity only. A further 31% of adults had gambled on two or three activities in the past year and 17% had gambled on four or more activities.

<i>All and past year gamblers aged 16 and over</i>							<i>2010</i>
Number of gambling activities	All		Total	Past year gamblers		Total	
	Men	Women		Men	Women		
	%	%		%	%		
None	25	29	27	-	-	-	
One	23	27	25	31	38	35	
Two	18	20	19	24	28	26	
Three	12	11	12	16	16	16	
Four	7	6	7	9	9	9	
Five	5	3	4	6	5	5	
Six	3	2	2	4	2	3	
Seven	3	1	2	4	1	2	
Eight or more	5	1	3	6	1	4	
Mean number of gambling activities	2.3	1.6	1.9	3.0	2.3	2.7	
Standard error of the mean	0.05	0.03	0.03	0.06	0.03	0.03	
<i>Bases (weighted)</i>	3796	3955	7751	2865	2799	5665	
<i>Bases (unweighted)</i>	3573	4177	7750	2704	3007	5711	

Men took part in a higher number of gambling activities per year than women. On average, men participated in 2.3 activities in the past year, whereas women took part in 1.6 activities. Nearly one quarter of men (22%) took part in four or more activities in the past year. By comparison, 12% of women reported the same.

Table 2.2 also shows the number of activities which past year gamblers participated in. Since this is simply the same data with non-gamblers excluded, the pattern remains the same. Most past year gamblers took part in one (35%) or two activities (26%), and decreasing numbers took part in three or more activities. Male past year gamblers tended to take part in a greater number of activities than female past year gamblers, the mean number of activities was 3.0 for men, and 2.3 for women. Likewise, 29% of male past year gamblers took part in four or more activities compared with 17% for female past year gamblers.

## 2.3 Gambling participation in the past week

### 2.3.1 Past week participation in each activity

If a respondent had undertaken an activity in the past year, they were also asked whether they had participated in that activity in the past week. This information is shown in Table 2.3.

Table 2.3						
<b>Gambling activities in the past week for all and for past week gamblers, by sex</b>						
<i>All and past week gamblers aged 16 and over</i>						<i>2010</i>
Type of gambling activity	All		Total	Past week gamblers		Total
	Men	Women		Men	Women	
	%	%		%	%	
National Lottery Draw	38	33	36	81	84	82
Another lottery	5	4	5	10	11	11
Scratchcards	6	6	6	13	16	15
Football pools	4	1	2	8	1	5
Bingo <sup>a</sup>	1	4	3	3	9	6
Slot machines	4	1	2	8	3	5
Fixed odds betting terminals	2	0	1	3	0	2
Horse races <sup>b</sup>	5	1	3	11	3	7
Dog Races <sup>b</sup>	1	0	1	2	0	1
Sports betting <sup>b</sup>	4	0	2	9	1	5
Betting on non-sports events <sup>b</sup>	1	1	1	3	2	2
Casino games <sup>c</sup>	1	0	1	3	0	2
Poker at a pub/club	1	0	0	1	0	1
Online slot machine style games/instant wins	1	0	0	1	1	1
Spread betting	0	0	0	0	0	0
Private betting	3	1	2	7	3	5
Any online betting <sup>d</sup>	2	0	1	4	1	2
Any other online gambling <sup>e</sup>	6	4	5	13	11	12
<b>Any gambling activity</b>	<b>47</b>	<b>40</b>	<b>43</b>	<b>100</b>	<b>100</b>	<b>100</b>
Bases (weighted) <sup>f</sup>	3795	3954	7749	1800	1564	3364
Bases (unweighted) <sup>f</sup>	3572	4176	7748	1730	1702	3432

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery and related games, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.



Overall, 43% of adults had gambled on at least one activity in the past week. Prevalence was higher among men (47%) than women (40%).

Over a third (36%) of adults had bought tickets for the National Lottery Draw in the past week. Only a small proportion of adults had taken part in each other activity. The next most popular activities were scratchcards (6%), other lotteries (5%), betting on horse races and playing bingo (both 3%). Past week prevalence of participating in other activities was 2% or lower. Notably, the prevalence of playing online slot machine style games, playing poker at a pub/club and spread betting in the past week was less than 1%. Overall, 1% of adults had bet online within the past week, and 5% had gambled online on the National Lottery, football pools, bingo, casino and slot machine style games.

As with past year participation, men were more likely than women to have gambled on a range of activities in the past week. For example, 38% of men had bought tickets for the National Lottery Draw compared with 33% of women. Likewise, 5% of men had bet on horse races in the past week compared with only 1% of women. This was one of 12 individual activities which was more popular among men than women. Betting online and other online gambling were also higher among men than women. The only activities where prevalence did not vary between the men and women were participation in other lotteries, scratchcards, online slot machine style games and spread betting (although with the latter two activities, this may also be an artefact of the sample size and that these are low prevalence activities). Finally, the only activity for which past week prevalence was greater among women than men was bingo. 4% of women reported playing bingo in the past week compared with 1% of men.

Looking at past week gamblers only, the National Lottery Draw was the most popular activity. Over four fifths (82%) of past week gamblers had bought tickets for the National Lottery Draw in the past week. Scratchcards were the next most popular activity undertaken in the past week (15%) followed by other lotteries (11%), horse races (7%) and bingo (6%). 5% or less of past week gamblers had taken part in each other activity in the past seven days.

### 2.3.2 Number of activities in the past week

Table 2.4 shows the number of activities undertaken in the past week. The majority of adults (57%) had not gambled on any activity in the past week. 30% had gambled on one activity, 9% on two activities, and 5% on three or more activities. Among all adults, the mean number of activities undertaken in the past week was 0.7. This was higher among men (0.8) than women (0.5). 7% of men had taken part in three or more activities in the past week compared with 2% of women.

Table 2.4						
Number of gambling activities in the past week for all and for past week gamblers, by sex						
<i>All and past week gamblers aged 16 and over</i>						2010
Number of gambling activities	All		Total	Past week gamblers		Total
	Men	Women		Men	Women	
	%	%	%	%	%	%
None	53	60	57	-	-	-
One	30	29	30	64	73	68
Two	10	8	9	22	21	21
Three	4	2	3	8	4	6
Four	1	1	1	3	1	2
Five	1	0	0	2	0	1
Six or more	1	0	0	1	0	1
Mean number of gambling activities	0.8	0.5	0.7	1.6	1.4	1.5
Standard error of the mean	0.02	0.01	0.01	0.03	0.02	0.02
<i>Bases (weighted)</i>	3795	3953	7748	1800	1564	3364
<i>Bases (unweighted)</i>	3572	4175	7747	1730	1702	3432



Among past week gamblers only, over two thirds (68%) had gambled on one activity in the past week. The mean number of activities undertaken by past week gamblers was 1.6 for men and 1.4 for women. 14% of male past year gamblers and 6% of female past year gamblers had taken part in three or more activities in the past week.

## 2.4 Comparisons with 1999 and 2007

### 2.4.1 Activity definitions

To enable effective comparisons of individual gambling activities between survey years to be made, the 2010 data was re-categorised to match the definitions used in 2007 (and 1999). This process is detailed in Appendix 2, Figure A2. Explanation of activity definitions are noted at the end of each table within this section. However, some caution should be exercised if comparing the results presented for 2010 in this section with those presented earlier in the chapter as some activities are defined differently. For example, in Table 2.1 the category 'casino games' includes playing casino games both at a casino and online. In 1999 and 2007, it referred only to playing games in a land based casino and is therefore called 'table games in a casino' in all BGPS series comparison tables.

### 2.4.2 Comparison of past year prevalence rates

In 2010 past year gambling prevalence was higher than 2007 and was similar to the levels observed in 1999. Estimates decreased from 72% in 1999 to 68% in 2007, and were 73% in 2010. This masks some differences by sex. Among men, although past year prevalence was higher in 2010 than 2007 (75% vs 71%), it was not significantly higher than the rate observed in 1999 (76%). However, among women, past year gambling prevalence estimates were higher in 2010 than in both 2007 and 1999. Estimates for women increased from 65% in 2007 and 68% in 1999 to 71% in 2010.

As shown in Table 2.5, the popularity of particular activities varied by survey year. Notably, there was a small increase in the popularity of the National Lottery Draw between 2007 and 2010; estimates were 57% and 59% respectively. However, prevalence was lower than observed in 1999 (65%). Therefore, unlike in 2007, where changes in overall gambling prevalence were largely attributed to changes in National Lottery participation, this does not appear to be the case in 2010. Examination of the prevalence of gambling on non-National Lottery activities and of participation in individual activities supports this.

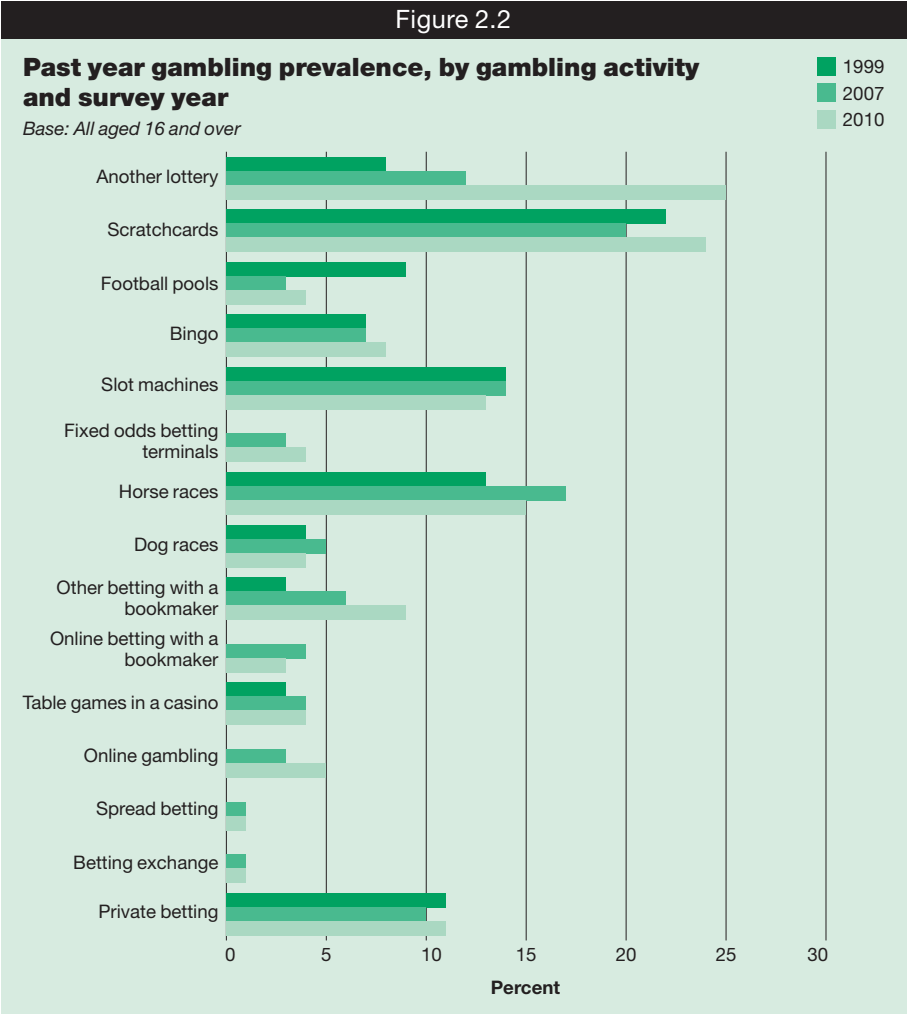
If National Lottery Draw only players are excluded from the analysis, the prevalence of past year gambling increased from 46% in 1999 and 48% in 2007 to 56% in 2010. This increase was greater among women than men. Excluding National Lottery Draw only players, in 1999, 52% of men were past year gamblers, compared with 41% of women. By 2010, the figures were 59% and 53% respectively. [Table not shown]

Looking at participation in individual activities also shows that the increase in past year gambling observed between 2007 and 2010 is largely attributable to an increase in popularity of five activities. The prevalence of playing scratchcards was higher in 2010 than in both 1999 and 2007, estimates were 20% in 2007, 22% in 1999 and 24% in 2010. There was also an increase in participation in other lotteries, from 8% in 1999 to 12% in 2007 to 25% in 2010.<sup>4</sup> Furthermore, the prevalence of betting on other events and sports increased from 3% in 1999 to 6% in 2007 to 9% in 2010<sup>5</sup> and the proportion of people gambling online on bingo, casino or slot machine style games increased from 3% in 2007 to 5% in 2010 (this activity was not included in 1999). Finally, there were some small but significant increases in play on fixed odds betting terminals, increasing from 3% to 4% between 2007 and 2010. As with other activities which have seen small increases in prevalence, it will be of interest in future years to see if this is indicative of an upward trend in participation on these machines or simply a random fluctuation in the data. Interestingly, despite changes to legislation allowing casino members to gamble immediately after joining a casino, participation in casino table games did not vary between 2007 and 2010 (4%), though prevalence was higher than in 1999 (3%).

As noted in section 2.2.2, the 2007 survey used a more conservative definition of online gambling, including only online betting, bingo, casino and online slot machine style games as gambling online. Using this comparable definition, online gambling increased from 6% in 2007 to 7% in 2010. This increase was greater among women (for whom it almost doubled from 3% to 5%), than among men (for whom it increased from 9% to 10%).

There were some activities for which prevalence was lower in 2010 than previously. These include football pools (estimates were 9% in 1999 and 4% in 2010); slot machines (14% in both 1999 and 2007; 13% in 2010) and online betting with a bookmaker (4% in 2007 and 3% in 2010).<sup>6</sup>

For other activities, estimates either did not vary by survey year (bingo or private betting) or varied with no clear pattern (betting on horse races or dog races).



**2.4.2 Past year prevalence rates by survey year and sex**

Comparisons of gambling on individual activities between 1999, 2007 and 2010 show some differences among men and women, which may help explain the overall increase in prevalence observed among women. Firstly, the increased prevalence of buying tickets for the National Lottery Draw between 2007 and 2010 was observed among men only (rising from 59% to 61% between 2007 and 2010). For women, the estimate was the same in both years, 56%.

This indicates that the increased prevalence of past year gambling among women is the result of more women taking part in other types of gambling activities. For example, the prevalence of gambling on slot machines increased among women (from 8% in 1999 to 10% in 2007 and 2010), whilst it decreased among men (from 20% in 1999, to 19% in 2007 and 16% in 2010). Betting on horse races, buying scratchcards and taking part in other lotteries showed a greater increase among women than among men. Among women, betting on horse races increased from 9% in 1999, to 13% in 2007 and 11% in 2010. Estimates for men were 18%,

22%, and 19% respectively. Prevalence of buying scratchcards increased from 22% in 1999 to 25% in 2010, among men estimates were 22% and 23%. Similarly, among women, taking part in other lotteries increased from 8% in 1999 to 25% in 2010, a slightly greater increase than among men (from 9% to 25%). Whilst the prevalence of gambling online on bingo, casino or slot machine style games increased for both men and women, the magnitude of the increase was greatest among women; prevalence rates were four times higher in 2010 than in 2007 (4% and 1% respectively). However, playing football pools showed a greater decrease among women than men (from 5% to 1% for women, and 13% to 8% for men, in 1999 and 2010 respectively).

In summary, this indicates that whilst men are still more likely to gamble than women, a small proportion of women have increased their gambling participation in a range of activities. More women than previously now buy scratchcards, play slot machines, take part in other lotteries and gamble online on bingo, casino or slot machine style games.

Table 2.5									
Comparison of gambling activities in the past year, 1999, 2007 and 2010 by sex									
<i>All aged 16 and over</i>							<i>1999, 2007, 2010</i>		
Type of gambling activity	Sex						Total		
	Men			Women					
	1999	2007	2010	1999	2007	2010	1999	2007	2010
	%	%	%	%	%	%	%	%	%
National Lottery Draw	68	59	61	62	56	56	65	57	59
Another lottery	9	12	25	8	12	25	8	12	25
Scratchcards	22	19	23	22	20	25	22	20	24
Football pools	13	5	8	5	2	1	9	3	4
Bingo <sup>a</sup>	5	4	5	10	10	10	7	7	8
Slot machines	20	19	16	8	10	10	14	14	13
Fixed odds betting terminals	<sup>e</sup>	4	6	<sup>e</sup>	1	1	<sup>e</sup>	3	4
Horse races <sup>b</sup>	18	22	19	9	13	11	13	17	15
Dog races <sup>b</sup>	6	7	6	2	3	2	4	5	4
Betting with a bookmaker (other than on horse or dog races)	5	10	14	1	3	3	3	6	9
Online betting with a bookmaker on any event or sport <sup>c</sup>	<sup>e</sup>	6	5	<sup>e</sup>	1	1	<sup>e</sup>	4	3
Table games in a casino	4	6	6	1	2	2	3	4	4
Online gambling	<sup>e</sup>	4	7	<sup>e</sup>	1	4	<sup>e</sup>	3	5
Spread betting	<sup>e</sup>	1	2	<sup>e</sup>	0	0	<sup>e</sup>	1	1
Betting exchange	<sup>e</sup>	2	2	<sup>e</sup>	0	0	<sup>e</sup>	1	1
Private betting (e.g. with friends, colleagues)	17	15	16	6	6	7	11	10	11
<b>Any gambling activity</b>	<b>76</b>	<b>71</b>	<b>75</b>	<b>68</b>	<b>65</b>	<b>71</b>	<b>72</b>	<b>68</b>	<b>73</b>
<i>Bases (weighted)<sup>f</sup></i>	3745	4333	3796	3955	4636	3955	7700	8972	7751
<i>Bases (unweighted)<sup>f</sup></i>	3610	4241	3573	4070	4733	4177	7680	8978	7750

<sup>a</sup> Bingo played in person only.

<sup>b</sup> Includes bets made by telephone or in person, with a bookmaker.

<sup>c</sup> Includes online bets on horse races, dog races, other sports or non-sports events with a bookmaker.

<sup>d</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino.

<sup>e</sup> Not included in 1999.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

### 2.4.3 Past week prevalence rates by survey year

In the BGPS 2007 report, it was noted that, despite the increased availability of new forms of gambling, there was a significant reduction in the proportion of adults who had gambled in the past seven days. In 2010, past week gambling rates were slightly higher than in 2007 (43% and 41% respectively) but were not as high as the rates observed in 1999 (53%). Therefore, fewer people were engaged with gambling in the week prior to interview in 2010 than a decade earlier, when, notably, the range of gambling products available was more limited. This pattern was the same for both men and women.

Of the 16 activities comparable between 2007 and 2010, past week participation increased for three activities. These were the National Lottery Draw, other lotteries and betting on other events or sports events. For two activities, playing bingo and playing on slot machines past week prevalence decreased, continuing the downward trend observed since 1999.

Although the prevalence of buying tickets for the National Lottery Draw was higher in 2010 (36%) than in 2007 (33%) it was still lower than the rates observed in 1999 (47%). This is very similar to the pattern observed for all past week gambling. The National Lottery is by far the most prevalent activity undertaken in the past week. Therefore, the overall trend of past week participation by survey year is largely shaped by changes in the popularity of the National Lottery.

Type of gambling activity	Sex						Total		
	Men			Women					
	1999	2007	2010	1999	2007	2010	1999	2007	2010
	%	%	%	%	%	%	%	%	%
National Lottery Draw	50	36	38	44	31	33	47	33	36
Another lottery	4	3	5	3	3	4	4	3	5
Scratchcards	8	6	6	8	6	6	8	6	6
Football pools	9	3	4	3	1	1	6	2	2
Bingo <sup>a</sup>	2	2	1	5	4	3	4	3	2
Slot machines	9	6	4	2	2	1	6	4	2
Fixed odds betting terminals	<sup>e</sup>	1	1	<sup>e</sup>	0	0	<sup>e</sup>	1	1
Horse races <sup>b</sup>	5	4	5	1	1	1	3	2	3
Dog races <sup>b</sup>	2	1	1	0	0	0	1	1	1
Betting with a bookmaker (other than on horse or dog races) <sup>b</sup>	2	2	3	0	0	1	1	1	2
Online betting with a bookmaker on any event or sport <sup>c</sup>	<sup>e</sup>	2	1	<sup>e</sup>	0	0	<sup>e</sup>	1	1
Table games in a casino <sup>d</sup>	1	1	1	0	0	0	0	1	0
Online gambling	<sup>e</sup>	1	1	<sup>e</sup>	0	1	<sup>e</sup>	1	1
Spread betting	<sup>e</sup>	0	0	<sup>e</sup>	0	0	<sup>e</sup>	0	0
Betting exchange	<sup>e</sup>	1	1	<sup>e</sup>	0	0	<sup>e</sup>	0	0
Private betting (e.g. with friends, colleagues)	6	4	3	2	1	1	4	3	2
<b>Any gambling activity</b>	<b>58</b>	<b>45</b>	<b>47</b>	<b>48</b>	<b>37</b>	<b>40</b>	<b>53</b>	<b>41</b>	<b>43</b>
Bases (weighted) <sup>f</sup>	3745	4353	3795	3955	4640	3954	7700	8996	7749
Bases (unweighted) <sup>f</sup>	3610	4257	3572	4070	4735	4176	7680	8996	7748

<sup>a</sup> Bingo played in person only.

<sup>b</sup> Includes bets made by telephone or in person, with a bookmaker.

<sup>c</sup> Includes online bets on horse races, dog races, other sports or non-sports events with a bookmaker.

<sup>d</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino.

<sup>e</sup> Not included in 1999.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

## 2.5 Relationship between different gambling activities

Gamblers are a heterogeneous group. As observed in Table 2.2, most past year gamblers take part in more than one activity. Table 2.7 shows the mean number of gambling activities undertaken in the past year among participants in different types of gambling.

Those who played poker at a pub/club and played on fixed odds betting terminals had the highest engagement in gambling activities, participating in 7.6 and 7.2 gambling activities respectively in the past year. Those who bought tickets for the National Lottery Draw and other lotteries had the lowest engagement overall, taking part in 2.9 and 3.5 gambling activities respectively in the past year.

Among men, the mean number of gambling activities undertaken in the past year was highest among those who played poker at a pub/club (7.9), those who gambled on online slot machine style games and those who played on fixed odds betting terminals (7.4 for both). Among women, the mean number of activities engaged in was highest among those who played on fixed odds betting terminals (6.4), those who bet on sports events (5.8) and those who bet on other events (5.3).

<i>Past year participants in each activity</i>					<i>2010</i>
<b>Type of gambling activity</b>	<b>Number of gambling activities</b>		<i>Bases (weighted)</i>	<i>Bases (un-weighted)</i>	
	Mean number of activities	Standard error of the mean			
<b>Men</b>					
National Lottery Draw	3.2	0.06	2327	2222	
Another lottery	4.0	0.09	944	915	
Scratchcards	4.7	0.11	891	808	
Football pools	5.7	0.13	287	254	
Bingo <sup>a</sup>	5.5	0.24	215	204	
Slot machines	5.6	0.12	614	549	
Fixed odds betting terminals	7.4	0.14	273	231	
Horse races <sup>b</sup>	5.0	0.11	780	729	
Dog races <sup>b</sup>	6.6	0.17	248	220	
Sports betting <sup>b</sup>	6.0	0.12	590	504	
Betting on non-sports events <sup>b</sup>	7.3	0.16	231	208	
Casino games <sup>c</sup>	6.8	0.14	323	272	
Poker at a pub/club	7.9	0.13	138	118	
Online slot machine style games/instant wins	7.4	0.22	139	119	
Spread betting	6.9	0.20	72	54	
Private betting	5.3	0.13	620	543	
<i>Any online betting<sup>d</sup></i>	<i>6.1</i>	<i>0.14</i>	<i>211</i>	<i>186</i>	
<i>Any other online gambling<sup>e</sup></i>	<i>4.6</i>	<i>0.13</i>	<i>570</i>	<i>520</i>	

*Continued...*

Table 2.7 continued

Past year participants in each activity			2010	
Type of gambling activity	Number of gambling activities		Bases (weighted)	Bases (un-weighted)
	Mean number of activities	Standard error of mean		
<b>Women</b>				
National Lottery Draw	2.5	0.03	2225	2419
Another lottery	3.0	0.05	999	1080
Scratchcards	3.3	0.06	1003	1074
Football pools	4.3	0.19	57	62
Bingo <sup>a</sup>	3.7	0.08	464	494
Slot machines	4.2	0.09	378	395
Fixed odds betting terminals	6.4	0.24	59	60
Horse races <sup>b</sup>	3.7	0.09	479	510
Dog races <sup>b</sup>	4.5	0.16	97	99
Sports betting <sup>b</sup>	5.8	0.25	84	91
Betting on non-sports events <sup>b</sup>	5.3	0.17	93	102
Casino games <sup>c</sup>	4.8	0.22	92	95
Poker at a pub/club	*	*	18	18
Online slot machine style games/instant wins	5.2	0.20	79	82
Spread betting	*	*	9	9
Private betting	3.9	0.13	268	274
Any online betting <sup>d</sup>	4.7	0.26	60	64
Any other online gambling <sup>e</sup>	3.1	0.09	431	463
<b>All</b>				
National Lottery Draw	2.9	0.04	4552	4641
Another lottery	3.5	0.06	1944	1995
Scratchcards	4.0	0.07	1895	1882
Football pools	5.4	0.12	344	316
Bingo <sup>a</sup>	4.3	0.11	678	698
Slot machines	5.0	0.10	992	944
Fixed odds betting terminals	7.2	0.12	333	291
Horse races <sup>b</sup>	4.5	0.08	1259	1239
Dog races <sup>b</sup>	6.0	0.16	344	319
Sports betting <sup>b</sup>	6.0	0.11	674	595
Betting on non-sports events <sup>b</sup>	6.8	0.14	323	310
Casino games <sup>c</sup>	6.3	0.13	414	367
Poker at a pub/club	7.6	0.12	155	136
Online slot machine style games/instant wins	6.6	0.15	218	201
Spread betting	7.1	0.20	80	63
Private betting	4.9	0.10	888	817
Any online betting <sup>d</sup>	5.8	0.14	272	250
Any other online gambling <sup>e</sup>	4.0	0.09	1001	983

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

\* Estimates not shown because of small base sizes.

## 2.6 How people gamble

For all activities which can be accessed in more than one way, respondents were asked whether they had gambled either 'in person only', 'online only', or both 'in person' and 'online', within the past year. The 'in person' category includes all offline methods of access, for example purchasing tickets, placing bets, or playing games in person at a shop or venue, and placing bets on the phone. The 'online only' category includes all methods of accessing the internet, for example on a computer, using internet-enabled mobile phones, or by interactive TV. This information is shown in Table 2.8.

Past year participants in each activity						
Type of gambling activity		Whether online or in person			Bases (weighted)	Bases (un-weighted)
		In person only	Online only	Both in person and online		
<b>Men</b>						
National Lottery Draw	%	84	6	10	2322	2218
Another lottery	%	95	2	2	941	912
Football pools	%	83	8	9	286	253
Bingo <sup>a</sup>	%	77	19	4	215	204
Horse races <sup>b</sup>	%	86	8	6	780	729
Dog races <sup>b</sup>	%	91	6	3	247	219
Sports betting <sup>b</sup>	%	72	17	11	590	504
Betting on non-sports events <sup>b</sup>	%	74	23	3	229	207
Casino games <sup>c</sup>	%	58	29	13	322	271
<b>Any gambling activity<sup>d</sup></b>	<b>%</b>	<b>78</b>	<b>2</b>	<b>20</b>	<b>2856</b>	<b>2695</b>
<b>Women</b>						
National Lottery Draw	%	86	5	10	2224	2418
Another lottery	%	97	2	1	994	1075
Football pools	%	96	2	1	57	62
Bingo <sup>a</sup>	%	82	11	7	463	493
Horse races <sup>b</sup>	%	91	8	2	475	505
Dog races <sup>b</sup>	%	99	-	1	97	99
Sports betting <sup>b</sup>	%	77	16	6	83	90
Betting on non-sports events <sup>b</sup>	%	87	11	2	93	102
Casino games <sup>c</sup>	%	74	21	5	92	95
<b>Any gambling activity<sup>d</sup></b>	<b>%</b>	<b>84</b>	<b>2</b>	<b>14</b>	<b>2787</b>	<b>2994</b>
<b>All</b>						
National Lottery Draw	%	85	5	10	4546	4636
Another lottery	%	96	2	2	1936	1987
Football pools	%	85	7	7	343	315
Bingo <sup>a</sup>	%	80	14	6	678	697
Horse races <sup>b</sup>	%	88	8	4	1255	1234
Dog races <sup>b</sup>	%	93	5	2	343	318
Sports betting <sup>b</sup>	%	72	17	10	673	594
Betting on non-sports events <sup>b</sup>	%	78	19	2	322	309
Casino games <sup>c</sup>	%	61	27	12	413	366
<b>Any gambling activity<sup>d</sup></b>	<b>%</b>	<b>81</b>	<b>2</b>	<b>17</b>	<b>5643</b>	<b>5689</b>

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes gambling activities not shown in this table that can only be done in person (such as scratchcards, slot machines, fixed odds betting terminals, poker at a pub/club), and those that can only be done online (such as online slot machine style games).



Overall, 81% of past year gamblers had gambled 'in person' only. A further 17% of past year gamblers had done so both 'online' and 'in person', and only 2% had gambled 'online only'. These estimates include participation in activities that could only be undertaken in one mode, such as online gambling on slot machine style games (online only) or scratchcards (in person only).

It is notable that around a fifth of past year gamblers (19%) reported gambling online, with a minority reporting that they gambled 'online only' (2%). Prevalence of gambling online was higher among men than women, with 22% of male past year gamblers reporting gambling online and 16% of women reporting the same.

Although only 2% of all past year gamblers reported that they gambled online only, this masks some notable differences among participants in individual activities.<sup>7</sup> In fact, for participants in most individual activities, respondents were more likely to report that they did these activities online only than they were to report that they did the activity both online and in person. For example, 27% of those who played casino games did so 'online only', whereas 12% did so both online and 'in person' (meaning that 39% of people who played casino games did so online). The only activities for which this pattern was not true were the National Lottery Draw and football pools. A similar pattern was observed among both male and female past year gamblers.

Table 2.9 shows mode of access to gambling activities among past week gamblers. For many activities base sizes are small and so should be interpreted with caution. As observed among past year gamblers, the most popular method of gambling was 'in person' only. 84% of past week gamblers reported this. However, in contrast to past year gamblers, the next most popular method of gambling was 'online only'. 8% of past week gamblers reported that they gambled 'online only' and 5% reported that they gambled both online and in person in the past week, meaning that 13% of past week gamblers had used the internet to gamble. This was higher among men than women. Estimates were 15% and 12% respectively.

As with past year gamblers, there were some significant variations in mode choices among participants in individual activities. For example, 50% of those who reported playing casino games in the past week had done so 'online only', with a further 4% who had both gambled online on casino games and gambled 'in person' in a casino. The next most prevalent online activity was sports betting. 28% of those who bet on sports events in the past week did so 'online only' and a further 5% bet both online on sports events and 'in person' with a bookmaker.



Table 2.9

**Mode of participation in each activity for past week gamblers, by sex***Past week participants in each activity*

2010

Type of gambling activity	Whether online or in person				Bases (weighted)	Bases (un- weighted)	
	In person only	Online only	Both in person and online	Other only <sup>e</sup>			
<b>Men</b>							
National Lottery Draw	%	88	11	2	-	1451	1421
Another lottery	%	67	2	1	30	184	179
Football pools	%	83	7	2	8	144	132
Bingo <sup>a</sup>	%	80	9	5	5	55	57
Horse races <sup>b</sup>	%	86	9	2	3	198	196
Dog races <sup>b</sup>	%	[89]	[5]	[3]	[3]	40	38
Sports betting <sup>b</sup>	%	65	27	4	3	155	134
Betting on non-sports events <sup>b</sup>	%	[76]	[16]	-	[8]	49	45
Casino games <sup>c</sup>	%	[47]	[49]	[5]	[0]	51	45
<b>Any gambling activity<sup>d</sup></b>	%	<b>84</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>1798</b>	<b>1728</b>
<b>Women</b>							
National Lottery Draw	%	89	10	1	-	1318	1444
Another lottery	%	55	1	-	43	177	194
Football pools	%	*	*	*	*	*	*
Bingo <sup>a</sup>	%	79	10	2	9	147	158
Horse races <sup>b</sup>	%	83	10	-	7	47	51
Dog races <sup>b</sup>	%	*	*	*	*	*	*
Sports betting <sup>b</sup>	%	*	*	*	*	*	*
Betting on non-sports events <sup>b</sup>	%	[77]	[14]	-	[9]	27	31
Casino games <sup>c</sup>	%	*	*	*	*	*	*
<b>Any gambling activity<sup>d</sup></b>	%	<b>85</b>	<b>8</b>	<b>3</b>	<b>3</b>	<b>1564</b>	<b>1702</b>
<b>All</b>							
National Lottery Draw	%	88	11	1	-	2770	2865
Another lottery	%	61	2	0	37	361	373
Football pools	%	84	6	2	8	166	156
Bingo <sup>a</sup>	%	79	10	3	8	202	215
Horse races <sup>b</sup>	%	86	9	1	4	244	247
Dog races <sup>b</sup>	%	[89]	[5]	[3]	[3]	43	41
Sports betting <sup>b</sup>	%	65	28	5	3	164	143
Betting on non-sports events <sup>b</sup>	%	76	15	-	9	76	76
Casino games <sup>c</sup>	%	46	50	4	-	57	52
<b>Any gambling activity<sup>d</sup></b>	%	<b>84</b>	<b>8</b>	<b>5</b>	<b>2</b>	<b>3362</b>	<b>3430</b>

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes gambling activities not shown in this table that can only be done in person (such as scratchcards, slot machines, fixed odds betting terminals, poker in a pub/club, and those that can only be done online (such as online slot machine style games).

<sup>e</sup> This includes Direct Debit and respondent's reporting 'Somewhere else/another way' but not specifying whether in person or online.

Tables 2.10 and 2.11 show further detail on the mode of access for betting activities. Those who reported betting on any event in the past year or past week were asked whether this was online with a bookmaker, in person at a bookmaker's, with a bookmaker at the venue, by phone with a bookmaker, online with a bookmaker or with a betting exchange. Among past year bettors, betting in person at a bookmaker's was the most common option for horse races (72%), sports events (76%) and non-sports events (76%). For dog races, betting in person at the track was the most common (58%), a trend driven by women betting at the track in the majority of cases (84%).

Table 2.10

**Mode of participation in selected betting activities for past year gamblers, by sex**

<i>Past year participants in each activity</i>								2010
Type of betting activity		Method of betting					Bases (weighted)	Bases (un-weighted)
		In person at book-makers	In person at track/course/venue	On the phone to book-makers	Online with a book-maker	Online with a betting exchange		
<b>Men</b>								
Horse races	%	75	22	6	11	5	780	729
Dog races	%	52	47	2	8	1	247	219
Sports betting	%	76	11	4	24	7	590	504
Betting on non-sports events	%	72	8	1	21	6	229	207
<b>Any betting activity</b>	<b>%</b>	<b>76</b>	<b>27</b>	<b>5</b>	<b>16</b>	<b>6</b>	<b>1093</b>	<b>995</b>
<b>Women</b>								
Horse races	%	67	26	3	9	1	475	505
Dog races	%	18	84	-	1	-	97	99
Sports betting	%	71	15	3	22	3	83	90
Betting on non-sports events	%	84	3	2	10	4	93	102
<b>Any betting activity</b>	<b>%</b>	<b>65</b>	<b>33</b>	<b>3</b>	<b>9</b>	<b>1</b>	<b>597</b>	<b>635</b>
<b>All</b>								
Horse races	%	72	24	5	10	3	1255	1234
Dog races	%	42	58	2	6	1	343	318
Sports betting	%	76	11	4	24	6	673	594
Betting on non-sports events	%	76	7	1	18	5	322	309
<b>Any betting activity</b>	<b>%</b>	<b>72</b>	<b>29</b>	<b>5</b>	<b>14</b>	<b>4</b>	<b>1690</b>	<b>1630</b>

Using a betting exchange was the least prevalent method of betting on horse races (3%) and dog races (1%). However, for other sports betting and betting on other events, using a betting exchange, was somewhat more popular; one in twenty respondents (5%) who had bet on other events had used a betting exchange and around one in sixteen respondents (6%) who bet on sports event had used a betting exchange. Overall, 4% of past year bettors used a betting exchange.

Table 2.11 shows mode of access to betting among past week bettors. Overall, the most popular method of placing bets was in person at a bookmaker's (71%). Of the other modes of access, betting online with a bookmaker was the next most common (14%), and betting on the phone with a bookmaker was least common (4%).

There were some differences by betting type. Among those who bet on sports events, betting online with a bookmaker or using a betting exchange was more popular. 24% reported using the former and 10% reported using the latter. Comparable estimates among horse race bettors were 7% and 5% respectively.

Among past week bettors, men and women were equally likely to bet in person at the bookmakers (71% of past week bettors). However, men were more likely place a bet on the phone to a bookmaker (5% of men, 1% of women), online with a bookmaker (15% of men, 9% of women), or online with a betting exchange (8% of men, 3% of women).

Table 2.11

**Mode of participation in selected betting activities for past week gamblers, by sex**

<i>Past week participants in each activity</i>								2010	
Type of betting activity		Whether online or in person					Other <sup>a</sup>	Bases (weighted)	Bases (un-weighted)
		In person at book-makers	In person at track/course/venue	On the phone to book-makers	Online with a book-maker	Online with a betting exchange			
<b>Men</b>									
Horse races	%	80	7	5	7	6	4	198	196
Dog races	%	[79]	[13]	[2]	[6]	[3]	[3]	40	38
Sports betting	%	64	4	4	24	10	5	155	134
Betting on non-sports events	%	[71]	[7]	[2]	[8]	[8]	[11]	49	45
<b>Any betting activity</b>	<b>%</b>	<b>71</b>	<b>7</b>	<b>5</b>	<b>15</b>	<b>8</b>	<b>6</b>	<b>326</b>	<b>302</b>
<b>Women</b>									
Horse races	%	72	7	2	8	2	9	47	51
Dog races	%	*	*	*	*	*	*	3	3
Sports betting	%	*	*	*	*	*	*	8	9
Betting on non-sports events	%	[77]	-	-	[10]	-	[13]	27	31
<b>Any betting activity</b>	<b>%</b>	<b>71</b>	<b>8</b>	<b>1</b>	<b>9</b>	<b>3</b>	<b>11</b>	<b>75</b>	<b>83</b>
<b>All</b>									
Horse races	%	78	7	4	7	5	5	244	247
Dog races	%	[75]	[17]	[2]	[6]	[2]	[3]	43	41
Sports betting	%	64	4	4	24	10	6	164	143
Betting on non-sports events	%	73	4	1	9	5	12	76	76
<b>Any betting activity</b>	<b>%</b>	<b>71</b>	<b>7</b>	<b>4</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>401</b>	<b>385</b>

<sup>a</sup> Includes sending text (SMS) and respondents reporting 'somewhere else/another way'.

## Notes and references

- 1 In 2010, the questionnaire was administered using computer-assisted self interviewing which allowed the questionnaire to be routed so that respondents were only asked to answer questions that were appropriate to them. Therefore, it was easier to ask each respondent to simply report whether they had taken part in each activity first, and if so, to follow-up with more detailed questions.
- 2 The activity descriptions used in the 2010 survey were refined and agreed with the Gambling Commission, the BGPS Steering Group and Advisory Group.
- 3 For this survey 'online' was defined as accessing the internet through a computer, an internet-enabled mobile phone and through interactive TV.
- 4 The way this activity was presented to respondents was modified slightly in 2010. In 2007, the direction to include charity lottery tickets was given as an instruction to respondents. Cognitive testing showed that some respondents were missing this instruction and not counting purchase of these tickets as a gambling activity. Therefore in 2010, this activity was described to respondents at 'tickets for a charity or other lottery' rather than 'tickets for another lottery'. This may explain the large increase in prevalence observed between 2007 and 2010. However, examination of the proportion of respondents who only gamble on other lotteries shows prevalence of this increased from 0.7% in 1999 to 1.4% in 2007 and to 3.4% in 2010. Therefore, it appears that there is an upward trend in participation in this activity and the change in activity description may account for part of this increase only.
- 5 To enable comparisons to be made with previous years, the 2010 data are categorised differently in sections which examine comparisons with 2007 than sections which focus only on 2010 data. For example, in 2007, betting on sports and betting on other events with a bookmaker were asked in combination and data presented as betting with a bookmaker (other than on horses or dogs). In 2010, this category was separated out to capture betting on other sports events and betting in other non-sports events. These are presented separately in tables which focus on 2010 data only. However, when comparing results with 2007, these estimates have been combined to provide data that is equivalent to 2007.
- 6 In 2007, 'online betting with a bookmaker' was a main gambling activity presented to all respondents. However, in 2010, it was treated as a sub-category of betting on horses, betting on dogs, betting on sports events and betting on other events. It is possible that this change of presentation may have influenced results.

7 It is interesting to note that a different pattern emerges in terms of mode of access when looking at past year gambling participation overall and participation within each individual activity. This is partly because the activities with higher proportions of online only gamblers (e.g., casino games) and those that could only be done online (e.g., online slot machine style games) were less prevalent overall than activities with higher proportions of 'in person' participation (e.g., National Lottery Draw) and those that could only be done in person (e.g., scratchcards). Activities which could only be accessed in one mode are not shown in the table, but are included in the calculation of 'any gambling activity'.

# 3 Profile of gamblers

## 3.1 Introduction

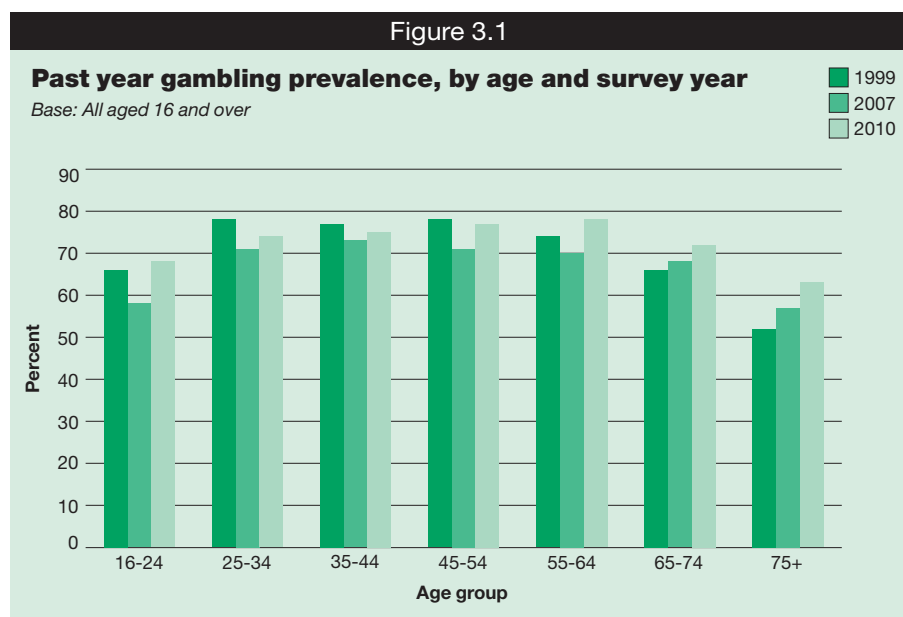
This chapter examines differences in participation in past year gambling by a number of socio-demographic (such as age and ethnicity) and socio-economic (such as income and employment) characteristics. Analyses focus on differences in past year gambling prevalence, participation in each type of activity, and the average number of activities undertaken in the past year. In addition, the profiles of past year gamblers, regular (at least monthly) gamblers and past week gamblers are compared. The definition of gambling participation and descriptions of gambling activities are the same as those used in Chapter 2.

## 3.2 Past year gambling by socio-demographic characteristics

### 3.2.1 Past year gambling by age

As in previous years, past year gambling prevalence was associated with age. Figure 3.1 shows past year gambling prevalence for each age group by survey year. In 2010, gambling participation was lowest among the youngest and oldest age groups: 68% for those aged 16-24 and 63% for those aged 75 and over. Prevalence was highest among those aged 45-64.

For all age groups, past year gambling prevalence was higher in 2010 than in 2007. Of particular interest is the change in pattern among those aged 65 and over, with past year gambling prevalence since 1999 showing a steady increase. For example, estimates among those aged 75 and over increased from 52% in 1999 to 57% in 2007 and to 63% in 2010. However, for those aged 16-54, estimates in 2010 were largely similar to those observed in 1999. For example, past year gambling prevalence estimates for those aged 16-24 were 66% in 1999, 58% in 2007 and 68% in 2010.



For the majority of individual activities, prevalence was greatest among younger age groups and decreased with advancing age (Table 3.1). This pattern was most pronounced for slot machines (prevalence fell from 23% for those aged 16-34, to 2% of those aged 75 and over) and scratchcards (prevalence fell from 36% for those aged 25-34 to 12% for those aged 75 and over). For the National Lottery Draw and other lotteries, the opposite pattern was true with prevalence being lowest among those aged 16-24 (42% and 15% respectively). For bingo, prevalence was highest among the oldest (11%) and youngest age groups (10%).

Table 3.1 also shows the mean number of gambling activities undertaken in the past year. Overall, the mean number of activities was highest among those in younger age groups and decreased with age. Interestingly, while those aged 16-24 had a lower overall gambling prevalence rate (68%), they also had one of the highest means of yearly gambling activities (2.3), suggesting that those who do gamble take part in a greater number of activities than some of their older counterparts.

Table 3.1								
Participation in gambling activities in the past year, by age								
<i>All aged 16 and over</i>								2010
Type of gambling activity	Age group							Total
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
	%	%	%	%	%	%	%	
National Lottery Draw	42	59	64	68	66	59	45	59
Another lottery	15	23	27	26	30	27	28	25
Scratchcards	34	36	28	21	17	14	12	24
Football pools	9	5	2	4	3	4	3	4
Bingo <sup>a</sup>	10	10	8	7	9	8	11	9
Slot machines	24	22	13	11	6	4	2	13
Fixed odds betting terminals	12	9	3	3	1	0	0	4
Horse races <sup>b</sup>	15	19	18	21	15	12	10	16
Dog races <sup>b</sup>	6	7	5	4	4	2	1	4
Sports betting <sup>b</sup>	14	15	10	9	4	2	0	9
Betting on non-sports events <sup>b</sup>	6	5	5	5	3	2	0	4
Casino games <sup>c</sup>	12	10	5	4	1	1	-	5
Poker at a pub/club	6	3	2	1	0	0	-	2
Online slot machine style games/instant wins	6	7	2	1	1	1	0	3
Spread betting	2	1	1	1	1	-	0	1
Private betting	21	17	14	9	7	3	2	11
Any online betting <sup>d</sup>	5	7	5	2	2	1	-	4
Any other online gambling <sup>e</sup>	14	23	16	14	9	5	0	13
<b>Any gambling activity</b>	<b>68</b>	<b>74</b>	<b>75</b>	<b>77</b>	<b>78</b>	<b>72</b>	<b>63</b>	<b>73</b>
Mean number of gambling activities	2.3	2.5	2.1	1.9	1.7	1.4	1.2	1.9
Standard error of the mean	0.10	0.08	0.06	0.06	0.05	0.05	0.05	0.03
Bases (weighted) <sup>f</sup>	1163	1237	1406	1303	1143	814	685	7751
Bases (unweighted) <sup>f</sup>	977	1117	1435	1346	1225	1019	631	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

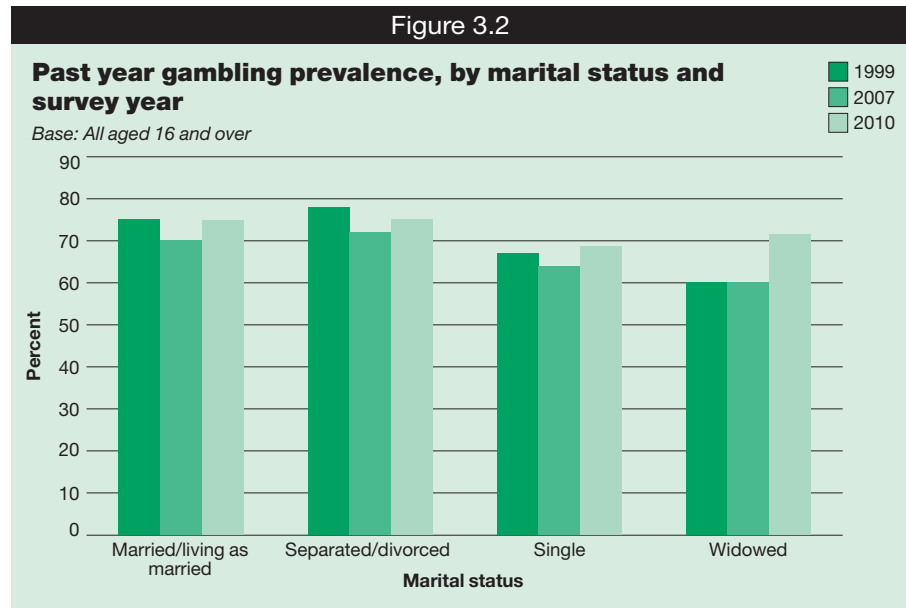
<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

### 3.2.2 Past year gambling by marital status

Figure 3.2 shows that, as seen in previous years, past year gambling was related to marital status, although this is also likely to be a reflection of the relationship between age and marital status. Those who were married or separated/divorced (75% for both groups) were more likely to gamble than those who were single (69%). However, the latter had the highest mean number of yearly gambling activities (2.2; Table 3.2) and higher prevalence rates for individual activities, suggesting that single people are more likely to take part in a greater number of gambling activities. For example, as shown in Table 3.2, 11% of single respondents had participated in casino games, compared with 4% of those who were married and 3% of those who were separated/divorced. Likewise, prevalence of playing on fixed odds betting terminals was three times higher among those who were single (9%) than those who were married or separated/divorced (3%).



However, single respondents were less likely to take part in the National Lottery Draw or other lotteries than their married or separated/divorced counterparts. Participation rates for the National Lottery Draw were 48% for those who were single and 65% for those who were separated/divorced. Bingo was the only activity where participation was highest among those who were widowed. 13% of those who were widowed had played bingo in the past year compared with 8% of those who were single. Likewise, betting on horse races was the only activity where prevalence was highest among those who were married/living as married (17%).

Consistent with the finding that past year gambling increased among the older age groups, the prevalence of past year gambling was higher among those who were widowed in 2010 than in 1999 and 2007. Estimates increased from 60% in both 1999 and 2007 to 72% in 2010.

Table 3.2

### Participation in gambling activities in the past year, by marital status

*All aged 16 and over* 2010

Type of gambling activity	Marital status				Total
	Married/ living as married %	Separated/ divorced %	Single, never married %	Widowed %	
National Lottery Draw	62	65	48	57	59
Another lottery	28	25	19	26	25
Scratchcards	24	25	28	14	24
Football pools	3	3	8	2	4
Bingo <sup>a</sup>	9	9	8	13	9
Slot machines	11	8	20	4	13
Fixed odds betting terminals	3	3	9	0	4
Horse races <sup>b</sup>	17	14	15	11	16
Dog races <sup>b</sup>	4	3	7	3	4
Sports betting <sup>b</sup>	8	5	13	1	9
Betting on non-sports events <sup>b</sup>	4	4	6	1	4
Casino games <sup>c</sup>	4	3	11	0	5
Poker at a pub/club	1	1	5	-	2
Online slot machine style games/instant wins	3	1	5	1	3
Spread betting	1	0	2	0	1
Private betting	10	7	19	3	11
Any online betting <sup>d</sup>	4	1	5	1	4
Any other online gambling <sup>e</sup>	14	10	14	4	13
<b>Any gambling activity</b>	<b>75</b>	<b>75</b>	<b>69</b>	<b>72</b>	<b>73</b>
Mean number of gambling activities	1.9	1.8	2.2	1.4	1.9
Standard error of the mean	0.04	0.07	0.07	0.06	0.03
Bases (weighted) <sup>f</sup>	4745	626	1902	477	7751
Bases (unweighted) <sup>f</sup>	4792	719	1722	517	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

### 3.2.3 Past year gambling by ethnicity

Table 3.3 shows that the prevalence of past year gambling was significantly higher among respondents whose ethnic group was White/White British: 76% of White/White British respondents had gambled in the past year compared with 52% for Black/Black British, 41% for Asian/Asian British and 53% for 'other' ethnic groups.

The mean number of gambling activities undertaken in the past year showed a similar pattern. Those whose ethnic group was White/White British participated in the most number of activities per year (2.0) and those whose ethnic group was Asian/Asian British participated in the least (1.0).

Looking at individual activities, White/White British respondents were more likely to have participated in the National Lottery Draw, other lotteries, scratchcards, bingo, slot machines, horse races, dog races, sports betting and private betting in the past year. For example, 61% of White/White British respondents participated in the National Lottery Draw compared with 46% for those who were Black/Black British and 32% of those who were Asian/Asian British.<sup>1</sup>



Table 3.3

**Participation in gambling activities in the past year, by ethnic group***All aged 16 and over*

2010

Type of gambling activity	Ethnic group				Total
	White/ White British	Asian/ Asian British	Black/ Black British	Other	
	%	%	%	%	
National Lottery Draw	61	32	46	40	59
Another lottery	26	12	13	12	25
Scratchcards	25	15	22	15	24
Football pools	4	3	4	5	4
Bingo <sup>a</sup>	9	2	6	4	9
Slot machines	14	5	7	6	13
Fixed odds betting terminals	4	2	5	8	4
Horse races <sup>b</sup>	17	5	7	6	16
Dog races <sup>b</sup>	5	0	1	4	4
Sports betting <sup>b</sup>	9	5	6	5	9
Betting on non-sports events <sup>b</sup>	4	3	1	4	4
Casino games <sup>c</sup>	5	3	3	7	5
Poker at a pub/club	2	1	1	1	2
Online slot machine style games/instant wins	3	2	1	4	3
Spread betting	1	0	1	1	1
Private betting	12	7	8	10	11
Any online betting <sup>d</sup>	4	2	2	1	4
Any other online gambling <sup>e</sup>	13	8	8	20	13
<b>Any gambling activity</b>	<b>76</b>	<b>41</b>	<b>52</b>	<b>53</b>	<b>73</b>
Mean number of gambling activities	2.0	1.0	1.3	1.3	1.9
Standard error of the mean	0.03	0.11	0.16	0.14	0.03
Bases (weighted) <sup>f</sup>	6976	355	228	174	7751
Bases (unweighted) <sup>f</sup>	7072	309	200	151	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

### 3.2.4 Past year gambling by highest educational qualification

Respondents with the highest level of educational qualifications were less likely to have gambled in the past year than respondents with lower educational qualifications. This pattern is similar to that observed in both 1999 and 2007, though estimates are not directly comparable due to changes in the way certain qualifications are categorised.<sup>2</sup> As Figure 3.3 shows, in 2010, 70% of those with a degree or higher had gambled in the past year whereas 76% of those whose highest educational qualifications were GCSEs or O-levels reported the same. 78% of those with 'other' qualifications had also gambled in the past year. This group includes those who reported that their highest level of educational achievement was an NVQ, but did not specify the level. As they did not report having GCSEs or equivalent, it is likely that this group represents those with low levels of educational attainment.

Figure 3.3

### Past year gambling prevalence, by highest educational qualifications

Base: All aged 16 and over

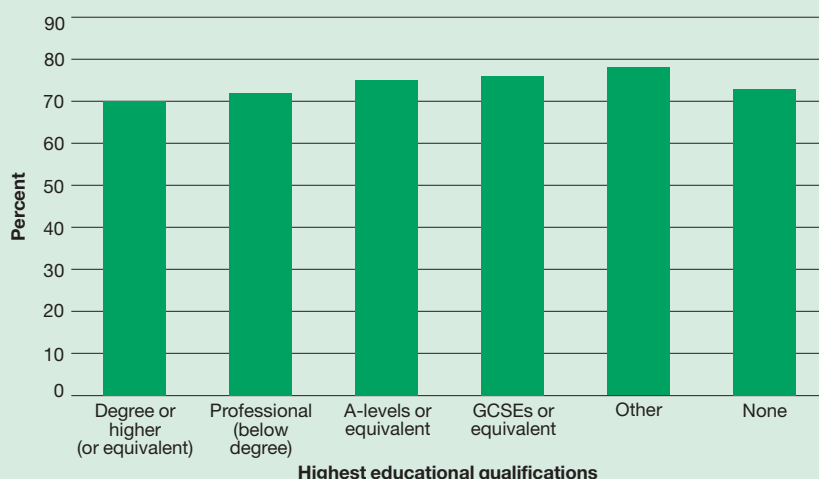


Table 3.4

### Participation in gambling activities in the past year, by highest educational qualification

All aged 16 and over

2010

Type of gambling activity	Highest educational qualification						Total
	Degree or higher (or equivalent)	Professional (below degree)	A-levels or equivalent	GCSEs or equivalent	Other	None	
	%	%	%	%	%	%	
National Lottery Draw	54	60	55	64	67	61	59
Another lottery	27	30	23	24	32	23	25
Scratchcards	20	22	28	31	23	22	24
Football pools	3	6	6	5	1	4	4
Bingo <sup>a</sup>	5	6	9	11	11	13	9
Slot machines	12	10	19	18	6	8	13
Fixed odds betting terminals	3	4	9	5	1	2	4
Horse races <sup>b</sup>	16	17	17	18	21	14	16
Dog races <sup>b</sup>	4	4	7	6	1	4	4
Sports betting <sup>b</sup>	10	8	14	10	5	4	9
Betting on non-sports events <sup>b</sup>	3	3	7	5	4	3	4
Casino games <sup>c</sup>	5	3	12	6	2	3	5
Poker at a pub/club	2	2	4	2	-	1	2
Online slot machine style games/instant wins	3	2	6	3	2	2	3
Spread betting	1	1	2	1	1	1	1
Private betting	12	10	20	13	5	5	11
Any online betting <sup>d</sup>	4	4	7	3	5	1	4
Any other online gambling <sup>e</sup>	16	14	18	13	10	6	13
<b>Any gambling activity</b>	<b>70</b>	<b>72</b>	<b>75</b>	<b>76</b>	<b>78</b>	<b>73</b>	<b>73</b>
Mean number of gambling activities	1.8	1.9	2.4	2.2	1.8	1.7	1.9
Standard error of the mean	0.05	0.09	0.10	0.06	0.16	0.04	0.03
Bases (weighted) <sup>f</sup>	2341	541	1000	1845	121	1880	7751
Bases (unweighted) <sup>f</sup>	2316	567	931	1831	127	1957	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

People with different levels of qualifications tended to gamble on different activities, though the pattern is not one that is easy to summarise. Those with a degree or higher were generally less likely than average to take part in the National Lottery Draw, play scratchcards, or play bingo. Likewise, those with no educational qualifications were less likely than average to take part in most other activities.

### 3.3 Past year gambling by socio-economic characteristics

#### 3.3.1 Past year gambling by NS-SEC of household reference person

NS-SEC is a classification of social position that has similarities to the Registrar General's Social Class. Respondents are assigned to an NS-SEC category based on the current or former occupation of the household reference person (HRP).

Table 3.5						
Participation in gambling activities in the past year, by NS-SEC of Household Reference Person						
<i>All aged 16 and over</i>						2010
Type of gambling activity	NS-SEC of Household Reference Person					Total <sup>g</sup>
	Managerial & professional	Inter-mediate	Small employers & own account workers	Lower supervisory & technical	Semi-routine & routine	
	%	%	%	%	%	%
National Lottery Draw	55	62	59	68	63	59
Another lottery	27	28	24	26	22	25
Scratchcards	20	23	26	28	30	24
Football pools	4	3	4	5	6	4
Bingo <sup>a</sup>	6	7	8	11	13	9
Slot machines	12	14	14	16	13	13
Fixed odds betting terminals	3	4	4	5	6	4
Horse races <sup>b</sup>	17	14	18	16	17	16
Dog races <sup>b</sup>	4	4	4	5	5	4
Sports betting <sup>b</sup>	9	8	8	9	9	9
Betting on non-sports events <sup>b</sup>	3	5	3	4	6	4
Casino games <sup>c</sup>	6	6	6	5	5	5
Poker at a pub/club	2	1	2	2	2	2
Online slot machine style games/instant wins	3	3	2	3	3	3
Spread betting	1	0	1	2	1	1
Private betting	12	13	10	12	10	11
Any online betting <sup>d</sup>	5	4	3	3	2	4
Any other online gambling <sup>e</sup>	15	14	11	14	10	13
<b>Any gambling activity</b>	<b>72</b>	<b>76</b>	<b>71</b>	<b>79</b>	<b>76</b>	<b>73</b>
Mean number of gambling activities	1.9	2.0	1.9	2.2	2.1	1.9
Standard error of the mean	0.04	0.09	0.10	0.11	0.06	0.03
Bases (weighted) <sup>f</sup>	3043	699	918	805	1943	7751
Bases (unweighted) <sup>f</sup>	3008	740	914	800	1991	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

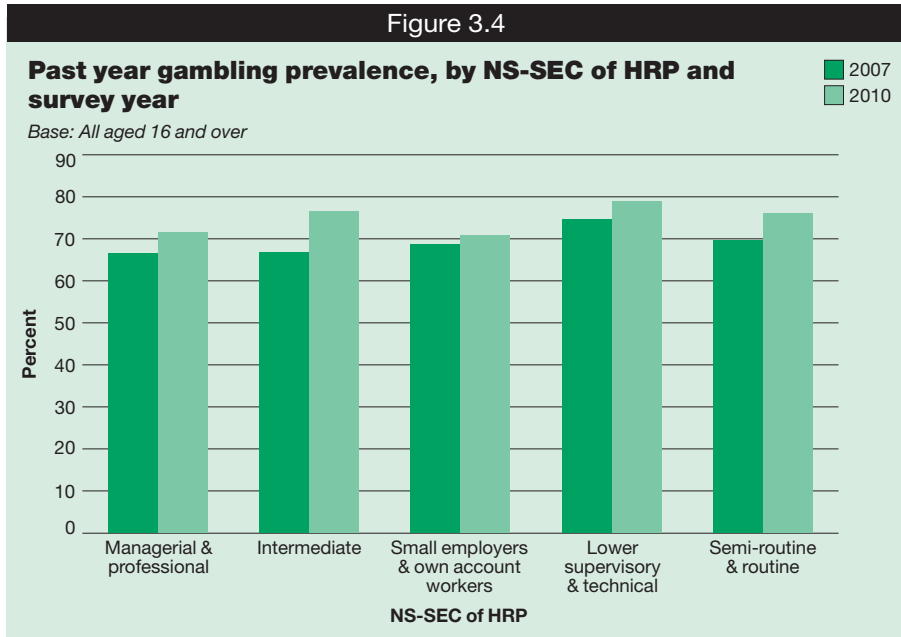
<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

<sup>g</sup> The total column includes those for whom NS-SEC of HRP was not known.

Figure 3.4



Overall, past year gambling prevalence was highest for those from lower supervisory and technical households (79%) and lowest among those from small employers/own account worker households (71%).

Table 3.5 shows that those from lower supervisory and technical households and those from semi-routine and routine households participated in a greater number of activities in the past year (2.2 and 2.1 respectively) than those from managerial and professional households (1.9).

A number of different gambling activities were favoured by people from different NS-SEC groups. For example, those from semi-routine and routine households had the highest prevalence of participating in scratchcards (30%), bingo (13%) and fixed odds betting terminals (6%), whereas people from managerial and professional households had the lowest prevalence of participation in these activities (20%, 6% and 3% respectively). The reverse was true when it came to online betting and other online gambling, which were more popular among those from managerial and professional households (5% and 15% respectively) than those from semi-routine and routine households (2% and 10% respectively). This was similar to the pattern observed in 2007.

### 3.3.2 Past year gambling by economic activity

Information was collected from all respondents about their main economic activity. This approach differed from 2007 where this information was only collected from the Household Reference Person. This is shown in Table 3.6. Those in paid work had the highest prevalence of gambling in the past 12 months (78%), while those in full-time education had the lowest prevalence (62%). Those who were retired took part in the least number of activities per year (1.3), whereas those who were unemployed participated in the most (2.5).

As Figure 3.5 demonstrates, those who were unemployed had lower rates of past year gambling prevalence than those in paid employment. However, the mean number of activities undertaken by those who were unemployed (shown on the right axis and represented by the line in Figure 3.5) was highest among this group, meaning that those who do gamble take part in a greater number of activities per year.

Participation in individual gambling activities varied according to people's economic activity; however, unemployed respondents particularly stood out. Compared with the average, those who were unemployed were more likely to gamble on several different activities (exceptions being the National Lottery Draw, other lotteries, football pools, betting on dog races and online betting). For example, 12% of those who were unemployed had played fixed odds betting terminals in the past year compared with 4% of respondents overall.

Table 3.6

**Participation in gambling activities within the past year, by economic activity**

All aged 16 and over

2010

Type of gambling activity	Economic activity							Total <sup>g</sup>
	Paid work higher (or equivalent)	Un-employed	Long-term disability	Looking after family/home	Retired	Full-time education	Other	
	%	%	%	%	%	%	%	
National Lottery Draw	66	53	60	52	54	32	61	59
Another lottery	28	16	19	21	28	13	23	25
Scratchcards	28	32	25	28	14	21	29	24
Football pools	4	5	5	1	3	9	5	4
Bingo <sup>a</sup>	8	14	11	11	10	4	10	9
Slot machines	16	23	11	12	3	17	14	13
Fixed odds betting terminals	5	12	4	2	0	9	8	4
Horse races <sup>b</sup>	19	21	17	10	12	10	21	16
Dog races <sup>b</sup>	6	6	5	2	2	4	6	4
Sports betting <sup>b</sup>	11	18	7	3	1	12	11	9
Betting on non-sports events <sup>b</sup>	5	8	4	3	1	5	4	4
Casino games <sup>c</sup>	7	10	1	2	1	10	6	5
Poker at a pub/club	3	4	2	0	0	3	3	2
Online slot machine style games/instant wins	4	8	1	2	0	3	3	3
Spread betting	1	4	2	0	0	2	2	1
Private betting	15	18	4	5	3	20	11	11
Any online betting <sup>d</sup>	5	5	1	1	1	5	3	4
Any other online gambling <sup>e</sup>	18	15	6	11	4	10	14	13
<b>Any gambling activity</b>	<b>78</b>	<b>70</b>	<b>71</b>	<b>66</b>	<b>69</b>	<b>62</b>	<b>75</b>	<b>73</b>
Mean number of gambling activities	2.3	2.5	1.8	1.5	1.3	1.7	2.2	1.9
Standard error of the mean	0.04	0.19	0.12	0.07	0.04	0.16	0.18	0.03
Bases (weighted) <sup>f</sup>	4119	240	255	639	1620	669	205	7751
Bases (unweighted) <sup>f</sup>	4056	222	271	678	1780	538	201	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

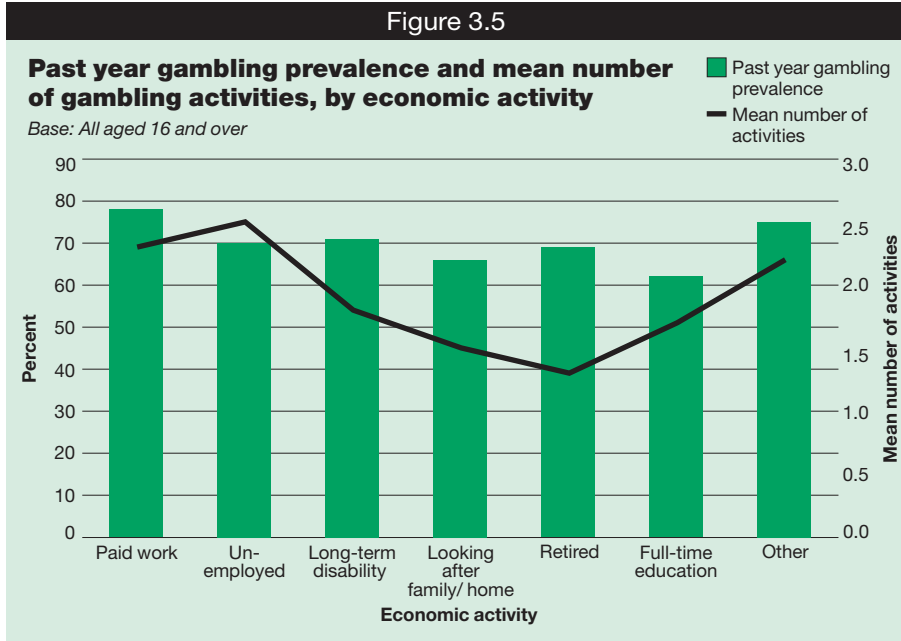
<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

<sup>g</sup> The total column includes those for whom economic activity was not known.

Those in paid work, compared with the average, were more likely to participate in the National Lottery Draw (66%), other lotteries (28%), scratchcards (28%), slot machines (16%), bet on horse races (19%) or take part in private betting (15%). Although respondents in full-time education had the lowest past year gambling prevalence rates, this group had much higher than average rates of private betting (20% compared with 11% overall). They were also more likely to play casino games (10%), slot machines (17%), fixed odds betting terminals (9%) and bet on sports events (12%), though less likely to play the National Lottery (32%).

Figure 3.5



### 3.3.3 Past year gambling by income

This section looks at gambling participation by income. Two measures of income are presented. The first is a measure of the respondent’s personal income. The second is equivalised household income, which takes into account the number of persons living in a household.<sup>3</sup>

#### Personal income

As Figure 3.6 and Table 3.7 show past year gambling prevalence varied by personal income. Those with the lowest personal income had the lowest prevalence of gambling (66%) whereas those with higher income levels had higher rates of gambling in the past year (79% and 76% for the 4th and 5th quintiles respectively). Correspondingly, those with the lowest income also took part in fewer activities (1.7) than their counterparts with higher personal income (2.2 and 2.1 for the 4th and 5th personal income quintiles).

Participation in individual gambling activities varied by income. For activities such as the National Lottery Draw, other lotteries, betting on horses, dogs, sports events, private betting or any online betting, prevalence was lower among those with the lowest personal income and higher among those with higher income levels. However, prevalence of playing fixed odds betting terminals was highest among those with the lowest personal income

Figure 3.6

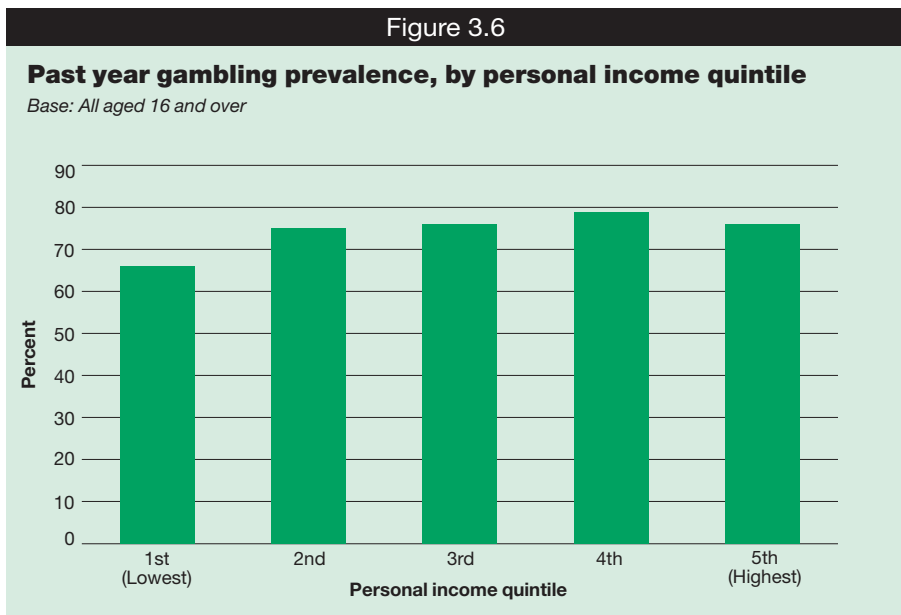


Table 3.7

Participation in gambling activities within the past year, by personal income						
All aged 16 and over						2010
Type of gambling activity	Personal income					Total <sup>g</sup>
	1st (Lowest)	2nd	3rd	4th	5th (Highest)	
	%	%	%	%	%	%
National Lottery Draw	46	59	64	66	63	59
Another lottery	18	24	28	29	29	25
Scratchcards	22	29	29	25	21	24
Football pools	5	5	5	4	3	4
Bingo <sup>a</sup>	9	13	9	7	6	9
Slot machines	14	11	15	14	12	13
Fixed odds betting terminals	7	4	5	4	4	4
Horse races <sup>b</sup>	12	13	18	20	20	16
Dog races <sup>b</sup>	3	4	6	5	6	4
Sports betting <sup>b</sup>	8	5	9	11	12	9
Betting on non-sports events <sup>b</sup>	4	4	5	5	4	4
Casino games <sup>c</sup>	6	3	6	5	7	5
Poker at a pub/club	2	1	3	2	2	2
Online slot machine style games/instant wins	3	2	3	3	3	3
Spread betting	1	1	1	1	1	1
Private betting	12	8	12	14	15	11
Any online betting <sup>d</sup>	3	2	3	6	5	4
Any other online gambling <sup>e</sup>	9	10	13	17	18	13
<b>Any gambling activity</b>	<b>66</b>	<b>75</b>	<b>76</b>	<b>79</b>	<b>76</b>	<b>73</b>
Mean number of gambling activities	1.7	1.8	2.2	2.2	2.1	1.9
Standard error of the mean	0.07	0.06	0.07	0.07	0.07	0.03
Bases (weighted) <sup>f</sup>	1401	1198	1574	1064	1407	7751
Bases (unweighted) <sup>f</sup>	1333	1241	1576	1062	1426	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

<sup>g</sup> The total column includes those for whom personal income was not known.

(7%) and lowest among those with highest personal income (4%). A similar pattern was evident for football pools and slot machines, with prevalence being lowest among the highest income groups. Likewise, bingo tended to be broadly more popular among those with lower income levels (estimates varied between 9% - 13% among the three lowest income quintiles) than those in the highest personal income quintile (6%). Participation in activities such as casino games and scratchcards varied by income, but with no clear pattern.

### Equivalised household income

Equivalised household income, which takes into account the number of persons living in a household,<sup>3</sup> was not associated with overall gambling prevalence or the mean number of gambling activities undertaken in the past year.

Table 3.8

### Participation in gambling activities within the past year, by equivalised household income

All aged 16 and over						2010
Type of gambling activity	Equivalised household income					Total <sup>g</sup>
	1st (Lowest)	2nd	3rd	4th	5th (Highest)	
	%	%	%	%	%	
National Lottery Draw	57	62	63	60	60	59
Another lottery	19	27	26	28	30	25
Scratchcards	29	28	27	22	21	24
Football pools	6	6	4	4	3	4
Bingo <sup>a</sup>	13	9	8	7	6	9
Slot machines	12	15	16	12	11	13
Fixed odds betting terminals	6	5	4	3	3	4
Horse races <sup>b</sup>	15	16	17	16	20	16
Dog races <sup>b</sup>	4	5	5	5	5	4
Sports betting <sup>b</sup>	9	8	10	9	11	9
Betting on non-sports events <sup>b</sup>	5	5	4	4	4	4
Casino games <sup>c</sup>	5	5	6	5	6	5
Poker at a pub/club	1	3	3	2	1	2
Online slot machine style games/instant wins	3	3	3	2	3	3
Spread betting	1	1	1	2	1	1
Private betting	8	12	14	12	14	11
Any online betting <sup>d</sup>	3	3	4	4	6	4
Any other online gambling <sup>e</sup>	9	12	15	15	17	13
<b>Any gambling activity</b>	<b>72</b>	<b>75</b>	<b>77</b>	<b>75</b>	<b>75</b>	<b>73</b>
Mean number of gambling activities	1.9	2.1	2.1	1.9	2.0	1.9
Standard error of the mean	0.10	0.08	0.08	0.06	0.07	0.03
Bases (weighted) <sup>f</sup>	1238	1256	1296	1238	1181	7751
Bases (unweighted) <sup>f</sup>	1247	1251	1249	1248	1250	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

<sup>g</sup> The total column includes those for whom household income was not known.

However, participation in some specific gambling activities did differ by equivalised household income. For example, those in the lowest income households had the highest prevalence of gambling on scratchcards (29%), bingo (13%) and football pools (6%) while those in the highest income households had the lowest prevalence (21%, 6% and 3% respectively). The reverse was true for online betting, online gambling and other lotteries, where those from the highest income households had the highest prevalence (6%, 17% and 30% respectively) while those from the lowest income households were less likely to take part in each of these activities. Equivalent estimates were 3%, 9% and 19% respectively. For slot machines, the pattern by equivalised household income was more varied, with participation being lowest among those from the lowest and highest income households (12% and 11% respectively) and highest among those from middle income households (16% for those in the 3rd household income quintile; see Table 3.8).



### 3.3.4 Past year gambling by Index of Multiple Deprivation

Indices of deprivation identify areas of multiple deprivation at the small area level. Each index is based on the concept that distinct dimensions of deprivation such as income, employment, education and health can be identified and measured separately. These dimensions are then aggregated to provide an overall Index of Multiple Deprivation (IMD)<sup>4</sup>. Different indices are calculated for England, Scotland and Wales. These are not comparable and cannot be combined. Therefore, this section presents information by IMD for England only.

Type of gambling activity	Index of Multiple Deprivation (England only)					Total
	1st (Least deprived)	2nd	3rd	4th	5th (Most deprived)	
	%	%	%	%	%	
National Lottery Draw	58	59	61	57	56	58
Another lottery	28	28	26	23	19	25
Scratchcards	19	24	24	28	26	24
Football pools	3	4	5	5	5	4
Bingo <sup>a</sup>	6	8	7	10	11	8
Slot machines	12	12	12	15	12	13
Fixed odds betting terminals	3	4	5	4	5	4
Horse races <sup>b</sup>	17	17	18	14	15	16
Dog races <sup>b</sup>	3	5	6	5	4	5
Sports betting <sup>b</sup>	7	9	8	10	8	9
Betting on non-sports events <sup>b</sup>	3	4	4	4	5	4
Casino games <sup>c</sup>	6	5	6	5	5	5
Poker at a pub/club	3	1	2	2	2	2
Online slot machine style games/instant wins	2	3	3	4	2	3
Spread betting	1	1	1	1	2	1
Private betting	12	13	13	12	8	12
Any online betting <sup>d</sup>	5	4	4	3	2	3
Any other online gambling <sup>e</sup>	14	14	12	15	10	13
<b>Any gambling activity</b>	<b>73</b>	<b>75</b>	<b>75</b>	<b>72</b>	<b>69</b>	<b>73</b>
Mean number of gambling activities	1.8	2.0	2.0	2.0	1.8	1.9
Standard error of the mean	0.07	0.06	0.07	0.08	0.08	0.03
Bases (weighted) <sup>f</sup>	1316	1401	1385	1263	1301	6666
Bases (unweighted) <sup>f</sup>	1334	1406	1354	1216	1239	6549

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

Area deprivation was not associated with either past year gambling prevalence or the mean number of activities undertaken in the past year. However, participation in some gambling activities did differ by area deprivation. These were other lotteries, scratchcards, football pools, bingo, online gambling on slot machine style games and private betting. Respondents in the most deprived areas were more likely to buy scratchcards (26%), play bingo (11%) and football pools (5%) than those in the least deprived areas (19%, 6% and 3% respectively). The reverse was true for other lotteries, where those in the least deprived areas had higher

prevalence (28%) than those in the most deprived areas (19%). Participation in online slot machine style games was lowest among those from the most and least deprived areas (2% for both) and highest among those from the middle deprivation quintiles (4% for those in the 4th quintile). For all other activities, no significant differences were observed.

### 3.3.5 Past year gambling by Government Office Region

Past year gambling prevalence differed by Government Office Region (GOR) with prevalence being higher in Scotland, Wales and the North and East of England and generally lower in the south of England and London. Prevalence was highest in the East Midlands (80%) and the lowest in London (58%). A similar pattern was found for the mean number of activities undertaken per year with those in the North West taking part in the highest number of activities (2.2) and those in London taking part in the least (1.5). However, caution should be taken when interpreting regional differences as they could be reflective of underlying differences in the socio-economic and demographic profiles of each region.

Participation in fixed odds betting terminals, betting on non-sports events, playing casino games, poker, online slot machine style games or spread betting did not vary significantly by region. For the remaining activities, the pattern was similar to that observed for overall gambling prevalence. Participation in each of these activities tended to be lower in either London or regions in the south of England and higher in other areas. For example, participation in the National Lottery Draw varied from a high of 66% in the North East to a low of 46% in London. Likewise, betting on horses was twice as popular among those in the North West (22%) as among those in London (11%). Exceptions to this were betting on dog races (lowest in Wales; 2%); sports betting (lowest in South West; 5%), and football pools, which was lowest among those in Wales and the South West (both 2%).

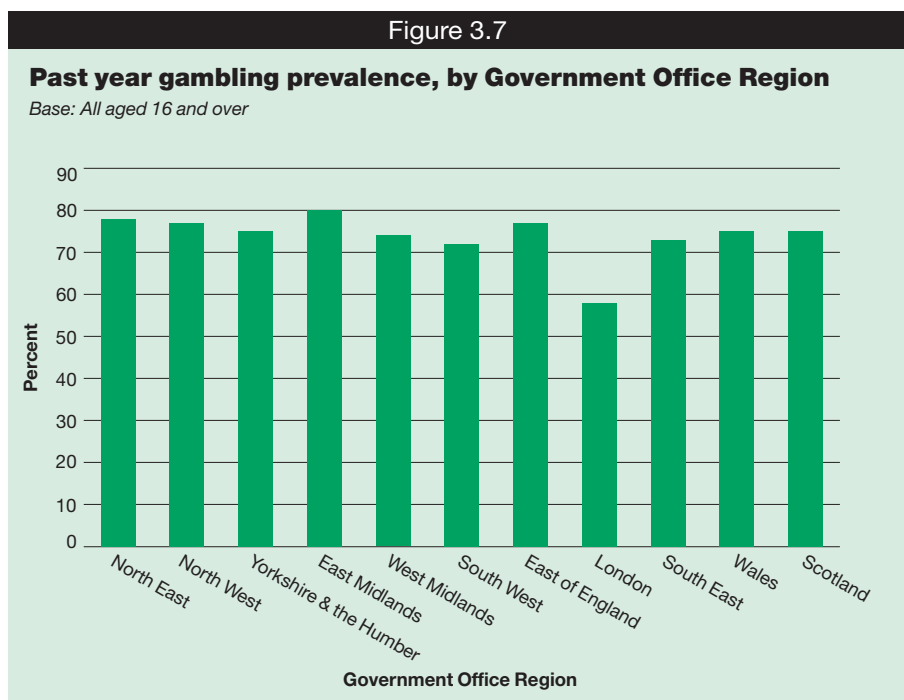


Table 3.10

**Participation in gambling activities in the past year, by Government Office Region**

All aged 16 and over

2010

Type of gambling activity	Government Office Region											Total
	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	South West	East of England	London	South East	Wales	Scotland	
National Lottery Draw	66	63	60	64	60	58	62	46	56	60	61	59
Another lottery	28	29	27	23	24	25	27	18	25	31	25	25
Scratchcards	27	26	22	24	28	26	27	20	22	24	26	24
Football pools	6	7	3	5	5	2	5	4	4	2	7	4
Bingo <sup>a</sup>	11	10	7	10	10	8	9	5	7	11	12	9
Slot machines	14	14	14	15	13	11	14	8	12	11	16	13
Fixed odds betting terminals	3	5	4	4	5	3	5	3	5	4	7	4
Horse races <sup>b</sup>	15	22	17	19	17	14	14	11	17	15	17	16
Dog races <sup>b</sup>	3	4	4	5	6	4	6	4	5	2	4	4
Sports betting <sup>b</sup>	8	10	10	9	11	5	7	7	10	6	12	9
Betting on non-sports events <sup>b</sup>	2	5	5	4	5	3	4	3	3	4	6	4
Casino games <sup>c</sup>	2	6	5	6	7	4	6	3	7	4	5	5
Poker at a pub/club	1	3	1	3	2	1	3	1	2	3	2	2
Online slot machine style games/instant wins	1	3	2	3	3	2	4	3	3	2	4	3
Spread betting	0	1	1	1	1	0	1	2	1	0	1	1
Private betting	9	11	12	16	12	10	13	8	14	9	11	11
Any online betting <sup>d</sup>	3	3	3	4	3	4	4	3	4	3	4	4
Any other online gambling <sup>e</sup>	9	14	12	14	13	12	15	11	15	10	12	13
<b>Any gambling activity</b>	<b>78</b>	<b>77</b>	<b>75</b>	<b>80</b>	<b>74</b>	<b>72</b>	<b>77</b>	<b>58</b>	<b>73</b>	<b>75</b>	<b>75</b>	<b>73</b>
Mean number of gambling activities	2.0	2.2	2.0	2.1	2.1	1.8	2.1	1.5	1.9	1.9	2.1	1.9
Standard error of the mean	0.09	0.08	0.12	0.08	0.09	0.08	0.08	0.08	0.11	0.12	0.12	0.03
Bases (weighted) <sup>f</sup>	341	881	673	580	692	691	744	983	1080	402	683	7751
Bases (unweighted) <sup>f</sup>	351	960	581	627	659	738	750	828	1055	437	764	7750

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Bases shown are for participation in 'any gambling activity'. Unweighted bases for individual gambling activities vary.

### 3.4 Comparison of past year, regular and weekly gamblers

Table 3.11 presents a comparison of past year gamblers, regular gamblers (that is, those who gamble once a month or more), and past week gamblers, by a number of key socio-economic and demographic characteristics. This comparison gives a way of exploring potential differences in the profile of different types of gamblers.

In general, there was a close correspondence between the three types of gamblers. Past year, regular and past week gamblers were more likely to be male and more likely to be older. However, there were some notable differences. For example, as shown in Figure 3.8, the pattern of association between gambling participation and age was more pronounced for regular and past week gamblers, with those aged 45-65 being 1.5 times more likely to be a regular gambler than those aged 16-24 (estimates were 60% and 39% respectively).



Likewise, compared with past year gamblers, it appears that those from semi-routine and routine households were more likely to be either regular gamblers or past week gamblers: 62% of those from semi-routine and routine households were regular gamblers compared with 47% of those from managerial and professional households. Furthermore, when looking at main economic activity across the three types of gamblers, there were some differences in profile. Past year gambling prevalence was highest among those who were in paid work and was lower among those who were unemployed or retired. However, among regular and weekly gamblers, prevalence between these groups was similar.

Finally, although there was no association observed between equivalised household income and past year gambling prevalence, there was a relationship between household income and regular and past week gambling. Prevalence of regular or past week gambling was lowest among those from the highest income households.

Table 3.11

**Comparison of past year, regular (at least monthly) gamblers and past week gamblers**

All aged 16 and over

2010

Proportion within each category who gambled within the past year/week or were regular (at least monthly) gamblers	Gambling participation		
	Any gambling activity in the past year	Regular, at least monthly, gambling	Any gambling activity in past week
	%	%	%
<b>Sex</b>			
Male	75	58	47
Female	71	50	40
<b>Age group</b>			
16-24	68	39	27
25-34	74	51	39
35-44	75	55	46
45-54	77	60	50
55-64	78	60	51
65-74	72	59	49
75 and over	63	51	42
<b>Marital status</b>			
Married/living as married	75	56	46
Separated/divorced	75	57	47
Single, never married	69	45	34
Widowed	72	60	52
<b>Ethnic group</b>			
White/White British	76	56	45
Black/Black British	41	29	22
Asian/Asian British	52	37	30
Other ethnic group	53	34	27
<b>Highest educational qualification</b>			
Degree or higher (or equivalent)	70	44	36
Professional (below degree)	72	54	45
A-levels or equivalent	75	50	38
GCSEs or equivalent	76	59	47
Other	78	65	54
None	73	61	52
<b>NS-SEC of HRP</b>			
Managerial & professional occupations	72	47	38
Intermediate occupations	76	57	46
Small employers & own account workers	71	52	41
Lower supervisory & technical occupations	79	63	52
Semi-routine & routine occupations	76	62	53
<b>Economic activity of individual</b>			
Paid work	78	58	47
Unemployed	70	56	45
Long-term disability	71	53	44
Looking after family/home	66	48	37
Retired	69	55	46
Full-time education	62	30	20
Other	75	54	42

Table 3.11 continued

All aged 16 and over

2010

Proportion within each category who gambled within the past year/week or were regular (at least monthly) gamblers	Gambling participation		
	Any gambling activity in the past year	Regular, at least monthly, gambling	Any gambling activity in past week
	%	%	%
<b>Equivalent household income quintile</b>			
1st (Lowest)	72	56	44
2nd	75	58	48
3rd	77	55	45
4th	75	55	46
5th (Highest)	75	50	40
<b>Index of Multiple Deprivation (England only)</b>			
1st (Least Deprived)	73	49	39
2nd	75	53	44
3rd	75	55	44
4th	72	53	43
5th (Most deprived)	69	54	44
<b>Government Office Region</b>			
North East	78	57	50
North West	77	62	50
Yorkshire & the Humber	75	54	42
East Midlands	80	58	50
West Midlands	74	57	46
South West	72	51	41
East of England	77	56	45
London	58	41	32
South East	73	48	39
Wales	75	55	45
Scotland	75	59	49

Continued...

## Notes and references

- 1 Base sizes for those in non-white ethnic groups are very small, making differences between survey years difficult to detect. Therefore, comparisons with previous survey years are not presented here.
- 2 In 2007, those who indicated that they had obtained an NVQ (Levels 1-5) and that this was their highest qualification were coded as 'other' for their highest educational qualification. In 2010, they were coded to the equivalent level of academic qualification (i.e., Levels 4 and 5 to Degree or higher, Level 3 to A-levels and Level 1&2 to GCSEs).
- 3 As part of the household questionnaire, respondents were asked to report their total household income (including money from wages, savings, investments and pensions) by choosing a banded figure on a showcard that most closely represented their total income. This figure was then adjusted to take into account the number of people in the household using the widely used McClements scoring system.
- 4 More information about the Index of Multiple Deprivation can be found at:  
<http://www.communities.gov.uk/documents/communities/doc/615986.doc>

# 4 Gambling involvement

## 4.1 Introduction

The term gambling involvement is commonly used in the academic literature on gambling behaviour. It is often used in studies to describe gambling participation or as a measure of how engaged someone is with gambling. However, despite the popularity of this term, there has been little attempt to formally define what the term gambling involvement means and what features contribute to its measurement. This situation has partly arisen from the fact that there is no single measure of a 'unit' of gambling consumption.<sup>1</sup> In addition, numerous studies have highlighted the methodological problems associated with trying to measure component parts of gambling involvement, such as gambling expenditure.<sup>2</sup> A key aim of the 2010 survey was to develop questions that would allow us to better measure varying levels of gambling involvement. A review of the academic literature and pilot work with members of the British public allowed us to develop survey questions that could be used to identify sub-groups with varying levels of gambling involvement. Our aim was to measure gambling involvement on two domains: participation and volume. Questions developed to measure the former included participation within individual activities, the number of activities undertaken and the frequency of participation. Questions aimed at capturing information about volume included broad measures of money and time spent gambling on individual activities.

## 4.2 Questions, definitions and measurement

### 4.2.1 Gambling involvement and participation

Chapter 2 presented information about participation in gambling. This chapter presents further information about the frequency and volume of gambling involvement.

For each activity undertaken, respondents were asked how often they gambled on that activity in the past 12 months. The answer options for the frequency questions matched the 2007 survey, allowing comparisons to be made between the two survey years (frequency was not asked in 1999). In addition, those who reported gambling monthly or more regularly were asked to report how many days a month they usually gambled on this activity. This additional measure was asked to provide greater discrimination of gambling frequency for those who reported gambling regularly. It was also deemed an important outcome measure of gambling involvement by Walker et al<sup>1</sup> in their recommended framework for reporting outcomes in problem gambling treatment research.

For each activity undertaken monthly or more often, respondents were asked how much money they usually spent on that activity in a month. Measuring expenditure on gambling is extremely difficult. The approach used in the 2007 survey, by which respondents were asked to report the total amount won and total amount lost for each activity, revealed that respondents were likely to have had a number of cognitive and heuristic biases when reporting these data (see Chapter 2 of the 2007 report for a fuller discussion). Therefore, this approach was not recommended for re-administration in the present survey. Furthermore, the focus of the present survey was slightly different in that it was not our aim to accurately capture data on net expenditure but to administer questions that would allow us to divide gamblers into a range of sub-groups based on higher to lower involvement. Work by Wood

and Williams comparing different question wording against diary data suggested that broad information about gambling 'spend' could serve as a proxy measure of gambling volume.<sup>3</sup> Therefore, the questions used in the present survey, by which respondents were asked to report how much money they usually spent on an activity in a month, were a refinement of the approach recommended by Wood and Williams.

Questions aimed at broadly measuring time spent gambling were developed in two stages. The first was a review of approaches used by other international prevalence surveys. The questions identified were evaluated using the Questionnaire Appraisal System.<sup>4</sup> Recommended approaches were cognitively piloted with members of the British public to assess how easy or difficult it was to answer these questions, whether the respondent understood the terms and to assess how respondents calculated time spent gambling. This process demonstrated when answering questions about time spent gambling, most respondents included the time they spent preparing for or thinking about gambling. Therefore, it was agreed with the Gambling Commission and the BGPS Steering Group that these questions should have a broad definition of what to include when measuring time spent gambling. Questions were phrased appropriately to encourage this (see Appendix C for the full questionnaire). For appropriate activities, all respondents who reported regularly participating in this activity were asked how much time they usually spent gambling on this activity on a usual gambling day. As with the expenditure questions, the measures of time spent gambling were not included to provide precise data on time spent gambling but rather to serve as a proxy for gambling volume.

Sections 4.3 to 4.5 of this chapter examine the frequency of gambling participation for each activity, frequency of participation by mode of access, and compare gambling frequency between 2007 and 2010. Section 4.6 discusses gambling volume (time and money spent on gambling) among regular gamblers. Finally, self-reported changes in gambling involvement are examined in section 4.7.

## 4.3 Gambling frequency

### 4.4.1 Frequency of participation in each activity

For each activity undertaken in the past year, respondents were asked how often they spent money on that activity. Table 4.1 shows the frequency of participation for each activity, by sex.

Of the 18 activities listed,<sup>5</sup> two were played once a week or more by the majority of participants; the National Lottery Draw and football pools. As in 2007, the National Lottery Draw was the most frequently played gambling activity. 59% of people who participated in the National Lottery did so once a week or more, with 21% taking part on two or more days a week. Football pools were played almost as frequently: 54% of participants did so once a week or more, though fewer (12%) did so on two or more days a week.

In addition to the National Lottery Draw and football pools, there were five other activities which were played by a majority of participants once a month or more. These were bingo played in person (54% of bingo players did so once a month or more), casino games played online and spread betting (both 53%), fixed odds betting terminals (52%), and poker at a pub/club or tournament (50%). This means that the majority of gamblers who take part in these activities do so relatively regularly, that is once a month or more often.

Participation in the remaining activities was less frequent. Three quarters (75%) of those who played casino games in person had done so less than once a month, in common with those who had bet on horse races (75% less than monthly). Of those who had bet on dog races, 72% did so less regularly than once a month.



Table 4.1

**Frequency of gambling in the past year, by sex and activity type***Past year participants in each activity aged 16 and over*

2010

Type of gambling activity	Frequency of participation				Bases (weighted)	Bases (un- weighted)	
	2+ days per week only	Once a week	Once month, less than once a week	Less than once/ month			
<b>Men</b>							
National Lottery Draw	%	23	38	18	21	2323	2219
Another lottery	%	4	10	20	66	943	913
Scratchcards	%	9	14	26	50	891	808
Football pools	%	14	41	18	27	287	254
Bingo in person	%	14	18	21	47	171	165
Bingo online	%	[2]	[4]	[33]	[61]	49	45
Slot machines	%	10	13	23	53	613	548
Fixed odds betting terminals	%	15	14	27	45	273	231
Horse races <sup>a</sup>	%	14	11	10	65	778	727
Dog races <sup>a</sup>	%	10	12	13	65	247	219
Sports betting <sup>a</sup>	%	14	17	21	48	590	504
Betting on non-sports events <sup>a</sup>	%	18	14	16	52	230	207
Casino games in person	%	6	7	16	71	229	191
Casino games online	%	17	15	23	45	131	113
Poker at a pub/club	%	13	20	18	49	138	118
Online slot machine style games/instant wins	%	10	14	21	55	137	116
Spread betting	%	15	18	19	48	72	54
Private betting	%	4	13	19	64	619	542
<i>Online betting<sup>b</sup></i>	%	19	11	20	50	168	150
<i>Other online gambling<sup>c</sup></i>	%	12	15	21	51	261	226
<b>Women</b>							
National Lottery Draw	%	18	40	18	24	2225	2419
Another lottery	%	3	12	17	68	999	1080
Scratchcards	%	7	15	26	51	1003	1074
Football pools	%	-	50	11	38	57	62
Bingo in person	%	16	21	18	45	411	437
Bingo online	%	10	11	24	56	84	88
Slot machines	%	3	7	17	73	378	395
Fixed odds betting terminals	%	7	9	24	60	58	59
Horse races <sup>a</sup>	%	3	3	4	90	479	509
Dog races <sup>a</sup>	%	4	4	5	88	97	99
Sports betting <sup>a</sup>	%	2	6	12	80	84	91
Betting on non-sports events <sup>a</sup>	%	14	21	8	56	93	102
Casino games in person	%	-	4	8	89	73	75
Casino games online	%	*	*	*	*	24	25
Poker at a pub/club	%	*	*	*	*	18	18
Online slot machine style games/instant wins	%	5	7	20	68	79	82
Spread betting	%	*	*	*	*	9	9
Private betting	%	2	9	11	78	268	274
<i>Online betting<sup>b</sup></i>	%	3	4	4	89	51	54
<i>Other online gambling<sup>c</sup></i>	%	10	8	19	63	152	159

Continued...

Table 4.1 continued

Past year participants in each activity aged 16 and over						2010	
Type of gambling activity		Frequency of participation				Bases (weighted)	Bases (un-weighted)
		2+ days per week only	Once a week	Once month, less than once a week	Less than once/month		
<b>All</b>							
National Lottery Draw	%	21	39	18	22	4548	4638
Another lottery	%	4	11	19	67	1942	1993
Scratchcards	%	8	15	26	50	1895	1882
Football pools	%	12	42	17	29	344	316
Bingo in person	%	15	20	19	46	583	602
Bingo online	%	7	8	28	58	133	133
Slot machines	%	7	11	21	61	991	943
Fixed odds betting terminals	%	13	13	26	48	331	290
Horse races <sup>a</sup>	%	9	8	8	75	1257	1236
Dog races <sup>a</sup>	%	8	10	10	72	343	318
Casino games in person	%	5	6	14	75	302	266
Casino games online	%	17	15	21	47	154	138
Poker at a pub/club	%	12	21	18	50	155	136
Online slot machine style games/instant wins	%	8	12	21	59	216	198
Spread betting	%	15	18	20	47	80	63
Private betting	%	4	11	17	68	887	816
Online betting <sup>b</sup>	%	15	10	16	59	218	204
Other online gambling <sup>c</sup>	%	11	13	20	56	413	385

<sup>a</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange

<sup>b</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange

<sup>c</sup> Includes using the internet to play bingo, football pools, casino games, online slot machine style games (the National Lottery Draw and other lotteries are not included)

\* Estimates not shown because of small base sizes.

As Figure 4.1 shows, there were some variations in gambling frequency between men and women. Men were more likely than women to participate at least once a week in the following activities: National Lottery Draw, slot machines, fixed odds betting terminals, betting on horses, dogs and other sports events, playing casino games in person, online slot machine style games and private betting. Women were more likely than men to play bingo online at least once a week. For all other activities, no significant differences between men and women were observed. (Figure 1 only shows activities where differences between men and women were observed.)

Table 4.1 also shows two summaries of online gambling by gambling frequency. All respondents who reported betting online (on any activity) were asked to estimate how often they gambled online on these things in total. Likewise, those who reported gambling online on bingo, casino or online slot machine style games and the football pools were also asked to estimate how often they gambled online on these things in total.

A quarter of gamblers (25%) who bet online, gambled at least once a week on any online betting activity. Men were more likely than women to use the internet at least once a week to bet (31% compared with 7%). Of those who used the internet to play bingo, online casino games, online instant wins, or the football pools, 24% did so at least weekly. Men were more likely to use the internet to play these games weekly or more (28% compared with 18%).

#### 4.3.2 Number of gambling days per year for all activities

Examining the frequency of participation in each gambling activity does not give an overall measure of frequency of gambling as a whole. Respondents were not asked how often they

Figure 4.1

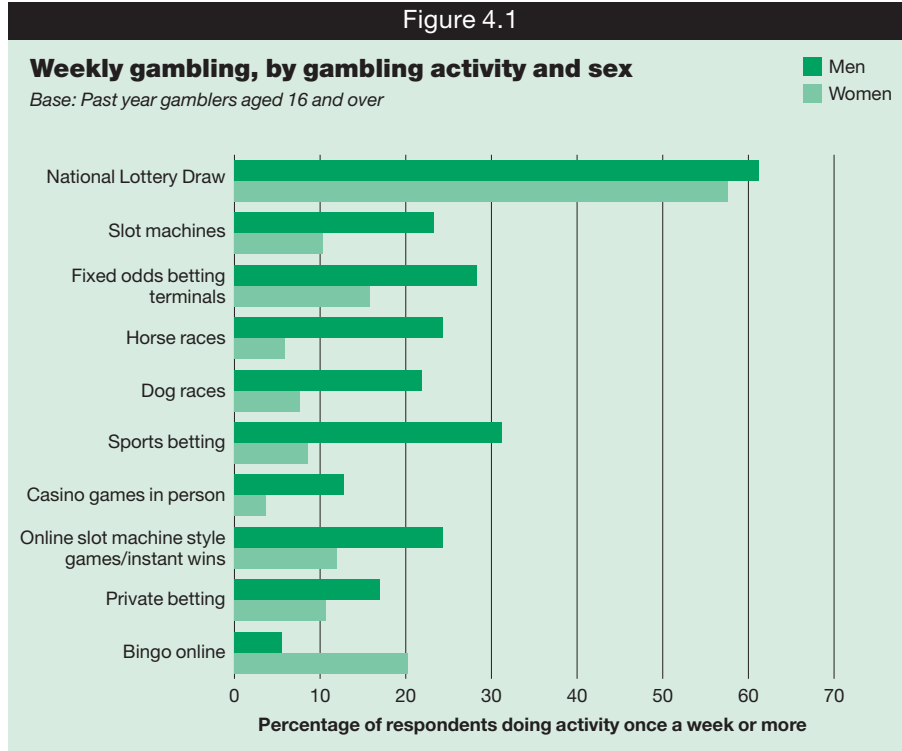


Table 4.2

**Mean gambling days per year, by age and sex**  
 Past year gamblers aged 16 and over 2010

Age group	Sex				Total	
	Men		Women		Mean	Standard error of the mean
	Mean	Standard error of the mean	Mean	Standard error of the mean		
16-24	126.2	11.87	66.2	6.87	97.8	7.29
25-34	132.0	10.20	67.0	4.11	102.2	6.00
35-44	107.0	7.35	74.0	4.02	90.8	4.47
45-54	125.0	8.79	74.7	3.85	100.3	5.13
55-64	100.9	7.46	71.5	4.26	85.8	4.57
65-74	104.6	6.68	74.1	4.25	89.1	4.15
75+	92.1	7.65	72.8	5.56	81.0	5.32
All	115.2	3.78	71.5	1.84	93.6	2.35
<i>Bases (weighted)</i>						
16-24	415		373		788	
25-34	495		420		915	
35-44	538		516		1054	
45-54	509		491		1000	
55-64	429		454		883	
65-74	287		295		582	
75+	185		249		434	
All	2858		2798		5657	
<i>Bases (unweighted)</i>						
16-24	318		354		672	
25-34	407		426		833	
35-44	506		578		1084	
45-54	487		550		1037	
55-64	434		514		948	
65-74	367		363		730	
75+	179		221		400	
All	2698		3006		5704	

took part in ‘any gambling activity’ as this is cognitively difficult to answer, particularly among more regular gamblers who may gamble often on a range of different activities. Therefore, to give an estimate of overall gambling frequency, the number of gambling days per year was calculated by adding together the number of days a respondent reported participating in each activity.<sup>6</sup> This gives a broad measure of gambling frequency that takes into account the number of activities undertaken and the frequency of participation in each.<sup>7</sup>

Table 4.2 shows the mean number of gambling days per year for past year gamblers by age and sex. Overall, past year gamblers took part in gambling on 93.6 days per year. That is, they tended to gamble more than once a week, but not quite as often as twice a week.

Male past year gamblers had a higher mean number of gambling days per year than female past year gamblers (115.2 days compared with 71.5 days). The mean number of gambling days observed for men corresponds with gambling twice a week or more, on average. Among women, the mean number of gambling days was lower, suggesting that they gambled slightly more often than once a week, but not as often as twice a week.

The mean number of gambling days varied by age group. Among male past year gamblers, mean gambling days tended to be higher among younger gamblers and lower among older gamblers. Estimates among those aged 16-24 and 25-34 were 126.2 days and 132.0 days per year respectively. Among those aged 75 and over, the mean number of gambling days was 92.1. However, among women, the opposite pattern was true. Women younger than 35 tended to have the lowest mean number of gambling days (66.2 days among those aged 16-24, 67.0 days among those aged 25-34) and those aged 35 and over had higher means (ranging between 71.5 days for those aged 55-64 to 74.7 days per year for those aged 45-54).

## 4.4 Gambling frequency by mode of access

### 4.4.1 Gambling frequency of most frequent activity by mode of access

For the majority of activities (except those where there was only one mode of access) respondents were asked whether they had participated in the activity ‘in person’, ‘online’, or ‘both in person and online’. The ‘in person’ category includes all offline methods of access,

<i>Past year gamblers aged 16 and over</i>							2010
Mode of access		Frequency of participation				Bases (weighted)	Bases (un-weighted)
		2+ days per week only	Once a week	Once month, less than once a week	Less than once/ month		
<b>Men</b>							
In person only <sup>a</sup>	%	24	33	17	26	2216	2112
Online only <sup>b</sup>	%	27	41	11	21	55	54
Both in person and online <sup>c</sup>	%	33	37	16	13	584	528
<b>Women</b>							
In person only <sup>a</sup>	%	16	34	17	33	2326	2500
Online only <sup>b</sup>	%	24	33	15	28	65	71
Both in person and online <sup>c</sup>	%	29	35	21	14	395	422
<b>All</b>							
In person only <sup>a</sup>	%	20	34	17	30	4542	4612
Online only <sup>b</sup>	%	25	37	13	25	120	125
Both in person and online <sup>c</sup>	%	32	36	18	14	979	950

<sup>a</sup> Includes by phone.

<sup>b</sup> Includes using the internet, WAP, interactive TV, to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games, and any online betting with a bookmaker or betting exchange.

<sup>c</sup> Activities undertaken both in person and online.

for example purchasing tickets, placing bets, or playing games in person at a shop or venue, and placing bets on the phone. The 'online' category includes accessing the internet by computer, internet-enabled mobile phone, or through interactive TV.

Table 4.3 presents a comparison of gambling frequency among 'in person only' gamblers, 'online only' gamblers and those who gambled using both methods. For each of these sub-groups, frequency information is presented for the activity that respondents reported taking part in most often.

Those who gambled both online and in person did so the most frequently: 68% gambled once a week or more, and 86% gambled once a month or more on their most frequent activity. Those who gambled 'in person' only or 'online only', did so less frequently, 54% and 62% weekly or more, and 70% and 75% monthly or more.

Within all three sub-groups, men gambled more frequently than women. However, although men gambled more frequently than women, it is interesting to note the proportion of online only gamblers who gambled on two or more days a week was broadly similar between men and women (27% and 24% respectively).

#### 4.4.2 Number of gambling activities and mean number of gambling days per year by mode of access

Table 4.4 compares the mean number of activities undertaken in the past year by each sub-group. Those who accessed gambling both online and in person took part in the greatest number of activities; 4.3 activities, on average, per year. Those who gambled in person only, gambled on 2.3 activities and those who gambled online only took part in 1.2 activities, on average, in the past year. This may help explain some of the differences in gambling frequency observed by mode of access in Table 4.3.

Table 4.4						
Mean number of activities and mean days per year on all activities, by gambling mode and sex						
<i>Past year gamblers aged 16 and over</i>						2010
Mode of access	Mean number of activities and mean number of gambling days per year				Bases (weighted)	Bases (un-weighted)
	Mean number of activities	Standard error of the mean	Mean number of days/year <sup>d</sup>	Standard error of the mean		
<b>Men</b>						
In Person only <sup>a</sup>	2.6	0.06	96.2	3.68	2215	2111
Online only <sup>b</sup>	1.3	0.08	73.3	10.92	55	54
Both <sup>c</sup>	4.9	0.13	191.3	10.51	585	527
<b>Women</b>						
In Person only <sup>a</sup>	2.1	0.03	63.6	1.66	2326	2500
Online only <sup>b</sup>	1.1	0.04	51.4	5.34	65	71
Both <sup>c</sup>	3.5	0.10	122.0	6.15	395	422
<b>All</b>						
In Person only <sup>a</sup>	2.3	0.03	79.5	2.18	4541	4611
Online only <sup>b</sup>	1.2	0.05	61.5	6.18	120	125
Both <sup>c</sup>	4.3	0.09	163.3	7.43	978	949

<sup>a</sup> Includes by phone.

<sup>b</sup> Includes using the internet, WAP, interactive TV, to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games, and any online betting with a bookmaker or betting exchange.

<sup>c</sup> Activities undertaken both in person and online.

<sup>d</sup> The mean is of total days per year when gambling took place. This is the sum of days per year for each individual activity. It is not possible to determine the number of days when gambling participation overlapped (i.e., days when a respondent gambled on multiple activities in the one day).

Among all three groups, men tended to gamble on more activities than women. This sex difference was greatest among those who gambled both online and in person (4.9 activities for men, 3.5 activities for women). The sex difference was smaller, though still significant, for the 'in person' only (2.6 compared with 2.1), and 'online only' groups (1.3 compared with 1.1).

The same table also shows the mean number of days gambled per year. Those who gambled both online and in person did so more than twice as often (163.3 days per year) as those who gambled online only (61.5 days per year) or 'in person' only (79.5 days per year). 'Online only' gamblers tended to take part in fewer activities than their 'in person' only counterparts. However, interestingly, the frequency of participation between these two groups was similar, indicating that although 'online only' gamblers do not gamble on quite as many activities, they gamble almost as often as 'in person' only gamblers.

#### 4.5 Comparisons of gambling frequency with 2007

This section compares gambling frequency, as indicated by the most frequent activity in the past 12 months, between 2007 and 2010.<sup>8</sup> Among past year gamblers as a whole, there were no changes in gambling frequency observed between 2007 and 2010. In 2007, 54% of past year gamblers reported gambling once a week or more on their most frequent activity. In 2010, 56% of past year gamblers reported the same.

As Figure 4.2 and Table 4.5 show, in both 2007 and 2010 gambling frequency increased with age. However, the finding that frequency did not vary overall by survey year masks some changes observed by age group. Among those aged 25-44, an increase in gambling frequency was observed in 2010 compared with 2007. The proportion of gamblers aged 25-34 who gambled weekly or more often increased from 39% in 2007 to 48% in 2010. The proportion of those aged 35-44 reporting the same increased from 50% to 56% between the two surveys. This was offset by a decrease in gambling frequency among those aged 75 and over: the proportion gambling weekly or more decreased between the two survey years, from 71% in 2007 to 65% in 2010. With only two data points to compare, it is important to treat these observations with some caution. Future research will be needed to examine whether this is evidence of a changing behaviour trend, or simply a random fluctuation.

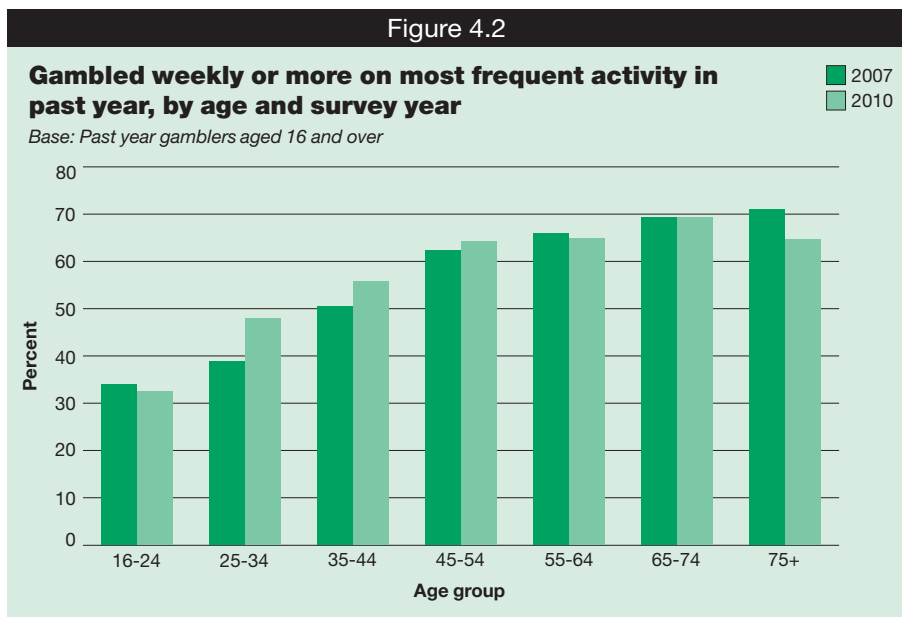


Table 4.5

### Comparisons of most frequent gambling activity, 2007 and 2010, by age and sex

*Past year gamblers aged 16 and over* *2007, 2010*

Age group	Frequency of participation				Bases (weighted)		Bases (un-weighted)		
	Once a week or more		Once a month or more (inc weekly +)		2007	2010	2007	2010	
	2007	2010	2007	2010					
<b>Men</b>									
16-24	%	39	37	63	65	391	415	309	318
25-34	%	43	54	69	74	528	495	445	407
35-44	%	54	59	72	76	647	538	617	506
45-54	%	66	69	79	81	514	509	542	487
55-64	%	68	68	80	79	456	431	526	436
65-74	%	71	72	82	84	314	288	358	368
75+	%	74	67	84	79	197	185	208	179
Total	%	57	60	74	77	3050	2861	3007	2701
<b>Women</b>									
16-24	%	29	28	55	50	348	373	294	354
25-34	%	35	41	57	63	514	420	511	426
35-44	%	47	53	64	70	621	516	646	578
45-54	%	59	59	72	74	494	491	540	550
55-64	%	64	62	75	76	476	454	567	514
65-74	%	67	67	77	80	305	295	334	363
75+	%	69	63	81	81	249	249	233	221
Total	%	51	53	68	70	3011	2798	3129	3006
<b>All</b>									
16-24	%	34	33	60	58	740	788	603	672
25-34	%	39	48	63	69	1043	915	956	833
35-44	%	50	56	68	74	1268	1054	1263	1084
45-54	%	62	64	75	78	1008	1000	1082	1037
55-64	%	66	65	78	77	932	885	1093	950
65-74	%	69	69	80	82	619	583	692	731
75+	%	71	65	82	80	446	434	441	400
Total	%	54	56	71	73	6060	5659	6136	5707

## 4.6 Gambling volume among regular gamblers

### 4.6.1 Definitions and measures

Questions were included to measure gambling volume among regular gamblers (that is, those who gambled once a month or more often on their most frequent activity). Two measures of gambling volume have been calculated:

- Amount of time spent gambling in an average month
- Amount of money spent gambling in an average month

The amount of time spent gambling in an average month was calculated in two stages. Firstly, for each individual activity undertaken regularly, the amount of time spent gambling on a usual gambling day was multiplied by the number of gambling days per month for that activity. This provided a measure of hours spent gambling per month for each activity. Once this had been calculated, the second stage was to sum this across all activities to give an overall measure of gambling volume based on time spent gambling.

Values in the overall measure ranged from 0 to 385 hours per month. However, the distribution of this measure was skewed towards zero. Questions about time spent gambling were only asked of those activities where it was appropriate. Notably, we did not ask about time spent buying tickets for the National Lottery Draw, tickets for other lotteries,



scratchcards, or entering the football pools. 70% of regular gamblers (63% of men and 79% of women) did not take part in any activities for which a ‘time spent’ question was asked. These people may be considered ‘low-time’ gamblers, by virtue of the fact that none of their gambling choices offer the potential for spending a large amount of time on this activity.

An attempt was made to divide the remaining group of regular gamblers into ‘medium-time’ and ‘high-time’ gamblers. A simple division of the remaining sample gave the following categories: those who spent more than zero but less than three and a half hours a month gambling (15%), and those who spent more than three and a half hours a month gambling (15%). However, these cut points were not satisfactory as it meant that those who gambled for less than one hour a week were included in the same category as those who gambled much more often. Thus, for analysis purposes, a distinction was made between the top 10% of regular gamblers who typically spent seven hours a month or more gambling (with a mean of 31.0 hours gambling per month) and the other 90% of regular gamblers, who either did not spend any time gambling or generally spent less than seven hours a month gambling (a mean of 30 minutes per month). We have called these groups ‘high-time’ and ‘non high-time’ gamblers respectively.

The amount of money spent in an average month was asked for each activity undertaken monthly or more often. The total amount of money spent gambling on all activities was calculated by summing together the figure for all 16 activities. As with the time spent measure, the distribution was skewed towards the minimum: 44% of regular gamblers (49% of men; 38% of women) spent an estimated £5.50 per month on gambling. That is, they regularly gambled on one activity and spent between £1- £10 on this activity. Further attempts to identify ‘medium-spend’ and ‘high-spend’ groups resulted in somewhat unsatisfactory cut-points (for example, simply dividing the remaining sample into two groups gave a high-spend group who reported spending between £21 a month and £3952 a month). Therefore, a distinction was made between the top 10% of regular gamblers, who spent an estimated £61.50 or more per month on gambling (mean expenditure of £209.92 per month) and the remaining 90% of regular gamblers who spent less than this amount (mean expenditure of £14.82 per month). The former is called the ‘high-spend’ group and the latter the ‘non high-spend’ group.

Taking information from both measures together provides four possible sub-groups of regular gamblers. These are:

- Those who were both non high-time and non high-spend gamblers.
- Those who were high-time but non high-spend gamblers.
- Those who were high-spend, but non high-time gamblers.
- Those who were both high-time and high-spend gamblers.

The proportion of regular gamblers falling into these categories is shown in the table below. Overall, 85% of regular gamblers were not high on either index of gambling volume. Four percent were high-spend but not high-time gamblers. A further 4% were high-time only but not high-spend gamblers and 6% of regular gamblers were high on both measures. These category descriptions are used in the rest of this section, which aims to explore how gambling participation and socio-demographic characteristics vary among these sub-groups.

	Non high-spend	High-spend (top 10%)
0 or non high-time	Non high-time/non high-spend 85%	High-spend only 4%
High-time (top 10%)	High-time only 4%	High-time/high-spend 6%

#### 4.6.2 Gambling volume sub-group by socio-demographic characteristics

The socio-demographic profile of each sub-group is shown in Table 4.6. There were some notable differences. Overall, 53% of regular gamblers were male. However, among those who were high-spend only gamblers or high-time/high-spend gamblers, significantly



greater proportions were male (77% and 79% respectively). The sex profile of the other two groups was similar to that of all regular gamblers.

High-time only, high-spend only and high-time/high-spend gamblers all tended to be younger, and were more likely to be single than their non high-time/non high-spend counterparts. 24% of non high-time/non high-spend gamblers were aged 16-34. This compared with 32% for high-time only gamblers, 38% for high-spend only gamblers and 40% for high-time/high-spend gamblers. A higher proportion of high-time only, high-spend only and high-time/high-spend gamblers were single than non high-time/non high-spend gamblers.

A number of variables are presented in Table 4.6 which relate to socio-economic position or status. Of the four groups, high-time only gamblers were more likely (compared with all regular gamblers) to be from semi-routine/routine households (39%), to live in the lowest income households (53%), and to have no educational qualifications (35%). They were less likely to be in paid work (40%) and more likely to be unemployed (7%). This group therefore consisted disproportionately of those with the poorest socio-economic indicators. However, as 60% of this group was not in paid employment and 27% were retired, it might be argued that this group includes those who have more time available to gamble, but less money to spend gambling.

Table 4.6					
Socio-demographic profile of gambling volume sub-groups					
<i>Regular (monthly or more) gamblers aged 16 and over</i>					2010
Socio-demographic characteristics	Gambling volume sub-group				All regular gamblers
	Non high-time & spend	High-time only	High-spend only	High-time & spend	
	%	%	%	%	%
<b>Sex</b>					
Male	50	48	77	79	53
Female	50	52	23	21	47
<b>Age group</b>					
16-24	10	17	14	18	11
25-34	14	15	23	23	15
35-44	19	18	22	13	19
45-54	19	13	13	22	19
55-64	17	13	13	13	17
65 and over	21	24	14	12	20
<b>Marital status</b>					
Married/living as married	65	54	62	53	64
Separated/divorced	9	10	6	9	9
Single, never married	19	26	27	32	21
Widowed	7	9	6	6	7
<b>Ethnic group</b>					
White/White British	94	93	94	94	94
Asian/Asian British	2	2	3	3	2
Black/Black British	2	3	3	1	2
Other ethnic group	1	2	1	2	1
<b>NS-SEC of HRP</b>					
Managerial & professional occupations	37	27	32	27	36
Intermediate occupations	10	6	9	7	10
Small employers & own account workers	11	14	14	15	12
Lower supervisory & technical occupations	12	14	11	14	13
Semi-routine & routine occupations	29	39	33	37	30

Continued...

Table 4.6 continued

Regular (monthly or more) gamblers aged 16 and over

2010

Socio-demographic characteristics	Gambling volume sub-group				All regular gamblers
	Non high-time & spend	High-time only	High-spend only	High-time & spend	
	%	%	%	%	
<b>Household income tertile</b>					
1st (lowest)	33	53	26	39	34
2nd	35	28	46	33	35
3rd (highest)	32	19	28	29	31
<b>Highest educational qualification</b>					
Professional qualification or above	33	17	35	26	32
GCSEs/'O' levels or 'A' levels or equivalent	38	47	42	39	39
Other	2	1	3	1	2
None	27	35	20	34	28
<b>Index of Multiple Deprivation (England only)</b>					
1st (least deprived)	19	15	10	16	18
2nd	22	23	21	12	21
3rd	22	14	21	21	21
4th	18	23	28	20	19
5th (most deprived)	19	26	21	31	20
<b>Economic activity of individual</b>					
Paid work	57	40	70	59	57
Unemployed	3	7	4	10	3
Long-term disability	3	5	2	5	3
Looking after family/home	8	9	4	5	7
Retired	22	27	15	13	21
Full time education	5	7	4	4	5
Other	2	5	1	4	3
<i>Bases (weighted)</i>	3539	178	177	258	4151
<i>Bases (unweighted)</i>	3628	176	169	245	4218

The profile of the high-spend group was more varied. For example, this group had the highest proportion of graduates (35% compared with 32% for all regular gamblers) and, correspondingly, the lowest proportion of people with no qualifications (20% compared with 28% overall). This group also had the highest proportion of people in paid work (70%) and the lowest proportion of people living in the lowest income households (26%). The profile of this group by NS-SEC was largely the same as average, as was the proportion of people living in the most deprived areas (21%). In short, this group seems to represent those who are more likely to be in paid employment, more highly educated and more likely to live in middle income households than their high-time only or high-time/high-spend counterparts. It may be argued that this is the group who had more money available to spend on gambling.

Finally, those who were in the high-time/high-spend group were, compared with all regular gamblers, also more likely to be from semi-routine/routine households (37%), were more likely to live in areas of greatest deprivation (31%), were more likely to have no educational qualifications (34%), were slightly more likely to live in the lowest income households (39%) and were much more likely to be unemployed (10%). Like high-time only gamblers, this group also displayed the most adverse socio-economic profile.

#### 4.6.3 Gambling behaviour among gambling volume sub-groups

##### Number of gambling activities

Table 4.7 shows how the gambling volume sub-groups differed in terms of their overall participation in gambling activities. Non high-time/non high-spend gamblers took part in 2.5 gambling activities in the past year. Those who were high-time only gamblers took part in 4.0 gambling activities in the past year, with high-spend only gamblers taking part in 5.2 activities on average. High-time/high-spend gamblers took part in 6.6 gambling activities, meaning that they had the highest levels of gambling participation.

Regular (monthly or more) gamblers aged 16 and over 2010					
Number of gambling activities	Gambling volume sub-group				All regular gamblers
	Non high-time & spend	High-time only	High-spend only	High-time & spend	
Mean number of activities undertaken in past year	2.5	4.0	5.2	6.6	3.0
Standard error of the mean	0.04	0.18	0.21	0.21	0.04
Bases (weighted)	3539	178	177	258	4151
Bases (unweighted)	3628	176	169	245	4218

##### Participation in individual gambling activities and activity preferences

The activity choices of each group are presented in Table 4.8. Because the different sub-groups took part in a varying number of activities (see Table 4.7), it is difficult to compare participation in activities without the varying popularity of gambling participation confounding the analysis.

Rank	Gambling volume sub-group			
	Non high-time & spend	High-time only	High-spend only	High-time & spend
1st	National Lottery Draw (90%)	National Lottery Draw (74%)	National Lottery Draw (92%)	National Lottery Draw (86%)
2nd	Scratchcards (35%)	Bingo (58%)*	Scratchcards (63%)	Horse races (62%)*
3rd	Another lottery (34%)*	Scratchcards (44%)	Horse races (50%)	Scratchcards (57%)
4th	Horse races (20%)	Horse races (33%)	Another lottery (45%)	Betting on sports events (55%)*
5th	Slot machines (16%)	Private betting (32%)	Betting on sports events (44%)	Slots machines (54%)
6th	Private betting (12%)	Slot machines (30%)	Slot machines (41%)	Fixed odds betting terminals (44%)*
7th	Bingo (10%)	Another lottery (29%)	Private betting (34%)	Private betting (43%)
8th	Betting on sports events (9%)	Betting on sports events (21%)	Football pools (23%)*	Casino games (39%)
9th	Football pools (6%)	Casino games (15%)	Betting on other events (22%)*	Bingo (38%)
10th	Casino games (5%)	Poker (12%)*	Bingo (20%)	Another lottery (38%)

\* Denotes that this activity ranked highest among this group.

To look at the relative popularity of activities by gambling volume sub-group, each group's activity preferences have been ranked, starting with the activity that most people reported taking part in and then presenting the second most popular activity and so on. Table 4.8 shows the top ten activity preferences for each gambling volume sub-group.

The most prevalent activities among each group were similar in some aspects: the National Lottery Draw was the most popular among all groups, and scratchcards were in 2nd or 3rd place across the groups. Slot machines enjoyed relatively similar prominence among all groups, in 5th or 6th place. Playing casino games had similar levels of preference between groups, ranking between 8th and 12th position. Spread betting was the least popular activity across all groups (16th place), and online slot machine style games were in 14th – 15th place across the groups (not shown in Table 4.8). However, gambling preferences among each group varied for other activities.

Another lottery was the 3rd most popular among the non high-time/non high-spend group, and 4th most popular among the high-spend only group, but was much less popular among the other groups (ranking between 7th and 10th place).

Playing bingo was most popular among the high-time only group (2nd after the National Lottery Draw), and was less popular among the other groups (ranking in 7th place among non high-time/non high-spend gamblers, and 9th and 10th place among high-time/high-spend and high-spend only gamblers). Playing poker at a pub/club was also relatively more popular among the high-time only group, ranking in 10th place, whereas it was one of the least popular activities among all other groups.

Table 4.9

Gambling activities by gambling volume sub-groups					
Regular (monthly or more) gamblers aged 16 and over					2010
Type of gambling activity	Gambling volume sub-group				All regular gamblers
	Non high-time & spend	High-time only	High-spend only	High-time & spend	
	%	%	%	%	
National Lottery Draw	90	74	92	86	89
Another lottery	34	29	45	38	35
Scratchcards	35	45	63	57	38
Football pools	6	10	23	22	8
Bingo <sup>a</sup>	10	58	20	38	14
Slot machines	16	30	41	54	20
Fixed odds betting terminals	4	11	20	44	7
Horse races <sup>b</sup>	20	33	50	62	24
Dog Races <sup>b</sup>	4	10	15	33	7
Sports betting <sup>b</sup>	9	21	44	55	14
Betting on non-sports events <sup>b</sup>	5	10	22	32	7
Casino games <sup>c</sup>	5	15	18	39	8
Poker at a pub/club	1	12	9	22	3
Online slot machine style games/instant wins	3	7	14	22	5
Spread betting	1	3	6	13	2
Private betting	12	32	34	43	16
Any online betting <sup>d</sup>	6	19	21	36	9
Any other online gambling <sup>e</sup>	19	24	36	40	21
<i>Bases (weighted)</i>	<i>3539</i>	<i>178</i>	<i>177</i>	<i>258</i>	<i>4151</i>
<i>Bases (unweighted)</i>	<i>3628</i>	<i>176</i>	<i>169</i>	<i>245</i>	<i>4218</i>

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the national lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

Although betting on horse races was relatively popular among all groups (ranking between 3rd and 4th place for non high-time/non high-spend, high-time only and high-spend only gamblers) it was the second most popular activity among high-time/high-spend gamblers with 62% reporting betting on horse races in the past year. Betting on fixed odds betting terminals was also more popular among the high-time/spend gamblers (6th place) than the other groups (11th – 13th place).

Betting on sports events was much more popular among high-time/high-spend (4th place) and high spend only gamblers (5th place) and was less popular among non high-time/non high-spend and high-time gamblers (ranking 8th for both groups).

This analysis demonstrates the varying activity preferences of different sub-types of regular gamblers, with some interesting patterns emerging. For example, there was a relative preference among high-spend only and high-time/high-spend gamblers for betting on sports events or betting on horse races, and among high-time/high-spend gamblers, a preference for betting on fixed odds betting terminals. However, as with the rest of this report, this analysis shows associations, it cannot say anything about casual directions. Furthermore, some of these observed relationships are cyclical in nature. For example, playing bingo in a bingo hall is conducted over a number of hours. Therefore, those people who regularly participate in this activity are, by definition, more likely to be high-time gamblers. What this analysis adds is the potential to demonstrate that whilst bingo players, for example, may be more likely to be high-time gamblers, they tend not to be high-spend gamblers. This approach to analysing gambling participation highlights some potentially fruitful lines of enquiry that warrant further investigation.

#### 4.7 Self-reported changes in gambling involvement

All respondents, regardless of whether they had gambled in the past year or not, were asked to report whether their gambling involvement had increased, decreased or stayed the same in the past 12 months. Those who reported that their gambling had increased or decreased were asked why this was.

As Table 4.10 shows, the majority of respondents (including those who had not gambled in the past year) reported that their gambling involvement had not changed in the past 12 months (82%). A further 13% reported that their gambling involvement had decreased and 4% reported that their gambling involvement had increased in the past year.

								2010
<i>All aged 16 and over</i>								
Change in gambling behaviour	Age							Total
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
	%	%	%	%	%	%	%	%
Increased gambling	10	6	4	3	2	2	0	4
Stayed the same	72	78	81	84	87	89	93	82
Decreased gambling	18	16	15	13	11	9	7	13
<i>Bases (weighted)</i>	1158	1234	1405	1300	1138	814	684	7733
<i>Bases (unweighted)</i>	973	1115	1434	1343	1220	1019	630	7734

Notably, younger respondents were more likely to report that their gambling involvement had either decreased (18% of those aged 16-24 reported this compared with 7% of those aged 75 and over) or that their gambling involvement had increased (10% for those aged 16-24, 2% for those aged 65-74). Overall, over a quarter of young people (28%) aged 16-24 reported some change in their gambling involvement in the past year, suggesting that gambling behaviour is most variable among this group.

Table 4.11	
Reasons for increase in gambling involvement	
<i>All who increased gambling</i> 2010	
Reason for increase	Total %
<b>Opportunity</b>	
I have more money to spend now	21
I have more time now	16
I have more opportunities to gamble	21
There was a change in my health	1
I became old enough to gamble	8
<i>Any opportunity reason</i>	56
<b>External prompt</b>	
Because of friends and family	27
Better potential outcomes <sup>a</sup>	2
To support charity <sup>a</sup>	1
Increased gambling after a win <sup>a</sup>	1
<i>Any external prompt reason</i>	29
<b>Intrinsic</b>	
I wanted to/felt like gambling more	23
My priorities have changed	3
To get/make money <sup>a</sup>	5
<i>Any intrinsic motivation reason</i>	30
<i>Bases (weighted)</i>	336
<i>Bases (unweighted)</i>	318

<sup>a</sup> These reasons were created from responses to the 'other reason' category where respondents were asked to write in the reason.

Table 4.12	
Reasons for decrease in gambling involvement	
<i>All who decreased gambling</i> 2010	
Reason for decrease	Total %
<b>Opportunity</b>	
I have less money to spend now	32
I have less time/ I'm too busy now	18
I have fewer opportunities to gamble	8
There was a change in my health	3
<i>Any opportunity reason</i>	52
<b>External prompt</b>	
Lost gambling partner <sup>a</sup>	1
Gambling became more expensive <sup>a</sup>	0
Change in family circumstances <sup>a</sup>	1
<i>Any external prompt reason</i>	1
<b>Intrinsic</b>	
I have lost interest in the activities I used to do	24
My priorities have changed	21
I want to save money/spend money on other things	25
Trying to/recovering from addiction <sup>a</sup>	0
<i>Any intrinsic motivation reason</i>	57
<b>Other</b>	
Gambling was only ever irregular and infrequent	2
Other	3
<i>Any other reason</i>	5
<i>Bases (weighted)</i>	1017
<i>Bases (unweighted)</i>	1012

<sup>a</sup> These reasons were created from responses to the 'other reason' category where respondents were asked to write in the reason.

Respondents were asked to report their reasons for increasing or decreasing their gambling involvement. Looking at reasons for increasing involvement first, the majority of respondents (56%) gave at least one reason relating to an increased opportunity for gambling. For example, having more money to spend now (21%), having more opportunities to gamble (21%), and having more time now (16%). 29% of respondents gave reasons relating to an outside influence or prompt, such as friends and family (27%), better potential outcomes available (2%), or to support charity (1%). 30% gave a reason relating to an intrinsic motivation for gambling, such as, 'I wanted to/felt like gambling more' (23%), 'to get/make money' (5%), or 'because of a change in priorities' (3%).

As observed among those whose gambling involvement increased, 52% of those who said their gambling involvement decreased gave reasons relating to opportunity. For example, having less money to spend now (32%), having less time (18%), or having fewer opportunities generally (8%). One percent gave other external prompts as part of their reasons for reducing gambling involvement, such as losing their gambling partner (1%). Finally, 57% of respondents reported that they decreased their gambling involvement for an intrinsic reason. This included 25% who reported that they wanted to save money, 24% who said that they lost interest and 21% who said that their priorities had changed.

Although not directly comparable<sup>9</sup>, it is interesting that those who decreased their gambling involvement were much more likely to cite an intrinsic motivation, whereas those who increased their gambling involvement were more likely to cite increased opportunities for gambling.

## Notes and references

- 1 Walker M., Toneatto T., Potenza M., Petry N., Ladouceur R., Hodgins D., el-Guebaly N., Echeburua, Blaszczynski A. (2006). A framework for reporting outcomes in problem gambling treatment research: The Banff, Alberta consensus. *Addiction*, 101(4), 504-511.
- 2 Blaszczynski A., Dumlao, V., Lange M. (1997) How much do you spend gambling? Ambiguity in survey question items. *Journal of Gambling Studies*. 13(3), 237-252.
- 3 Wood R., Williams R. (2007) 'How much money do you spend on gambling?' The comparative validity of question wording used to assess gambling involvement. *International Journal of Social Research Methodology: Theory and Practice*, 10(1), 63-77.
- 4 Willis GB., Lessler J. (1999) *Questionnaire Appraisal System QAS-99*. Rockville MD: Research Triangle Institute. See <http://appliedresearch.cancer.gov/areas/cognitive/qas99.pdf>
- 5 For past year participation, 16 activities were listed, including bingo and casino games. For frequency and volume, respondents were asked separately about bingo played in person, and bingo played online. Casino games were treated in the same way, making a list of 18 activities.
- 6 Respondents who gambled once a week or more were asked on how many days a week they gambled. A similar question was asked of those who gambled once a month, but less than once a week. To calculate total number of gambling days per year, these responses were multiplied by either 52 or 12 respectively. For those who gambled on activities less often than once a month, the number of gambling days per year was estimated from their past year frequency of participation (i.e., those who gambled 1-5 days in the last year were assigned the mid point of 3 days per year; those gambling 6-11 days per year were assigned the mid point of 8.5 days). Once this calculation has been made for each activity, the number of days per year across all activities was summed.
- 7 We recognise that this may overestimate gambling frequency in some cases as some people may gamble on different activities concurrently. For example, some people may bet on both horse races and dog races when at a bookmakers.
- 8 The 1999 survey did not include questions about frequency and the 2007 survey did not include questions about the number of gambling days per week/month. Therefore, a total number of gambling days per year could not be calculated in the same way as for 2010. In order to compare frequency of participation between 2007 and 2010, the reported frequency of a gambler's most frequent activity was used.
- 9 The lists of options available differed for increasing and decreasing involvement, therefore direct comparisons cannot be made. It should also be noted that the grouping of reasons as 'opportunity' 'external prompt' 'intrinsic' and 'other' were applied post-hoc by the researchers, and were not chosen by the respondents.

**BLANK PAGE**



# 5 Problem gambling

## 5.1 Introduction

A primary aim of the BGPS series has been to measure the prevalence of problem gambling among the British population. 'Problem gambling' is gambling to a degree that compromises, disrupts or damages family, personal or recreational pursuits.<sup>1</sup> Many different instruments, or 'screens' exist to measure problem gambling, but (as yet) there is no single 'gold standard' instrument.

The BGPS 2010 and 2007 used problem gambling screens based on the DSM-IV criteria<sup>2</sup> and the Problem Gambling Severity Index (PGSI).<sup>3</sup> The 1999 BGPS used the DSM-IV screen and the South Oaks Gambling Screen (SOGS).<sup>4</sup> Between 1999 and 2007, the use of SOGS diminished and this screen was subject to a number of criticisms, including that it produces an unacceptably high rate of false positives.<sup>5</sup> The PGSI, developed in 2001, was specifically designed for use in population surveys and was intended to focus more on the harms and consequences of problem gambling. The PGSI has become widely used and replaced the SOGS in the 2007 survey (the rationale for this is outlined in the 2007 report).<sup>6</sup>

To maintain maximum comparability, the PGSI and DSM-IV were retained as the screens of choice for the 2010 survey. Using the DSM-IV allows us to compare prevalence estimates between the three survey years. Estimates from the PGSI can be compared between 2007 and 2010. Therefore, as in previous years, two problem gambling estimates are presented in this chapter, one based on the DSM-IV and the other based on the PGSI. This allows us to capitalise on the advantages of each and to compare the results of both screens.

Measurement of problem gambling can be based on 'lifetime' or 'current' prevalence rates. The BGPS series has always used current prevalence rates as these are of more interest for policy purposes and are also likely to be subject to less reporting error due to poor recall of behaviour by respondents. All questions were prefaced with reference to problems occurring in the past 12 months and therefore it is current prevalence that is reported in this chapter.

Each screen is described in more detail in the following sections. Important caveats, which should be borne in mind when interpreting results from each screen, are presented in section 5.4. Sections 5.5 and 5.6 outline problem gambling prevalence in 2010 according to the DSM-IV and the PGSI respectively. Estimates are presented by age and sex. A comparison between the prevalence rates obtained from the two screens is reported in section 5.7 and section 5.8 discusses comparisons of problem gambling prevalence estimates between 1999 and 2010. Finally, estimates from the BGPS 2010 are discussed in context of other international problem gambling prevalence rates.

## 5.2 The DSM-IV

The DSM-IV screening instrument developed for the BGPS series is based on criteria from the fourth edition of the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM-IV).<sup>2</sup> This contains ten diagnostic criteria ranging from chasing losses to committing a crime to fund gambling. The DSM-IV criteria constitute a tool created for diagnosis of pathological gambling by clinicians and was not intended for use as a

screening instrument among the general population. As such, there is no 'gold standard' questionnaire version of the DSM-IV. The screen used within the BGPS series was first developed in 1999 and was subject to a rigorous development and testing process, including cognitive testing and piloting. Each DSM-IV item is assessed on a four point scale, ranging from 'never' to 'very often'.<sup>7</sup> Responses to each item can either be dichotomised to show whether a person meets the criteria or not, or allocated a score and a total score produced. (The PGSI uses this latter method, see below.) Previous surveys in the BGPS series have used the dichotomous scoring method and it is this method that is presented in this chapter. A total score between zero and ten is possible. The scoring of each of the DSM-IV items is described in Appendix 2.

Among clinicians, a diagnosis of pathological gambling is made if a person meets five out of the ten criteria. Many surveys, including the BGPS, when adapting the DSM-IV criteria into a screening instrument for use within a general population survey have included a further category of 'problem gambler' for those who meet at least three of the DSM-IV criteria.<sup>8</sup> This cut-point has been found to give good discrimination between criterion groups and has provided the closest match to prevalence estimated by alternative screens used in the BGPS series (the SOGs in 1999 and PGSI in 2007).<sup>9</sup>

Therefore, the threshold used to identify problem gamblers in this current survey is the same threshold as used in 1999 and 2007: a score of three or more represents a 'problem gambler'. The BGPS series does not present the additional threshold of 'probable pathological gambler' (a DSM-IV score of five or more). This decision was made for the purposes of clarity and simplicity for the reader and also because the number of people falling into this category would be too small to analyse separately. This additional distinction is also not necessary for the purposes of this survey which aims to estimate the prevalence of problem gambling among the population. Furthermore, using the term 'problem gambling' rather than 'pathological gambling' avoids some of the negative judgments and conceptual issues associated with the latter term.

### 5.3 The PGSI

The Problem Gambling Severity Index was developed by Ferris and Wynne over a three year period. It was specifically developed for use among the general population rather than within a clinical context. It was developed, tested and validated within a general population survey of over 3,000 Canadian residents.<sup>3</sup> The instrument itself has been subject to critical evaluation and was revised in 2003.<sup>10</sup> More recently, Holtgraves examined the psychometric properties of the screen and concluded that it was a viable alternative to the SOGS for assessing degrees of problem gambling.<sup>11</sup>

The PGSI consists of nine items ranging from chasing losses to gambling causing health problems to feeling guilty about gambling. Each item is assessed on a four-point scale: never, sometimes, most of the time, almost always. Responses to each item are given the following scores: never = zero; sometimes = one; most of the time = two; almost always = three. When scores to each item are summed, a total score ranging from zero to 27 is possible. A PGSI score of eight or more represents a problem gambler. This is the threshold recommended by the developers of the PGSI and the threshold used in this report. The PGSI was also developed to give further information on sub-threshold problem gamblers. PGSI scores between three and seven are indicative of 'moderate risk' gambling and a score of one or two is indicative of 'low risk' gambling. The at-risk groups are discussed further in chapter 7. This chapter focuses solely on the category of problem gambler.

### 5.4 Caveats

As with any screening instrument, there are a number of caveats which need to be borne in mind when interpreting the problem gambling estimates.

- This survey is a cross sectional survey and therefore whilst the analysis might highlight associations, it cannot say anything about the direction of causality.
- The sample design of this survey is a sample of private households. As such, this excludes a number of sub-groups of the population, such as the homeless or those residing within institutions, student halls of residence or prisons. Recent evidence has shown that some of these sub-groups are more likely to be problem gamblers.<sup>12</sup> As such, the problem gambling estimates presented in this report may *underestimate* the prevalence of problem gambling.
- Some people may be motivated to give ‘socially desirable’ (and potentially dishonest) answers to a questionnaire and may underestimate the extent of their gambling behaviour.
- Response biases can influence results. Research from Canada has demonstrated that surveys branded as gambling studies are disproportionately attractive to gamblers and therefore *increase* problem gambling estimates whereas studies which are branded more generally also encourage non-gamblers to take part and provide more accurate estimates.<sup>13</sup> However, it may also be argued that very frequent gamblers are less likely to be at home and available for interview than other sub-groups and are therefore less likely to be included in the survey. This therefore may lead to a potential *underestimation* of the prevalence of problem gambling.<sup>14</sup>
- No screen for problem gambling is perfect. The best performing screens should endeavour to minimise both ‘false positives’ and ‘false negatives’. A false positive is where someone without a gambling problem is classified as a problem gambler. A false negative is where a person with a gambling problem is classified as someone without a gambling problem. The number of false positives and false negatives are related to the thresholds used. The DSM-IV threshold used in this current survey is the same as in 1999, 2007 and in other international studies. The threshold used for the PGSI follows the recommendation of the screen’s developers and is the same as used in the BGPS 2007.
- The PGSI has been validated on a Canadian population. It has not been validated in Britain. The DSM-IV criterion was developed as a diagnostic tool and has not been validated for use with the general population.
- Finally, a survey estimate is subject to sampling error and should be considered with reference to the confidence intervals (presented in this chapter) as well as the survey design and sample size.

The survey methodology used for this current survey attempted to overcome these criticisms, for example, by marketing the survey to respondents as a leisure and recreation survey rather than as a gambling survey; by using computer-assisted self-completion methods to encourage honest reporting; by weighting the results to take into account non-response bias across a number of domains and by carefully considering the choice of gambling screen and appropriate thresholds for problem gambling. (Fuller details are provided in Appendix 2.) In short, this chapter presents the *best estimate* of current problem gambling in Britain.

## 5.5 Problem gambling prevalence in 2010, according to the DSM-IV

Table 5.1 shows DSM-IV scores for both men and women aged 16 and over. Scores range from zero to ten, with scores for non-gamblers set to zero. The table shows DSM-IV scores for the entire population, including those who did not gamble in the past year. The vast majority of people (95.0%) had a DSM-IV score of zero. 4.1% of respondents had a DSM-IV score of one or two which is below the problem gambling threshold of three or more. As in previous years, men were more likely than women to have a DSM-IV score of one or more. Estimates were 6.7% for men and 3.3% for women.

Table 5.1			
DSM-IV scores, by sex			
<i>All aged 16 and over with a valid DSM-IV score</i>			2010
DSM-IV score	Sex		Total
	Men	Women	
	%	%	%
0	93.3	96.7	95.0
1	4.1	2.5	3.3
2	1.1	0.5	0.8
3	0.5	0.1	0.3
4	0.3	0.1	0.2
5	0.2	0.1	0.1
6	0.2	0.0	0.1
7	0.2	-	0.1
8	0.1	0.1	0.1
9	0.1	-	0.0
10	0.0	0.0	0.0
<i>Bases (weighted)</i>	3791	3956	7747
<i>Bases (unweighted)</i>	3570	4178	7748

Table 5.2						
DSM-IV problem gambling prevalence rates among the population, by age and sex						
<i>All aged 16 and over with a valid DSM-IV score</i>						2010
Age group	Sex				Total	
	Men		Women		%	Confidence interval
%	Confidence interval	%	Confidence interval			
16-24	2.8	(1.6, 4.8)	1.3	(0.6, 2.9)	2.1	(1.3, 3.3)
25-34	2.8	(1.6, 4.6)	0.3	(0.1, 1.1)	1.5	(0.9, 2.5)
35-44	1.8	(0.9, 3.5)	0.3	(0.1, 1.1)	1.0	(0.5, 1.9)
45-54	1.0	(0.4, 2.2)	0.3	(0.1, 1.1)	0.6	(0.3, 1.3)
55-64	0.6	(0.2, 1.6)	-	-	0.3	(0.1, 0.8)
65-74	0.4	(0.1, 1.7)	0.2	(0.0, 1.3)	0.3	(0.1, 0.9)
75+	-	-	-	-	-	-
<b>All</b>	<b>1.5</b>	<b>(1.1, 2.1)</b>	<b>0.3</b>	<b>(0.2, 0.6)</b>	<b>0.9</b>	<b>(0.7, 1.2)</b>
<i>Bases (weighted)</i>						
16-24	596		564		1160	
25-34	624		612		1237	
35-44	698		709		1407	
45-54	643		659		1303	
55-64	558		583		1141	
65-74	388		426		814	
75+	283		402		685	
All	3791		3956		7747	
<i>Bases (unweighted)</i>						
16-24	451		524		975	
25-34	509		608		1117	
35-44	656		780		1436	
45-54	617		729		1346	
55-64	565		659		1224	
65-74	498		521		1019	
75+	274		357		631	
All	3570		4178		7748	

DSM-IV problem gambling prevalence rates for the whole population were 1.5% for men, 0.3% for women and 0.9% overall. The confidence interval around the total estimate is 0.7% to 1.2%, meaning we can be 95% confident that the true estimate falls between these two values. This is shown in Table 5.2

As in previous years, problem gambling was higher among men than women and was associated with age. For both men and women, problem gambling estimates were higher among younger adults and lower among older adults. Among men, problem gambling estimates were 2.8% for those aged 16-34 and 0.4% among those aged 65-74. Among women, problem gambling estimates were 1.3% among those aged 16-24 and 0.2% among those aged 65-74.

Table 5.3 shows the prevalence of DSM-IV problem gambling among those who were past year gamblers. Estimates were 2.0% for men, 0.5% for women and 1.3% overall. The confidence interval for the overall estimate was 1.0% to 1.7%. As with estimates observed for the whole population, problem gambling rates for past year gamblers were higher among men than women and higher among younger adults than older adults. Among male past year gamblers, the rate decreased with advancing age. Among female past year gamblers, rates for those aged 25-54 were similar.

Table 5.3						
<b>DSM-IV problem gambling prevalence rates among past year gamblers, by age and sex</b>						
<i>Past year gamblers with a valid DSM-IV score</i>						2010
Age group	Sex				Total	
	Men		Women		%	Confidence interval
	%	Confidence interval	%	Confidence interval		
16-24	4.0	(2.3, 6.9)	2.0	(0.9, 4.5)	3.1	(1.9, 4.9)
25-34	3.5	(2.1, 5.8)	0.4	(0.1, 1.6)	2.1	(1.3, 3.4)
35-44	2.4	(1.2, 4.6)	0.3	(0.1, 1.4)	1.4	(0.7, 2.6)
45-54	1.2	(0.6, 2.8)	0.4	(0.1, 1.5)	0.8	(0.4, 1.6)
55-64	0.8	(0.3, 2.1)	-	-	0.4	(0.1, 1.0)
65-74	0.6	(0.1, 2.3)	0.3	(0.0, 1.8)	0.4	(0.1, 1.3)
75+	-	-	-	-	-	-
<b>All</b>	<b>2.0</b>	<b>(1.5, 2.7)</b>	<b>0.5</b>	<b>(0.3, 0.8)</b>	<b>1.3</b>	<b>(1.0, 1.7)</b>
<i>Bases (weighted)</i>						
16-24	415		372		787	
25-34	495		421		916	
35-44	538		516		1054	
45-54	510		491		1001	
55-64	430		454		884	
65-74	288		295		583	
75+	184		249		433	
All	2860		2798		5658	
<i>Bases (unweighted)</i>						
16-24	318		353		671	
25-34	407		427		834	
35-44	506		578		1084	
45-54	488		550		1038	
55-64	435		514		949	
65-74	368		363		731	
75+	178		221		399	
All	2700		3006		5706	

Table 5.4 shows the proportion of men and women who answered positively to each DSM-IV item. Responses ranged from 0.2% of respondents who reported that they had committed a crime to finance gambling to 2.5% who reported being preoccupied with gambling and 2.1% who reported that they had chased their losses. Interestingly, among men the most highly endorsed item was a preoccupation with gambling whereas among women it was chasing losses. With the exception of committing a crime to fund gambling, men were more likely than women to endorse each item. For example 1.3% of men and 0.6% of women reported a need to gamble with increasing amounts of money and 0.9% of men and 0.4% of women had tried but failed to cut back on gambling.

Table 5.4			
Response to DSM-IV items, by sex			
<i>All aged 16 and over</i>			<i>2010</i>
DSM-IV items	Sex		Total
	Men	Women	
	%	%	%
<b>In the last 12 months...</b>			
Chasing losses	2.7	1.6	2.1
A preoccupation with gambling	3.8	1.2	2.5
A need to gamble with increasing amounts of money	1.3	0.6	0.9
Being restless or irritable when trying to stop gambling	1.3	0.3	0.8
Gambling as escapism	0.9	0.3	0.6
Having tried but failed to cut back on gambling	0.9	0.4	0.7
Lying to people to conceal extent of gambling	0.8	0.1	0.4
Having committed a crime to finance gambling	0.3	0.2	0.2
Having risked or lost a relationship/job/educational opportunity because of gambling	0.6	0.2	0.4
Reliance on others to help with a financial crisis caused by gambling	1.1	0.3	0.7
<i>Bases (weighted)<sup>a</sup></i>	<i>3790</i>	<i>3954</i>	<i>7744</i>
<i>Bases (unweighted)<sup>a</sup></i>	<i>3569</i>	<i>4176</i>	<i>7745</i>

<sup>a</sup> Bases differ for each DSM-IV question.

Table 5.5			
PGSI scores, by sex			
<i>All aged 16 and over with a valid PGSI score</i>			2010
PGSI score	Sex		Total <sup>a</sup>
	Men	Women	
	%	%	%
0	88.2	95.6	91.9
1	5.2	2.6	3.9
2	2.6	0.8	1.7
3	1.0	0.4	0.7
4	0.6	0.2	0.4
5	0.7	0.1	0.4
6	0.3	0.0	0.2
7	0.2	0.1	0.2
8	0.3	0.0	0.2
9	0.3	0.1	0.2
10	0.1	0.0	0.1
11	0.1	0.0	0.0
12	0.0	-	0.0
13	0.1	-	0.1
14	-	-	-
15	-	-	-
16	0.0	-	0.0
17	0.1	-	0.0
18	-	0.0	0.0
19	0.1	-	0.0
20	-	-	-
21	0.1	-	0.0
22	-	-	-
23	0.0	-	0.0
24	0.0	-	0.0
25	0.0	-	0.0
26	0.0	-	0.0
27	0.0	-	0.0
<i>Bases (weighted)</i>	3791	3956	7747
<i>Bases (unweighted)</i>	3570	4178	7748

<sup>a</sup> Columns may not add to 100% because of rounding.

## 5.6 Problem gambling prevalence in 2010, according to the PGSI

Table 5.5 shows PGSI scores among the population. Scores range from zero to a maximum of 27. As with the DSM-IV, this table represents the whole population and non-gamblers (who were not asked to complete the problem gambling screens) were allocated a score of zero. As with DSM-IV scores, the vast majority of adults (91.9%) had a PGSI score of zero, meaning they did not endorse any PGSI item. 7.5% of adults had a PGSI score of between one and seven, which is below the problem gambling threshold of a score of eight or more. Men were more likely than women to both have a PGSI score of one or more (11.8% for men and 4.4% for women) or to have a PGSI score of between one and seven (10.6% men; 4.2% women). Sub-problem gambling threshold scores are discussed further in chapter 7.

Problem gambling prevalence estimates for the whole population according to the PGSI were 1.3% for men, 0.2% for women and 0.7% overall. The confidence interval for the total estimate was 0.5% to 1.0%, meaning we can be 95% certain that the true estimate lies between these values. (Confidence intervals for men and women by age group are shown in Table 5.6.)

Table 5.6						
<b>PGSI problem gambling prevalence rates among the population, by age and sex</b>						
<i>All aged 16 and over with a valid PGSI score</i>						2010
Age group	Sex				Total	
	Men		Women			
	%	Confidence interval	%	Confidence interval	%	Confidence interval
16-24	1.9	(1.0, 3.8)	0.8	(0.3, 2.1)	1.4	(0.8, 2.4)
25-34	2.2	(0.9, 5.2)	0.3	(0.1, 1.1)	1.2	(0.5, 2.8)
35-44	1.6	(0.8, 3.2)	0.2	(0.1, 0.9)	0.9	(0.5, 1.7)
45-54	1.1	(0.5, 2.4)	0.1	(0.0, 1.0)	0.6	(0.3, 1.3)
55-64	0.8	(0.3, 2.0)	0.1	(0.0, 1.0)	0.5	(0.2, 1.1)
65-74	-	-	-	-	-	-
75+	-	-	-	-	-	-
<b>All</b>	<b>1.3</b>	<b>(0.9, 1.8)</b>	<b>0.2</b>	<b>(0.1, 0.4)</b>	<b>0.7</b>	<b>(0.5, 1.0)</b>
<i>Bases (weighted)</i>						
16-24	596		564		1160	
25-34	624		612		1237	
35-44	698		709		1407	
45-54	643		659		1303	
55-64	558		583		1141	
65-74	388		426		814	
75+	283		402		685	
All	3791		3956		7747	
<i>Bases (unweighted)</i>						
16-24	451		524		975	
25-34	509		608		1117	
35-44	656		780		1436	
45-54	617		729		1346	
55-64	565		659		1224	
65-74	498		521		1019	
75+	274		357		631	
All	3570		4178		7748	

PGSI problem gambling was higher among men than women and was associated with age. Problem gambling estimates were typically higher among younger adults and lower among older adults. Among men, estimates ranged from 2.2% for those aged 25-34 whereas no men aged 65 and over had a PGSI score consistent with problem gambling. Among women, problem gambling prevalence was highest among those aged 16-24 (0.8%). Like men, no women aged 65 and over had PGSI scores that classified them as problem gamblers.



Table 5.7 shows PGSI problem gambling among those who reported gambling in the past year. Among this group, problem gambling estimates were 1.7% for men, 0.3% for women and 1.0% (confidence interval: 0.7 to 1.4) overall. The patterns by age and sex were similar to those observed for the total population, being higher among men and younger adults and lower among women and older adults.

Table 5.7						
<b>PGSI problem gambling prevalence rates among past year gamblers, by age and sex</b>						
<i>Past year gamblers with a valid PGSI score</i>						2010
Age group	Sex				Total	
	Men		Women		%	Confidence interval
	%	Confidence interval	%	Confidence interval		
16-24	2.7	(1.4, 5.4)	1.2	(0.4, 3.2)	2.0	(1.1, 3.5)
25-34	2.7	(1.1, 6.6)	0.4	(0.1, 1.6)	1.7	(0.7, 3.7)
35-44	2.0	(1.0, 4.1)	0.3	(0.1, 1.2)	1.2	(0.6, 2.3)
45-54	1.4	(0.7, 3.0)	0.2	(0.0, 1.3)	0.8	(0.4, 1.6)
55-64	1.1	(0.4, 2.6)	0.2	(0.0, 1.3)	0.6	(0.3, 1.4)
65-74	-	-	-	-	-	-
75+	-	-	-	-	-	-
<b>All</b>	<b>1.7</b>	<b>(1.1, 2.5)</b>	<b>0.3</b>	<b>(0.2, 0.6)</b>	<b>1.0</b>	<b>(0.7, 1.4)</b>
<i>Bases (weighted)</i>						
16-24	415		372		787	
25-34	495		421		916	
35-44	538		516		1054	
45-54	510		491		1001	
55-64	430		454		884	
65-74	288		295		583	
75+	184		249		433	
All	2860		2798		5658	
<i>Bases (unweighted)</i>						
16-24	318		353		671	
25-34	407		427		834	
35-44	506		578		1084	
45-54	488		550		1038	
55-64	435		514		949	
65-74	368		363		731	
75+	178		221		399	
All	2700		3006		5706	

Full responses to each PGSI item are shown in Table 5.8 for men, women and overall. Item endorsement ranged from 4.7% who reported that they had chased their losses (either sometimes or more often) to 1.0% who reported that they either borrowed money or sold items to finance gambling. Among both men and women, the most heavily endorsed PGSI item was chasing losses (6.9% men; 2.5% women) followed by betting more than you could afford to lose (5.7% men and 1.5% women). Men were more likely than women to answer affirmatively to each item.

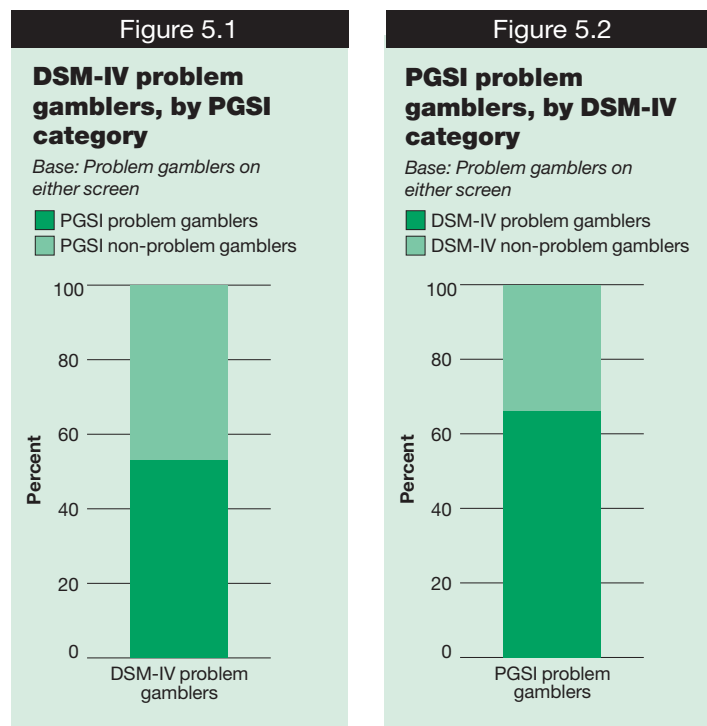
Table 5.8

Response to PGSI items, by sex							
<i>All aged 16 and over</i>							2010
PGSI item	PGSI response category				Bases (weighted)	Bases (un-weighted)	
	Never	Sometimes	Most of the time	Almost always			
<b>Men</b>							
<b>In the last 12 months...</b>							
Bet more than could afford to lose	%	94.2	4.8	0.5	0.4	3791	3570
Needed to gamble with increasing amounts of money	%	97.6	2.0	0.2	0.2	3791	3570
Chasing losses	%	93.1	5.9	0.6	0.4	3791	3570
Borrowed money/sold items to finance gambling	%	98.3	1.4	0.1	0.2	3791	3570
Felt that might have a gambling problem	%	97.6	1.8	0.3	0.3	3791	3570
Gambling caused health problems (including stress)	%	98.0	1.7	0.1	0.2	3791	3570
People criticised gambling	%	96.5	2.8	0.4	0.3	3791	3570
Gambling caused financial problems	%	98.1	1.4	0.1	0.3	3791	3570
Felt guilty about gambling	%	95.9	3.3	0.3	0.4	3791	3570
<b>Women</b>							
<b>In the last 12 months...</b>							
Bet more than could afford to lose	%	98.6	1.2	0.2	0.1	3956	4178
Needed to gamble with increasing amounts of money	%	99.4	0.5	0.0	-	3956	4178
Chasing losses	%	97.5	2.3	0.2	0.1	3956	4178
Borrowed money/sold items to finance gambling	%	99.7	0.3	0.0	0.0	3956	4178
Felt that might have a gambling problem	%	99.4	0.5	0.0	0.0	3955	4177
Gambling caused health problems (including stress)	%	99.6	0.3	0.1	0.0	3956	4178
People criticised gambling	%	99.1	0.7	0.1	0.0	3956	4178
Gambling caused financial problems	%	99.6	0.4	0.0	0.0	3956	4178
Felt guilty about gambling	%	98.9	1.0	0.1	0.0	3956	4178
<b>All</b>							
<b>In the last 12 months...</b>							
Bet more than could afford to lose	%	96.4	3.0	0.3	0.2	7747	7748
Needed to gamble with increasing amounts of money	%	98.5	1.2	0.1	0.1	7747	7748
Chasing losses	%	95.3	4.1	0.4	0.2	7747	7748
Borrowed money/sold items to finance gambling	%	99.0	0.8	0.1	0.1	7747	7748
Felt that might have a gambling problem	%	98.5	1.2	0.2	0.2	7746	7747
Gambling caused health problems (including stress)	%	98.8	1.0	0.1	0.1	7747	7748
People criticised gambling	%	97.8	1.7	0.3	0.2	7747	7748
Gambling caused financial problems	%	98.9	0.9	0.1	0.2	7747	7748
Felt guilty about gambling	%	97.4	2.2	0.2	0.2	7747	7748

## 5.7 Comparisons of the DSM-IV and PGSI

As in previous years, the tables presented so far show that problem gambling prevalence rates differ for each screen. The estimates measured by the DSM-IV are somewhat higher than those measured by the PGSI; 0.9% for the DSM-IV and 0.7% for the PGSI. This was also the case in 2007. Analysis of BGPS 2007 data demonstrated that the two screens are actually capturing slightly different groups of people and may also be capturing different types of problems.<sup>15</sup> This section explores the extent to which this is the case in 2010.

Overall, 1.2% of adults were classified as problem gamblers by either the DSM-IV or the PGSI; 0.5% were classified as problem gamblers according to both. Figures 5.1 and 5.2 show what proportion of problem gamblers, as classified by one screen, were also identified as problem gamblers by the other instrument. 53% of those identified as problem gamblers by the DSM-IV were also classified as problem gamblers by the PGSI. The converse of this is also true; 47% of those identified as problem gamblers by the DSM-IV were not classified as problem gamblers according to the PGSI (though the majority had a PGSI score of 3 or more, consistent with being a moderate risk gambler; table not shown). 66% of those classified as a PGSI problem gambler were also classified as problem gamblers by the DSM-IV. 34% of those who were problem gamblers according to the PGSI were not problem gamblers according to the DSM-IV.



The kappa statistic showed that the agreement between the two problem gambling screens is moderate (0.62). (No agreement would be expressed as a value of 0 and perfect agreement as a value of 1).<sup>16</sup>

As in 2007, these results provide supporting evidence to suggest that, rather than one screen being more sensitive to detecting gambling problems than the other, they are in fact capturing slightly different groups of people with potentially different types of problems. This is not unexpected; analysis by Orford et al of the performance of the two screens in the BGPS 2007 suggested that, particularly among women, the PGSI may under-estimate certain forms of gambling-related harm which are better picked up by some DSM-IV items. Likewise, this analysis also suggested that the DSM-IV screen instead of measuring a single construct, problem gambling, actually measures two different factors, gambling-related harm and gambling dependence. Furthermore, although the screens share similar items and rather similar conceptualisation of problem gambling<sup>17</sup>, each instrument was designed for different purposes; the DSM-IV criteria originally being developed for clinical application

and adapted for use among the general population and the PGSI being developed specifically for population surveys. It is therefore unsurprising that there is some disparity between these two instruments.

These considerations aside, taking into account the 95% confidence intervals around the prevalence estimates one can conclude that the number of problem gamblers in Britain is somewhere between 342,300 and 593,400 people according to the DSM-IV and between 254,900 and 507,900 according to the PGSI.

## 5.8 Problem gambling prevalence over time: comparisons with 1999 and 2007

### 5.8.1 Examining problem gambling estimates over time

Problem gambling is typically a low prevalence activity, though it represents an important public health concern. Less than 1% of the British population has a DSM-IV or PGSI score that is consistent with the problem gambling definition used by each screen. Because of this, there are only a small number of positive cases in each BGPS survey and changes between surveys need to be interpreted with caution. Differences between surveys may appear statistically significant but could be the result of some other underlying difference rather than demonstrate actual change in behaviour. For example, changes in the age profile of the population, in the profile of the responding population for each survey and sampling error between each survey year all have the potential to affect the observed estimates.

A number of statistical techniques are used to take into account some of these possibilities. For example, as seen in previous sections, 95% confidence intervals for problem gambling estimates have been presented for all surveys in the BGPS series. This means we are 95% confident that the true estimate lies between these figures. Furthermore, when testing for statistically significant differences, two levels are used: statistical significance at the 5% level (a p-value of less than 0.05) and statistical significance at the 1% level (a p-value of less than 0.01)<sup>18</sup>. If a change between survey years is statistically significant, this means it is likely that the observed difference is due to a real change in the population. However, the converse of this is also true, that there is a small chance (5% or 1% depending on the level of the test) that the difference is not due to a real difference in the population, but actually was observed by chance due to sampling error.<sup>19</sup> To ensure that the likelihood of this is low, using tests to determine if a change is significant at the 5% and 1% level are the accepted standards, the latter measure being more robust. However, these tests are designed to take into account sampling differences only and do not take into account other differences that might be observed, the obvious ones being changes in underlying population profile and response biases. As such, any interpretation of changes in problem gambling estimates over time needs also to consider these issues.

Determining trends over time requires a consistent series of data to fully examine the trend pattern and to take into account random variation between survey years and differences in sample sizes.<sup>20</sup> The BGPS has three time points to compare DSM-IV problem gambling estimates (1999, 2007 and 2010) and only two time points to compare PGSI problem gambling (2007 and 2010). Therefore, estimates between the survey years can be compared but data are not sufficient to provide evidence of underlying trends in problem gambling prevalence.

### 5.8.2 DSM-IV problem gambling in 1999, 2007 and 2010

In 1999, DSM-IV problem gambling estimates were 0.9% among men and 0.2% among women and 0.6% overall. In 2007, equivalent estimates were 1.0%, 0.2% and 0.6%. In 2010, estimates were 1.5% for men, 0.3% for women and 0.9% overall. When looking at problem gambling estimates for all adults aged 16 and over, the difference between 2010 and earlier surveys is significant at the 5% level, but not at the 1% level (the p-value is 0.049). This is thus at the margins of statistical significance and caution should be taken

when interpreting this result. Firstly, as noted above, the number of cases identified in each survey sample is small and therefore very sensitive to relatively small changes in responses. For example, in 2007, 47 people (out of 9003) were categorised as problem gamblers according to the DSM-IV screen. In 2010, 64 people (out of 7756) were categorised the same, the difference in absolute numbers is just 17 people. However, when sample sizes for each survey year and weighting for non-response are taken into account, the net effect is an increase in prevalence from 0.61% to 0.92%; an increase of 0.31 percentage points (pp).

Secondly, it is possible that differences in the socio-demographic profile of the responding sample between survey years affects the observed estimates. For example, problem gambling is significantly associated with education levels or socio-economic status; rates being higher among those with lower levels of educational attainment and higher among those from routine/manual groups. There is the possibility that the responding sample in 2010 differed from the responding sample in 2007 or 1999 in relation to some of these variables which could affect problem gambling estimates. For example, if more people with lower levels of educational attainment were interviewed in 2010 than in 2007, and we know these people are more likely to be problem gamblers, observed prevalence rates in 2010 could be greater than previously by virtue of the difference in the levels of educational attainment between the two samples rather than due to overall behaviour change. To test this, a multi-variate logistic regression model was run where DSM-IV problem gambling was the outcome variable of interest. A range of comparable socio-demographic variables were entered into the model, as was survey year, to see if the odds of being classified a DSM-IV problem gambler were higher in 2010 than 2007 once differences by socio-demographic and health and lifestyle characteristics, such as age, sex, education levels, NS-SEC, marital status, smoking status, general health status and ethnicity, were taken into account.

The results of this regression model showed that the odds of being a problem gambler were 1.5 times higher in 2010 than in 2007 when these variables were taken into account (the p-value was 0.046 and confidence interval 1.01–2.23).<sup>21</sup> As such, it does not appear that underlying differences in the socio-demographic profile of respondents in each survey year explain the increase in DSM-IV problem gambling estimates. However, it should be noted that there may be some other, unmeasured, response bias that could account for the difference - we are only able to test the data that are available to us.

In summary, between 1999 and 2010 there has been an increase in DSM-IV problem gambling prevalence, which is at the margins of statistical significance. As noted above, we recommend that caution is exercised when interpreting this result. Where possible, we have taken into account differences between responding samples (where data are available) and assessed changes in the underlying age and sex profile of the population. Having undertaken this analysis, the result remains significant at the 5% level and the odds of being a problem gambler were 1.5 times higher (confidence interval: 1.01-2.33) in 2010 than 2007. However, there may still be some unmeasured factor that is affecting these estimates. Future survey estimates are needed to explore whether the DSM-IV rates evident in 2010 are indicative of an upward trend in problem gambling prevalence or are simply the result of random variation. It is, however, useful to reiterate that although problem gambling may be a low prevalence activity, making detecting changes over time difficult, it is an important public health concern, and results from this survey show that there are somewhere between 254,000 and 594,000 problem gamblers in Britain.

### 5.8.3 **PGSI problem gambling in 2007 and 2010**

Problem gambling prevalence estimates as measured by the PGSI were 1.0% for men, 0.1% for women and 0.5% overall in 2007. In 2010, comparable estimates were 1.3%, 0.2% and 0.7%. These changes were not statistically significant ( $p=0.23$ ).

As discussed in section 5.7, it appears that the DSM-IV and PGSI screens are capturing slightly different groups of people and may be measuring slightly different types of gambling problems. Problem gambling prevalence rates when measured by the PGSI did not increase significantly between 2007 and 2010 whereas increases at the margins of statistical significance were evident when problem gambling was measured by the DSM-IV.

This disparity lends further support to the assertion that the screens are operating in different ways and capturing a different range of gambling related problems. This needs further investigation and more in-depth assessment of the performance of both screens is required. This also further demonstrates the difficulty of measuring problem gambling prevalence rates among the population, which should always be considered along side the caveats noted in section 5.4.

## 5.9 Comparisons with other national prevalence surveys

The table below presents current problem gambling prevalence rates from a variety of national surveys carried out between 2000 and 2010. Comparing prevalence rates from other jurisdictions is difficult as different sampling methodologies, data collection techniques and problem gambling screens have been used, all of which can affect problem gambling estimates. As such, this table is provided as an illustration of the range of prevalence estimates observed worldwide, but should not be used to definitively compare one country to another.

Overall, problem gambling prevalence estimates vary from 0.3% in Sweden to 5.3% in Hong Kong, though the Hong Kong estimate is now some 5 years out of date. Estimates in Australia are produced on a state by state basis. The Australian Productivity Commission has attempted to combine these rates and estimate that the rate of problem gambling in Australia is somewhere between 1.4% and 2.1% of adults.<sup>22</sup> The prevalence rate observed in Britain is similar to other European countries, notably Germany, Norway and Switzerland, and lower than countries like the USA, Australia and South Africa.

Country	Year	Screen	Timeframe	%	Confidence interval
Sweden <sup>23</sup>	2008/09	PGSI	Last 12 months	0.3	Not given
Norway <sup>24</sup>	2008	NODS	Last 12 months	0.8	0.6-1.2
Canada <sup>25</sup>	2003	PGSI	Last 12 months	0.5	Not given
New Zealand <sup>26</sup>	2006/2007	PGSI	Last 12 months	0.4	0.3-0.5
Great Britain	2010	PGSI/DSM-IV	Last 12 months	0.7/0.9	0.5-1.2
Germany <sup>27</sup>	2007	SOGS	Last 12 months	0.6	Not given
Switzerland <sup>28</sup>	2005	SOGS	Last 12 months	0.8	Not given
Iceland <sup>29</sup>	2005	PGSI	Last 12 months	1.1	0.7-1.5
South Africa <sup>30</sup>	2005	GA	Last 12 months	1.4	Not given
USA <sup>31</sup>	2000	DIS	Last 12 months	3.5	Not given
Singapore <sup>32</sup>	2008	Chinese DSM-IV	Last 12 months	1.2	0.7-1.6
Macao <sup>33</sup>	2003	Chinese DSM-IV	Last 12 months	4.3	Not given
Hong Kong <sup>34</sup>	2005	Chinese DSM-IV	Last 12 months	5.3	Not given

### Notes and references

- 1 Lesieur, HR & Rosenthal, MD. (1991). Pathological gambling: A review of the literature (prepared for the American Psychiatric Association Task Force on DSM-IV Committee on disorders of impulse control not elsewhere classified). *Journal of Gambling Studies*, 7 (1), 5-40
- 2 American Psychiatric Association (1993). *Diagnostic and statistical manual of mental disorders, 4th edition*. Washington DC: American Psychiatric Association.
- 3 Ferris, J & Wynne H. (2001). *The Canadian Problem Gambling Index: Final Report*. Canada: The Canadian Centre on Substance Abuse.
- 4 Lesieur, HR & Blume, SB. (1987). The South Oaks Gambling Screen (SOGS) A new instrument for the identification of pathological gamblers. *American Journal of Psychiatry*, 144, 1184-1188.
- 5 Culleton, R.P. (1989). The prevalence rates of pathological gambling: A look at methods. *Journal of Gambling Behavior*, 5(1), 22-41 and Dickerson, M (1993). *A preliminary exploration of a two-stage methodology in the assessment of the extent and degree of gambling-related problems in the Australian population* in Eadington WR & Cornelius JA, (eds). *Gambling Behavior and Problem Gambling*. Reno NV: Institute for the study of Gambling & Commercial Gaming, University of Nevada.



- 6 McCreedy, J & Adlaf E (2006). *Performance and enhancement of the Canadian Problem Gambling Index (CPGI) Report and recommendations*. Canada: Healthy Horizons Consulting. and Wenzel, M, McMillen J., Marshall D., & Ahmed E. (2004) *Validation of the Victorian Gambling Screen*. Australia: Community Support Fund.
- 7 This is with the exception of the chasing losses item which is rated on a scale ranging between never and every time I lost. See Appendix 3 for the full question wording.
- 8 Fisher, SE. (1996) *Gambling and problem gambling among casino patrons, Report to the British Casino Industry Consortium, Plymouth UK; National Gambling Impact Study Commission (NGISC) (US) 1999. Final Report*. <http://govinfo.library.unt.edu/ngisc/reports/fullrpt.html>; Australian Productivity Commission (APC) (1999). *Australia's Gambling Industries*. Report No. 10, Canberra: Ausinfo.  
Clarke D., Abbott M., Tse S., & Townsend S. (2006). Gender, Age, Ethnic and Occupational Associations with Pathological Gambling in a New Zealand Urban Sample. *New Zealand Journal of Psychology*. 35(2), 84-91.
- 9 Orford J., Wardle H., Griffiths M., Sproston K., Erens B. (2010). PGSI and DSM-IV in the 2007 British Gambling Prevalence Survey: reliability, item response, factor structure and inter-scale agreement. *International Gambling Studies*, 10(1), 31-44.  
Stinchfield R., Govani R & Frisch GR. (2005). DSM-IV diagnostic criteria for pathological gambling: Reliability, validity and classification accuracy. *The American Journal on Addictions*, 14, 73-82.
- 10 Wynn, HJ. (2003). *Introducing the Canadian Problem Gambling Index*. Wynne Resources: Canada.
- 11 Holtgraves T. (2009). Evaluating the problem gambling severity index. *Journal of Gambling Studies*, 25(1), 105-120
- 12 Current research conducted by Professor Corinne May-Chahal has estimated that problem gambling prevalence rates among the prison population may well be higher than the general population. See Scarfe A and Wilson A. Addressing Problem Gambling in Prisons: Good Organisational Reasons for Programme Success and Failure. Presented at the 14th international Conference on gambling and risk. May 2008.
- 13 Williams RJ., Volberg RA. (2009). Impact of Survey Description, Administration Format, and Exclusionary Criteria on Population Prevalence Rates of Problem Gambling. *International Gambling Studies*, 9 (2), 101-117.
- 14 There is some evidence to support this as those respondents for whom it took more effort to persuade to take part (i.e., they required multiple calls to contact, were reissued or followed-up by the telephone unit after the interviewer failed to either make contact or persuade them to participate) were more likely to be gamblers.
- 15 The performance of both screens in the 2007 survey is documented in Orford J, Wardle H, Griffiths M, Sproston K, Erens B. (2010). PGSI and DSM-IV in the 2007 British Gambling Prevalence Survey: reliability, item response, factor structure and inter-scale agreement. *International Gambling Studies*, 10(1), 31-44.
- 16 Cohen's kappa coefficient is a statistical measure of inter-rater agreement for categorical items. It measures the level of agreement between two measures, in this case, the two problem gambling screens.
- 17 As noted by Abbott M.W & Volberg R.A (2006) The measurement of adult problem gambling and pathological gambling. *International Gambling Studies*. 6(2), 175-200.
- 18 The p-value is the probability of observing the survey estimate (or a more extreme value) simply by chance (i.e., due to sampling error) assuming that there is no difference in the population.
- 19 Surveys are based on random samples that are selected to be representative of the target population. Hence for any survey there are likely to be differences between the true (usually unmeasurable) population measures and the observed survey estimates. There is a possibility that, for two independent samples, a difference is observed simply by chance. For example, it could be purely by random chance that a second independent sample contained more gamblers than the first sample and therefore any differences observed are a result of this difference in the samples rather than reflective of actual changes in behaviour. Standard tests of statistical significance take this possibility into account, although, by definition, there always remains an element of uncertainty.
- 20 Many other national surveys which provide trend data on key behaviours, such as smoking prevalence, often present trends as three year moving averages to smooth out random variation between survey years, differences in sample sizes, or age/cohort effects to determine the underlying trend. (For example, see R.Craig and J. Mindell (eds). *Health Survey for England 2008*, Information Centre for health and social care (2009), or, Z. Uren *The GHS pseudo cohort dataset: methodology and design*. Office for National Statistics (2006)). It is not possible to do this with the BGPS series as there are only three surveys, to date, to compare.
- 21 See Appendix 2 for fuller information about the regression models run to test this.
- 22 Australian Government Productivity Commission (2010) *Gambling: Productivity Commission Inquiry Report volume 1*. [http://www.pc.gov.au/data/assets/pdf\\_file/0010/95680/gambling-report-volume1.pdf](http://www.pc.gov.au/data/assets/pdf_file/0010/95680/gambling-report-volume1.pdf). Accessed 23 Nov 2010.
- 23 Details provided by personal correspondence with study researchers.

- 24 Øren, A., & Bakken, IJ. (2007). *Pengespill og pengespillproblem i Norge 2007 [Gambling and Gambling Problems in Norway 2007]*. Oslo: SINTEF Helse.
- 25 Cox B., Yu N., Afiffi T & Ladouceur RA. (2005). National Survey of Gambling Problems in Canada. *Canadian Journal of Psychiatry*. 50, 213-217.
- 26 Ministry of Health. (2009). *A focus on problem gambling: Results of the 2006/07 New Zealand health survey*. Wellington: Ministry of Health.
- 27 Federal Center for Health Education (BZgA) (2008). *Glücksspielverhalten und problematisches Glücksspielen in Deutschland 2007 [Gambling behaviour and problem gambling in Germany in 2007]*.
- 28 Bondolfi G., Osiek C, & Ferrero F. (2008). Prevalence estimates of pathological gambling in Switzerland. *Acta Psychiatrica Scandinavica*, 117: 236-239.
- 29 Olason DT., Finnbogadottir H., Hauksdottir A., & Barudottir SK. (2003). *An Icelandic version of the Problem Gambling Severity Index: A psychometric evaluation*. Paper presented at the 27th Nordic Psychiatric congress, Reykjavik, Iceland.
- 30 Collins P., & Barr G. (2007) *Gambling and problem gambling in South Africa: The national 2006 prevalence study*. National Centre for the Study of Gambling at the University of Cape Town.
- 31 Welte J., Barnes G., Wieczorek W., Tidewell M., and Parker J. (2001), Alcohol and Gambling Pathology among US Adults: Prevalence, demographics patterns and comorbidity. *Journal of Studies on Alcohol*. 62, 706-712.
- 32 Ministry of Community Development, Youth and Sports (2008). *Report of Survey on Participation in Gambling Activities Among Singapore Residents, 2008*.
- 33 Ka-Chio Fong D & Ozorio B. (2005). Gambling Participation and Prevalence Estimates of Pathological Gambling in a Far-East City: Macao. *UNLV Gaming Research Review Journal*, 9(2), 15-28.
- 34 *Study on Hong Kong People's Participation in Gambling Activities*. (2005) Key Statistics.



# 6 Profile of problem gamblers

## 6.1 Introduction

In addition to estimating problem gambling prevalence, an important aim of this survey was to examine the profile of problem gamblers, to learn more about who problem gamblers are and what types of activities they participate in. This chapter examines the profile of problem gamblers by a range of socio-demographic factors, health and lifestyle characteristics, self-reported problems with gambling, and type of gambling activity.

This chapter focuses mainly on problem gamblers as defined by the DSM-IV. The DSM-IV was one of two problem gambling screens used in the first British Gambling Prevalence Survey (BGPS) in 1999 and in the second BGPS in 2007. By presenting similar analyses using the DSM-IV here, it is possible to highlight changes in the profile of problem gamblers between 1999 and 2010 as well as between 2007 and 2010.

Section 6.4 presents the findings of multivariate analysis to highlight factors that are independently associated with problem gambling when interrelated variables are taken into account. This analysis has been undertaken for both the PGSI and the DSM-IV with results presented separately for each measure. (See Chapter 5 for further discussion and definition of the DSM-IV and PGSI measures.)

## 6.2 Problem gambling by socio-demographic, health, lifestyle and familial characteristics

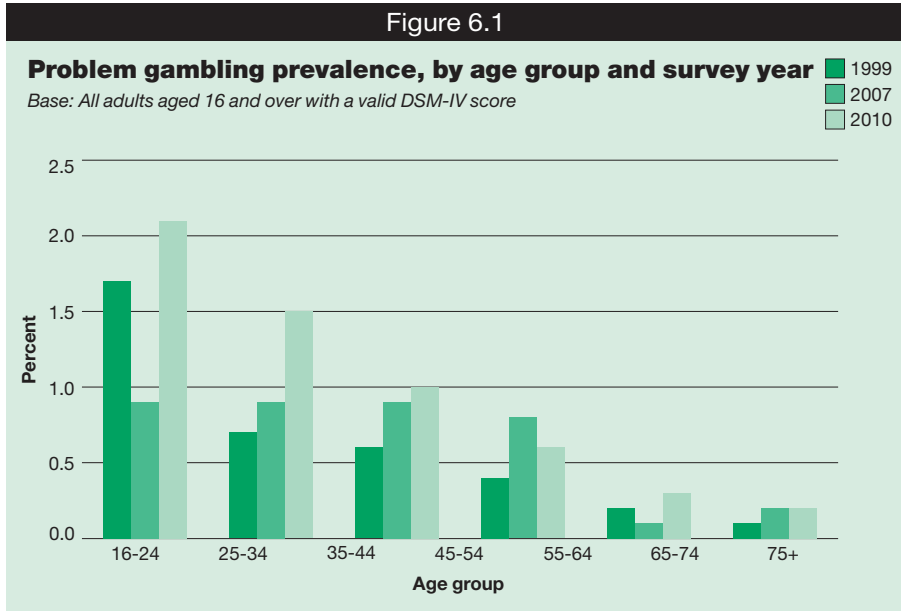
### 6.2.1 Problem gambling by socio-demographic characteristics

This section examines the prevalence of DSM-IV problem gambling by a number of socio-demographic characteristics. As shown in Chapter 5, the prevalence of problem gambling is higher among men than women, as was the case in 1999 and 2007.

In the present survey, there is a marked association between problem gambling prevalence and age. The highest rates were observed among younger adults aged 16-24 (2.1%) and those aged 25-34 (1.5%) and the lowest rates were observed among older adults (0.3% among those aged 55-64 and 0.2% of those aged 65 and over). This stands in contrast to the 2007 survey where age was not significantly associated with problem gambling and corresponds with a marked association between problem gambling prevalence and age in 1999. Moreover, none of the changes between 1999 and 2010 in problem gambling prevalence within each age group are statistically significant, although this may simply be a consequence of the small base sizes within each group.

In 1999 and 2007, problem gambling prevalence varied by ethnic group with significantly higher rates being observed among those of Asian/Asian British origin and Black/Black British origin. In 2010, problem gambling prevalence was again higher among those of Asian/Asian British origin (2.8%) and Black/Black British origin (1.5%) compared with those whose ethnic group was White/White British (0.8%). Although the category 'Other' represents a diverse group from a range of backgrounds, the estimate of problem gambling among this group was the same as observed for those whose ethnic group was White/White British (0.8%). This is a contrast with 2007 when problem gambling prevalence was highest among those whose ethnic origin was other.

Figure 6.1



As in 2007, problem gambling prevalence varied by marital status in 2010, with significantly higher rates among those who were single (1.8%) and those who were separated/divorced (1.1%). Rates were lowest among those who were married or living as married (0.7%).

The Index of Multiple Deprivation (IMD) measures area deprivation across a range of domains such as income, employment, education and health. Different indices are calculated for England, Scotland and Wales. These are not comparable and cannot be combined. Therefore, this section presents information by IMD for England only. In 2010, problem gambling prevalence varied by IMD and was lowest among the least deprived areas (0.6% for IMD quintiles 1 and 2) and was higher among more deprived areas, being highest among those in IMD quintile 4 (1.8%). Problem gambling prevalence was also associated with employment status, being highest among the unemployed (3.3%) and the 'other' group (4.6%)<sup>1</sup> and lowest among those who were retired (0.1%) and those looking after family/home (0.5%). Finally, in 2010, problem gambling prevalence was significantly higher among groups with increasingly severe money problems. Prevalence was lowest among those with no money problems (0.5%) and highest among those with very severe money problems (6.1%).

In 1999 and 2007, there was an association between problem gambling prevalence and educational achievement. Respondents whose highest level of educational attainment were 'A' levels or below were more likely to be problem gamblers than those who had professional or degree level qualifications. In 2010, there was no association identified between education and problem gambling prevalence.

Likewise, in 2007 an association was found between NS-SEC and problem gambling prevalence. Problem gambling was least prevalent within managerial and professional households and most prevalent within the small employers and own account workers category. In 2010, a significant association between NS-SEC and problem gambling was not observed. As in 2007, there were no significant differences in problem gambling prevalence by household income.

Table 6.1

**Problem gambling prevalence, by socio-demographic characteristics**

All aged 16 and over with a valid DSM-IV score

2010

Socio-demographic characteristics		DSM-IV problem gamblers	Bases (weighted)	Bases (un-weighted)
<b>Sex</b>				
Male	%	1.5	3791	3570
Female	%	0.3	3956	4178
<b>Age group</b>				
16-24	%	2.1	1160	975
25-34	%	1.5	1237	1117
35-44	%	1.0	1407	1436
45-54	%	0.6	1303	1346
55-64	%	0.3	1141	1224
65 and over	%	0.2	1499	1650
<b>Marital status</b>				
Married/living as married	%	0.7	4742	4789
Separated/divorced	%	1.1	627	720
Single, never married	%	1.8	1900	1721
Widowed	%	-	478	518
<b>Ethnic group</b>				
White/White British	%	0.8	6977	7073
Asian/Asian British	%	2.8	353	308
Black/Black British	%	1.5	229	202
Other ethnic group	%	0.8	174	151
<b>NS-SEC of Household Reference Person</b>				
Managerial & professional occupations	%	1.0	3042	3007
Intermediate occupations	%	0.3	699	740
Small employers & own account workers	%	0.6	917	913
Lower supervisory & technical occupations	%	0.8	806	801
Semi-routine & routine occupations	%	1.4	1941	1990
<b>Equivalised household income tertile</b>				
1st (lowest)	%	1.3	2079	2081
2nd	%	1.1	2110	2070
3rd (highest)	%	0.7	2018	2093
<b>Highest educational qualification</b>				
Professional qualification or above	%	0.8	2883	2884
GCSEs/'O' levels or 'A' levels or equivalent	%	1.2	2843	2761
None/other	%	0.7	2003	2086
<b>Index of Multiple Deprivation (England only)</b>				
1st (least deprived)	%	0.6	1315	1333
2nd	%	0.6	1400	1405
3rd	%	0.7	1384	1353
4th	%	1.8	1262	1216
5th (most deprived)	%	0.8	1301	1240

Table 6.1 continued...

All aged 16 and over with a valid DSM-IV score

2010

Socio-demographic characteristics		DSM-IV problem gamblers	Bases (weighted)	Bases (un-weighted)
<b>Economic activity of individual</b>				
Paid work	%	0.9	4116	4054
Unemployed	%	3.3	240	222
Long-term disability	%	1.0	256	272
Looking after family/home	%	0.5	639	678
Retired	%	0.1	1621	1781
Full time education	%	1.2	667	537
Other	%	4.6	205	201
<b>Money problems</b>				
No problems	%	0.5	5517	5558
Slight problems	%	1.7	1749	1717
Definite problems	%	2.9	329	323
Very severe problems	%	6.1	133	132

Continued...

## 6.2.2 Problem gambling by health and lifestyle characteristics

Table 6.2 considers problem gambling prevalence by a number of health and lifestyle factors. This analysis suggests that problem gambling was more prevalent among those who report current cigarette smoking. In contrast to the 2007 survey, problem gambling prevalence in 2010 was not significantly different among those with poor health and those who reported drinking the highest amount of alcohol.

Respondents were asked to rate their general health on a five-point scale ranging from very good to very bad. Problem gambling prevalence rates did not vary by general health status. Respondents were also asked if they had a longstanding illness, disability or infirmity and, if so, whether this illness limited their activities in any way. As with general health status, problem gambling prevalence did not vary by presence of a longstanding illness.

Respondents were also asked whether they smoked cigarettes at all nowadays. Problem gambling prevalence was significantly higher among current smokers (1.9%) than those who did not currently smoke cigarettes (0.6%). A similar pattern has been observed in many other gambling studies and was evident in the BGPS 2007.

Finally, respondents were asked whether they drank alcohol nowadays and, if so, what was the highest number of units consumed (if any) on the heaviest drinking day within the last week. Results showed that those who drank the highest amount of alcohol were more likely to be problem gamblers than those who reported drinking more moderately. However, in contrast to the 2007 survey, differences in problem gambling rates among moderate and heavy drinkers were not statistically significant.

Table 6.2				
<b>Problem gambling prevalence, by health and lifestyle characteristics</b>				
<i>All aged 16 and over with a valid DSM-IV score</i>				<i>2010</i>
<b>Health and lifestyle characteristics</b>		DSM-IV problem gamblers	Bases (weighted)	Bases (unweighted)
<b>Self-reported general health status</b>				
Very good/good	%	1.0	5910	5832
Fair	%	0.6	1395	1445
Bad/very bad	%	1.5	432	462
<b>Presence of a longstanding illness</b>				
Limiting longstanding illness	%	0.8	1404	1481
Non-limiting longstanding illness	%	0.7	791	829
No longstanding illness	%	1.0	5534	5422
<b>Cigarette smoking status</b>				
Current cigarette smoker	%	1.9	1882	1862
Not current cigarette smoker	%	0.6	5855	5877
<b>Units of alcohol consumed by current drinkers on heaviest drinking day in last week</b>				
Did not drink in last week	%	0.6	904	917
1-4 units	%	0.6	2627	2683
5-9 units	%	1.4	1136	1145
10-14 units	%	0.5	607	586
15-19 units	%	1.5	156	147
20 units or more	%	2.4	243	209

### 6.2.3 Problem gambling by self-reported parental gambling experience, familial gambling experience and early gambling experiences

Two questions were asked to look at the relationship between parental gambling behaviour and the respondent's gambling behaviour. The first asked whether the respondent's parents/guardians had ever regularly gambled. If so, the respondent was asked to report whether they felt that either of their parents/guardians had ever had a problem with their gambling. Problem gambling prevalence was significantly higher among those whose parents gambled regularly (1.6%) than those whose parents did not (0.7%).

The 1999 and 2007 prevalence surveys highlighted that those who reported that either of their parents had a gambling problem were themselves more likely to be problem gamblers. This finding was replicated in the current survey. 5.0% of those who reported that either parent had (or had ever had) a gambling problem were themselves problem gamblers, compared with 1.0% of those who reported that, although their parents regularly gambled, they did not have a problem with their gambling.

An additional question was asked of all respondents to examine the relationship between problem gambling and the possible presence of gambling problems among close relatives, including spouses/partners, in the last twelve months. As in the 2007 survey, problem gambling prevalence was significantly higher among those who reported that a close relative had a gambling problem within the last 12 months (2.6%) than those who did not (0.9%).

Table 6.3				
Problem gambling prevalence, by health and lifestyle characteristics				
<i>All aged 16 and over with a valid DSM-IV score</i>				2010
Health and lifestyle characteristics		DSM-IV problem gamblers	Bases (weighted)	Bases (un-weighted)
<b>Respondent considered themselves to ever have had a gambling problem</b>				
Yes	%	18.6	158	156
No	%	0.6	7583	7586
<b>Parents gambled regularly</b>				
Yes	%	1.6	1809	1846
No	%	0.7	5906	5869
<b>Whether either parent who regularly gambled had problems with their gambling</b>				
Yes	%	5.0	272	277
No	%	1.0	1534	1566
<b>Any close relative had a problem with gambling in last 12 months</b>				
Yes	%	2.6	291	293
No	%	0.9	7432	7432
<b>Age respondent first started gambling</b>				
15 or younger	%	1.6	1999	2011
16-17	%	1.2	1242	1206
18-21	%	1.0	1667	1680
22 or over	%	0.6	1181	1247
<i>All aged 18 and over</i>	%	0.9	2849	2927
<b>Gambling involvement in past 12 months</b>				
Increased	%	9.3	337	319
Stayed the same	%	0.3	6377	6402
Decreased	%	2.0	1015	1011

All respondents were asked to report how old they were the first time they ever gambled. Problem gambling prevalence was significantly higher among those who reported that they were 15 or under the first time they ever gambled (1.6%) than among those who were 22 or over (0.6%).

Finally, respondents who had gambled in the past 12 months were asked whether their gambling involvement had increased, stayed the same or decreased in that time. Problem gambling was significantly higher among those who reported that their gambling had increased in the past 12 months (9.3%) as well as among those who reported that their gambling had decreased in the past 12 months (2.0%) compared with those who said their gambling involvement had stayed about the same (0.3%). It is possible that those who had decreased their gambling in the past 12 months had done so because of concerns about their gambling involvement which could have contributed to their gambling-related problems.

## 6.3 Problem gambling by gambling activity

### 6.3.1 Introduction

This section presents information about the associations evident between problem gambling and participation in individual gambling activities. Exploring this relationship is complex and a number of considerations should be borne in mind when interpreting these results. These are:

- 1) The BGPS is a cross-sectional survey and whilst patterns or associations may be highlighted within the data, we cannot draw any inference about causal directions.
- 2) Gamblers are a heterogeneous group. Those who gamble frequently (at least once a month or more) tend to take part in a range of different activities. Therefore, it is important to recognise when looking at problem gambling prevalence by participation in individual activities that each gambling activity is not mutually exclusive. As Chapter 2 demonstrated, those who took part in activities such as playing poker or betting on fixed odds betting terminals also participated, on average, in another six gambling activities in the past year.
- 3) Cross-tabulations show relationships between the dependent and independent variables, in this case, participation in certain gambling activities and problem gambling prevalence. If associations are observed, there is the possibility that some other factor may be influencing the results. For example, in Chapter 3 we noted that past year gambling prevalence was associated with marital status, but that this, in part, may also be a reflection of the relationship between age and gambling participation. Secondary analysis of the BGPS 2007 data has demonstrated that frequency of participation or the number of gambling activities undertaken are associated with problem gambling prevalence rates and that the relationship of these measures of gambling involvement with problem gambling needs to be further explored.<sup>2</sup> Examining these issues in detail is beyond the scope of this primary report of findings. However, it is important to recognise this possibility and to bear this in mind when interpreting results.

The following sections present problem gambling prevalence rates firstly for each activity undertaken in the past year and then for each activity undertaken on a regular, at least monthly, basis. Problem gambling prevalence rates are also presented by the number of activities undertaken in the past year and on a regular (at least monthly) basis.

### 6.3.2 Problem gambling prevalence by activity and gambling involvement

Table 6.4 shows problem gambling prevalence rates by activity type and number of activities undertaken. Among those who had gambled in the past year, problem gambling prevalence was highest among those who had played poker at a pub/club (12.8%) followed by those who had played online slot machine style games (9.1%) and fixed odds betting terminals (8.8%). As noted in 2007, these are newer forms of gambling participation which

have emerged since 1999, or in the case of poker, gained popularity in the past few years.<sup>3</sup> Problem gambling prevalence was lowest among those who had played the National Lottery or another lottery (1.3% for both). Notably, problem gambling estimates were highest among those who reported participating in nine or more activities in the past year (12.7%) and were lowest among those who took part in just one or two activities in the past year (0.3%).

It is clear from Chapter 2 that people who take part in certain activities are also more likely to gamble on a range of other activities. For example, 48% of past year poker players had taken part in seven or more activities in the past year. By comparison, only 4% of those who had bought tickets for the National Lottery Draw in the past year had taken part in seven or more activities (table not shown). Figure 6.2 illustrates how the relationship between number of activities undertaken, participation in individual activities and problem gambling estimates varies. Where base sizes permit, those who reported taking part in activities where problem gambling prevalence was highest (namely, poker, fixed odds betting terminals, football pools, online slot machine style games and betting on non-sports events) were subdivided into two groups; those who did each activity and participated in at least six other gambling activities in the past year (meaning they participated in at least seven activities in total) and those who did each activity and participated in less than six other gambling activities in the past year. As can be seen, problem gambling prevalence rates were highest among those who played poker in the past year and had also taken part in at least six other activities (20%). Among those who played poker but did not take part in as many other gambling activities, problem gambling prevalence rates were much lower (1.4%). The same pattern was observed for all other activities, though the magnitude of difference between the two groups was not as large for fixed odds betting terminals.

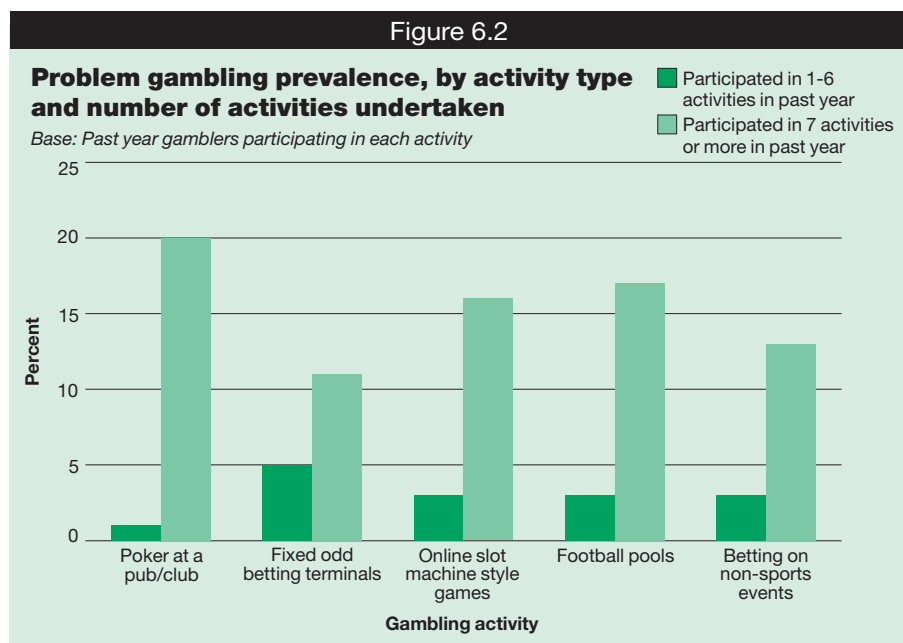


Table 6.4 also shows that the prevalence of problem gambling among those who reported that they took part in each activity on a regular (at least monthly) basis. Problem gambling prevalence was highest among those who reported that they regularly played poker in a club/pub (20.3%) and those who regularly bet on dog races (19.2%), followed by 17.0% for those who regularly played online slot machine style games and 13.9% for those who regularly played casino games. This pattern, by which problem gambling prevalence is particularly high among those who bet regularly on dog races, was also observed in 2007 and 1999.<sup>4</sup>

Problem gambling prevalence was highest among those who reported that they gambled on nine or more different activities on a regular basis (27.8%). This exceeds the prevalence rates observed for any individual activity by at least seven percentage points. Small base sizes mean that it is not possible to replicate the analysis presented in Figure 6.2 for regular



Table 6.4

**Problem gambling prevalence, by gambling behaviour***Past year and regular gamblers with a valid DSM-IV score*

2010

Gambling activity	Past year gamblers			Bases (weighted)	Bases (un-weighted)	Regular (at least monthly) gamblers		Bases (weighted)	Bases (un-weighted)
	DSM-IV problem gamblers	95% Confidence interval				DSM-IV problem gamblers	95% Confidence interval		
National Lottery Draw	%	1.3	(1.0, 1.8)	4545	4636	1.5	(1.1, 2.0)	3522	3615
Another lottery	%	1.3	(0.9, 1.9)	1943	1994	2.8	(1.6, 4.6)	639	664
Scratchcards	%	2.5	(1.8, 3.6)	1893	1881	4.0	(2.8, 5.9)	938	937
Football pools	%	7.5	(4.7, 12)	344	316	9.9	(6.1, 15.8)	245	228
Bingo <sup>a</sup>	%	2.9	(1.7, 4.9)	678	698	4.1	(2.3, 7.2)	362	379
Slot machines	%	4.0	(2.9, 5.7)	1007	957	8.7	(6.1, 12.2)	390	357
Fixed odds betting terminals	%	8.8	(6.0, 12.7)	333	291	13.3	(8.7, 19.7)	173	152
Horse races <sup>b</sup>	%	2.9	(2.0, 4.0)	1257	1237	9.1	(6.4, 12.9)	317	313
Dog races <sup>b</sup>	%	7.1	(4.6, 10.7)	344	319	19.2	(12.6, 28.1)	97	90
Sports betting <sup>b</sup>	%	4.4	(3.0, 6.4)	674	595	8.1	(5.5, 11.8)	323	278
Betting on non-sports events <sup>b</sup>	%	7.8	(5.1, 11.7)	323	310	13.8	(8.7, 21.4)	150	147
Casino games <sup>c</sup>	%	6.8	(4.7, 9.9)	414	367	13.9	(8.7, 21.3)	146	124
Poker at a pub/club	%	12.8	(8.0, 19.8)	155	136	20.3	(12.0, 32.2)	78	68
Online slot machine style games/instant wins	%	9.1	(5.5, 14.8)	218	201	17.0	(9.7, 28.2)	88	78
Spread betting	%	7.5	(3.0, 17.7)	80	63	[10.7]	[[3.7, 26.8]]	42	30
Private betting	%	3.1	(2.1, 4.7)	888	817	7.6	(4.8, 12.1)	281	252
<b>Online gambling activities</b>									
Any online betting <sup>d</sup>	%	3.0	(1.5, 5.6)	272	250	f	f	f	f
Any other online gambling <sup>e</sup>	%	3.0	(2.0, 4.3)	1000	982	f	f	f	f
Any online gambling (excluding National Lottery)	%	5.3	(3.6, 7.6)	568	534	f	f	f	f
<b>Number of gambling activities</b>									
1-2	%	0.3	(0.2, 0.6)	3434	3531	0.6	(0.0, 4.1)	3236	3331
3-4	%	0.7	(0.2, 1.8)	1406	1424	1.9	(0.9, 3.9)	604	600
5-6	%	2.9	(1.0, 7.5)	495	462	4.8	(2.5, 9.2)	174	162
7-8	%	9.6	(5.8, 15.4)	187	170	17.6	(9.9, 29.3)	70	64
9+	%	12.7	(7.5, 20.6)	136	119	27.8	(17.6, 41.1)	64	58

<sup>a</sup> Includes bingo played at a club or online.

<sup>b</sup> Includes bets made online, by telephone, or in person, with a bookmaker or a betting exchange.

<sup>c</sup> Includes casino games (such as roulette, poker, blackjack) played in a casino or online.

<sup>d</sup> Includes online bets on horse races, dog races, other sports or non-sports events made with a bookmaker or betting exchange.

<sup>e</sup> Includes using the internet to play the National Lottery, other lotteries, bingo, football pools, casino games, online slot machine style games.

<sup>f</sup> Data not available.

gamblers. However, as problem gambling estimates are highest among those who regularly take part in a greater number of activities, it would appear that the number of activities undertaken is just as important a predictor of problem gambling among regular gamblers as it is among past year gamblers.

For the majority of activities, problem gambling prevalence was higher among regular, at least monthly, gamblers than past year gamblers. For other lotteries, slot machines, betting on dog races, casino games and private betting, problem gambling estimates were between two to three times higher among regular gamblers than past year gamblers. Estimates for those betting on horse races were over three times higher among regular horse race bettors than past year horse race bettors.



## 6.4 Factors associated with problem gambling

### 6.4.1 Introduction

Multi-variate logistic regression was used to examine the factors associated with DSM-IV and PGSI problem gambling. Two separate models are presented. The first examines the socio-demographic characteristics associated with being a DSM-IV problem gambler. The second replicates this analysis to examine the characteristics associated with being a PGSI problem gambler.

Only a small number of respondents within the survey were classified as problem gamblers. Therefore, any multi-variate analysis focusing on this group has to be developed with caution. The resultant models can be quite unstable as, in the case of the 2010 survey, we are modelling the characteristics of between 49 to 64 people. The results presented in this chapter are the final models developed once the data had been subjected to a number of stages of examination and different models tested to examine the impact of inclusion or exclusion of certain variables.<sup>5</sup> The regression technique adjusts for several explanatory variables simultaneously. For each one, key variables of interest were entered into the model. These included key socio-demographic variables (age, sex, marital status, ethnic group, NS-SEC of the household reference person, household income, educational qualifications, economic activity of respondent) and key risk factors for problem gambling identified in other studies, including the BGPS 1999 and 2007 (general health status, limiting longstanding illness, smoking, drinking and parental gambling behaviour). As in 2007, consideration of possible co-linearity and interactions between variables were tested to identify a set of variables that would perform well in the final model without confounding the analysis. Variables excluded for these reasons were money problems and self-reported changes in gambling involvement. Both of these are highly related to problem gambling, and highly correlated with each other, with money problems and increases in gambling involvement being potential outcomes of problem gambling. Including these variables within the analysis confounded results and they were therefore excluded.

It was our original intention to also examine the activities associated with problem gambling in a logistic regression model which would also take into account measures of gambling involvement. However, there is no standard measure of gambling involvement. LaPlante et al in their secondary analysis of BGPS 2007 data concluded that whilst the number of activities undertaken seemed to be an important predictor of gambling problems, other measures of gambling involvement may exist and should be examined to assess how this may change the relationship between gambling activities and gambling problems. Preliminary analysis conducted for this report showed that using different measures of gambling involvement (i.e., number of activities, frequency of play, volume of engagement) alters the results and shows different patterns of associations between problem gambling and activity.<sup>6</sup> This has also been examined using the 2007 data. As there is no agreed consensus of how to measure and define gambling involvement and since using different definitions alters the observed relationship between problem gambling and individual activities, we have not presented this analysis within this report. We believe that further secondary analysis of data should be conducted to explore this issue in full.

For all models presented, the independent variable is significantly associated with the outcome variable if  $p < 0.05$ . The odds associated with the outcome variable, in this case problem gambling, are presented for each category of the independent variable. Odds are expressed relative to a reference category, which is given a value of 1. An odds ratio greater than 1 indicates higher odds of problem gambling. An odds ratio less than 1 indicates lower odds of problem gambling. 95% confidence intervals are also shown for each odds ratio. If the interval does not include 1, there is a significant difference between the odds ratio for the category and that of the reference category.

### 6.4.2 Socio-demographic factors associated with DSM-IV problem gambling

Table 6.5 shows the odds of being classified as a DSM-IV problem gambler. Only variables

that were significant in the final model are shown in the table. The characteristics that were significantly associated with being a DSM-IV problem gambler were sex, age group, ethnic group, parental gambling behaviour and smoking status.

As observed in 1999 and 2007, the odds of being classified a problem gambler were 4.28 times higher among men than women. In 2007, age was associated with DSM-IV problem gambling but no systematic pattern in the odds of being a problem gambler by age group was observed. This was not the case in the present survey where the odds of being a problem gambler were lower among those aged 45 and over compared with those aged 16-24. The odds also decreased with advancing age, being 0.31 times lower among those aged 45-54, 0.16 times lower among those aged 55-64 and 0.11 times lower among those aged 65 and over, relative to those aged 16-24.

The odds of being a problem gambler were 3.06 times higher among those from Asian/Asian British groups relative to those who were White/White British. The odds of being a problem gambler did not vary significantly among those from Black/Black British groups. The finding that those from Asian/Asian British groups are more likely to be problem gamblers was observed in 2007 and, as noted in that report, is particularly interesting as participation in gambling is lowest among this group (see Chapter 3), attitudes to gambling are the most negative among this group (see Chapter 9) and those that do gamble tend to gamble for different reasons to those who are White/White British (see Chapter 8).

As highlighted in previous BGPS reports, the odds of being a DSM-IV problem gambler were highest among those who reported that either of their parents had experienced

<b>Table 6.5</b>		
<b>Odds of being classified a DSM-IV problem gambler</b>		
<i>All aged 16 and over with a valid DSM-IV score</i>		
		2010
<b>Socio-demographic characteristics</b>	Odds ratio	95% CI
<b>Sex (p&lt;0.01)</b>		
Female	1	
Male	4.28	(2.38, 7.69)
<b>Age group (p&lt;0.01)</b>		
16-24	1	
25-34	0.64	(0.33, 1.26)
35-44	0.49	(0.20, 1.16)
45-54	0.31	(0.13, 0.73)
55-64	0.16	(0.06, 0.47)
65 and over	0.11	(0.03, 0.39)
<b>Ethnic group (p&lt;0.01)</b>		
White/White British	1	
Asian/Asian British	3.06	(1.50, 6.23)
Black/Black British	1.72	(0.38, 7.79)
Other ethnic group	0.60	(0.07, 5.22)
<b>Parental gambling behaviour (p&lt;0.01)</b>		
Parents did not regularly gamble	1	
Parents regularly gambled, but did not have a problem with their gambling	1.58	(0.79, 3.15)
Parents regularly gambled and did have problems with their gambling	7.32	(3.43, 15.61)
<b>Smoking status (p&lt;0.01)</b>		
Non-cigarette smoker	1	
Current cigarette smoker	2.46	(1.43, 4.25)
<i>Base (unweighted)</i>	<i>7712</i>	

problems with their gambling behaviour (7.32). Unlike previous reports, those whose parents had regularly gambled but did not experience problems did not have odds of being a problem gambler that were significantly different to those whose parents did not gamble.

Finally, the odds of being a problem gambler were 2.46 times higher among current cigarette smokers than those who were non-smokers.

### 6.4.3 PGSI problem gambling

The same variables described in section 6.4.2 were entered into a model to examine if they were also associated with problem gambling as defined by the PGSI. There were some common features. The odds of being a PGSI problem gambler were higher among men (4.64), among current cigarette smokers (2.89) and among those who reported that their parents had experienced problems with their gambling (4.42).

There were two further variables which were associated with PGSI problem gambling. These were general health status and economic activity. The odds of being a PGSI problem gambler were 6.17 times higher among those who reported bad or very bad health than those whose health was good/very good. The pattern by economic activity was more complex. Only those who were unemployed had odds of being a problem gambler that were significantly different from the reference category of those in paid employment. The odds of being a problem gambler were 4.02 times higher among those who were unemployed than those who were in paid work.

Table 6.6		
<b>Odds of being classified a PGSI problem gambler</b>		
<i>All aged 16 and over with a valid PGSI score</i>		
		2010
<b>Socio-demographic characteristics</b>	Odds ratio	95% CI
<b>Sex (p&lt;0.01)</b>		
Female	1	
Male	4.64	(2.39, 9.00)
<b>Parental gambling behaviour (p&lt;0.03)</b>		
Parents did not regularly gamble	1	
Parents regularly gambled, but did not have a problem with their gambling	1.20	(0.50, 2.90)
Parents regularly gambled and did have problems with their gambling	4.42	(1.41, 13.91)
<b>Smoking status (p&lt;0.01)</b>		
Non-cigarette smoker	1	
Current cigarette smoker	2.89	(1.59, 5.25)
<b>General health status (p&lt;0.01)</b>		
Very good/good	1	
Fair	1.65	(0.75, 3.63)
Bad/very bad	6.17	(2.38, 15.99)
<b>Economic activity of individual (p&lt;0.01)</b>		
Paid work	1	
Unemployed	4.02	(1.22, 13.21)
Long-term disability	0.25	(0.05, 1.31)
Looking after family/home	1.25	(0.38, 4.07)
Retired	0.12	(0.01, 1.04)
Full time education	0.89	(0.23, 3.44)
Other	2.57	(0.97, 6.78)
<i>Base (unweighted)</i>	7712	

Notably, ethnic group and age were not significantly associated with being a PGSI problem gambler but were associated with being a DSM-IV problem gambler. Likewise, general health status and economic activity were predictors of PGSI problem gambling but not DSM-IV problem gambling. This disparity provides further evidence that the two screens are capturing slightly different groups of people and potentially different aspects of gambling problems.

#### 6.4.4 Summary

Problem gamblers, according to both the DSM-IV and the PGSI were more likely to be male, be current cigarette smokers and have parents who had experienced gambling problems. According to the DSM-IV they were also more likely to be Asian/Asian British and be younger adults whereas, according to the PGSI, they were also more likely to be unemployed and in poor health.

Evidence from this chapter also shows that problem gamblers are more likely to take part in a range of gambling activities on a regular basis. Further examination of the relationship between participation in individual activities, overall gambling involvement and problem gambling is needed.

#### Notes and references

- 1 This group includes a diverse range of employment situations, including those who were on a Government scheme for employment training; those doing unpaid work for a business owned by the respondent or a relative; those intending to look for work but prevented by temporary sickness or those doing something else.
- 2 See LaPlante D.A., Nelson S.E., LaBrie, R.A., Shaffer H.J. (2009) Disordered gambling, type of gambling and gambling involvement in the British Gambling Prevalence Survey 2007 *European Journal of Public Health* doi: 10.1093/eurpub/ckp177 and Vaughan Williams L., Page L., Parke J., Rigbye J., *British Gambling Prevalence Survey 2007: secondary analysis* (2008) Gambling Commission.
- 3 Poker played in a pub or club was included in the questionnaire as an individual gambling activity for the first time in 2010.
- 4 These reports used past week gambling as a proxy for regular gambling. While the results are therefore not strictly comparable, the broad pattern is similar.
- 5 Please contact the authors for more information about how the regression models were developed.
- 6 A number of models were produced to examine this. Firstly, we replicated the methods used by LaPlante et al (2009) by running a simple logistic regression model for each activity. The variables used in these models were age, sex, participation in an individual activity and a measure of gambling involvement. This showed that the range of activities which are significantly associated with problem gambling is affected by the measure of gambling involvement entered into the model. For example, when number of activities was used as the measure of gambling involvement, slot machines were not significantly associated with problem gambling. However, when number of gambling days per year was used as a measure of gambling involvement, slot machines were significantly associated with problem gambling; the odds of being a problem gambler were 2.21 times higher among slot machine players. Secondly, using a logistic regression model in which all 16 activities were entered into to model simultaneously produced different results again, with five activities (not including slot machines) being significantly associated with problem gambling.

# 7 Profile of at-risk gamblers

## 7.1 Introduction

Many health behaviours are matters of degree and are therefore most accurately described and measured as continua. For example, many people describe their own general health to varying degrees using terms such as excellent, good, fair, bad, very poor and so on, rather than stating that they are in bad health or not 'bad' health. There is increasing recognition within the field of gambling research that gambling problems, like alcohol dependence, also lie upon a continuum of risk or problems. Examining the profile of those who experience some problems but are classified below the threshold of problem gambling, or those who may be at-risk of developing problems is a public health concern. For example, it is possible that the greatest volume of harm from gambling is associated with those at low to moderate risk, simply because this group greatly outnumbers those who are at the highest risk, problem gamblers.

The PGSI screening instrument was developed with this viewpoint in mind. Responses to the nine PGSI items are summed to yield scores between 0 and 27 and the following thresholds are used to describe varying levels of problems:

PGSI score 0	Non-problem gambler
PGSI score 1-2	Low risk gambler
PGSI score 3-7	Moderate risk gambler
PGSI score 8 and over	Problem gambler

Using this taxonomy provides greater detail on those who have a PGSI score below the threshold of problem gambling but endorse some of the PGSI items to varying degrees. The developers of the PGSI used the concepts of 'low' risk and 'moderate' risk gamblers to describe groups who may potentially experience varying degrees of adverse consequences from gambling.<sup>1</sup> Others have defined 'at-risk' gamblers as those who may experience gambling-related harm without loss of control or experience loss of control without gambling related-harm.<sup>2</sup> Whichever definition is used, these groups are at elevated risk of experiencing adverse consequences from gambling. Therefore, the focus of this chapter is to describe the prevalence and characteristics of these different groups of 'at-risk' gamblers within the British population.

The DSM-IV screen used in this report and previous BGPS reports has scored responses to each of the ten DSM-IV items in a dichotomous way, that is, either the respondent meets the criteria or does not meet the criteria. This method gives a total score for each respondent between 0 and 10. However, the DSM-IV questions developed for the BGPS series are, like the PGSI, multi-response and answer options are measured on a four point Likert scale ranging from never to very often. It is therefore possible to score responses to the DSM-IV screen in a continuous way to give a total score between 0 and 30. Like the PGSI, this has the benefit of using all of the data provided by respondents and can give greater detail about those who are sub-threshold problem gamblers but endorse DSM-IV items to varying levels. Table 7.1 shows a comparison of PGSI and DSM-IV responses when both screens are scored using the same method. Although the PGSI and DSM-IV scores are not directly comparable since each screen uses different questions and has slightly different answer categories, Table 7.1 highlights that scoring the DSM-IV in the same way to the PGSI potentially provides just as useful information about those with lower scores to the

screen as the PGSI. Interestingly, 18.9% of adults had a DSM-IV score of 1 or more compared with 8.1% who had a PGSI score of 1 or more. This difference may be, in part, due to the fact that the DSM-IV contains 10 items as opposed to the PGSI which contains 9 items, also to the slight difference in answer options between the screens and, as discussed in chapter 5, that each screen is identifying slightly different groups of people with potentially different types of problems. However, it is of further note that the proportion of people scoring highly on each screen starts to converge from scores of 8 or more (the PGSI problem gambling threshold).

Table 7.1		
DSM-IV and PGSI scores		
<i>All aged 16 and over with a valid DSM-IV and PGSI score</i>		
	2010	
PGSI/DSM-IV score	Problem gambling screen	
	DSM-IV %	PGSI %
0	81.1	91.9
1	9.7	3.9
2	4.0	1.7
3	1.7	0.7
4	1.1	0.4
5	0.6	0.4
6	0.4	0.2
7	0.3	0.2
8 - 10	0.4	0.4
11 - 13	0.2	0.1
14 - 16	0.1	0.0
17 and over	0.2	0.2
<i>Bases (weighted)</i>	7747	7747
<i>Bases (unweighted)</i>	7748	7748

From this preliminary examination of the data, it appears that scoring the DSM-IV in a continuous way has potential to help researchers further examine the continuum of gambling problems. However, more investigation is needed to assess this fully. The PGSI thresholds are recognised standards and have been used in many international prevalence surveys.<sup>3</sup> Furthermore, a recent examination of the PGSI concluded that it provides a viable alternative when assessing degrees of problem gambling severity in a non clinical context.<sup>4</sup> Therefore, this chapter focuses on at-risk gambling as defined by the PGSI.

## 7.2 Prevalence of at-risk gambling

This section examines the prevalence of at-risk gambling by age and sex. Focus here is on both low risk and moderate risk gamblers with problem gamblers and non-problem gamblers/non-gamblers included for comparative purposes.

Overall, 5.5% of adults were low risk gamblers (a PGSI score of 1-2) and a further 1.8% were moderate risk gamblers (a PGSI score of 3-7), meaning that overall 7.3% of adults had a PGSI score which categorised them as an 'at-risk' gambler. These estimates were similar to those observed in 2007. In 2007, 5.1% of adults were classified as low risk gamblers, 1.4% were moderate risk gamblers and 6.5% of adults overall had a PGSI score consistent with being a PGSI at-risk gambler.

Table 7.2 shows that, in 2010, there was a marked association between at-risk gambling and sex as well as age. As with problem gambling, the highest rates of low risk and moderate risk gambling were observed among younger adults aged 16-24 (12.6% and



3.5% respectively) and the lowest rates were observed among older adults (2.6% and 0.2% among those aged 65-74 and 1.2% and 0.8% among those aged 75 and over). As with problem gambling, rates of low risk and moderate risk gambling were significantly higher among men than women. Estimates were 7.8% (low risk) and 2.8% (moderate risk) among men and 3.4% (low risk) and 0.8% (moderate risk) among women.

As noted in the introduction to this chapter, examining the prevalence of at-risk gambling is important as the greatest volume of harm from gambling may be associated with those at low to moderate risk, simply because this group greatly outnumbers those who are at the highest risk, problem gamblers. Looking at the prevalence estimates presented above and applying these to population data, shows that the number of moderate risk gamblers in Britain is around 879,000 people and the number of low risk gamblers in Britain is around 2,686,000 people.

Table 7.2								
PGSI status, by age and sex								
<i>All aged 16 and over with a valid PGSI score</i>								2010
PGSI status	Age							Total
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
	%	%	%	%	%	%	%	
<b>Men</b>								
Non-problem gambler/ non gambler	74.6	80.7	89.1	92.0	94.4	96.8	98.1	88.2
Low risk gambler	18.5	11.5	6.6	5.2	3.1	2.8	1.6	7.8
Moderate risk gambler	5.0	5.6	2.8	1.7	1.7	0.4	0.3	2.8
Problem gambler	1.9	2.2	1.6	1.1	0.8	-	-	1.3
<b>Women</b>								
Non-problem gambler/ non gambler	90.9	94.0	96.1	96.1	97.4	97.6	98.0	95.6
Low risk gambler	6.4	4.9	3.0	3.1	2.3	2.4	0.9	3.4
Moderate risk gambler	1.9	0.8	0.7	0.7	0.1	-	1.1	0.8
Problem gambler	0.8	0.3	0.2	0.1	0.1	-	-	0.2
<b>All</b>								
Non-problem gambler/ non gambler	82.5	87.3	92.6	94.1	95.9	97.2	98.0	91.9
Low risk gambler	12.6	8.3	4.8	4.1	2.7	2.6	1.2	5.5
Moderate risk gambler	3.5	3.2	1.8	1.2	0.9	0.2	0.8	1.8
Problem gambler	1.4	1.2	0.9	0.6	0.5	-	-	0.7
<i>Bases (weighted)</i>								
<i>Men</i>	596	624	698	643	558	388	283	3791
<i>Women</i>	564	612	709	659	583	426	402	3956
<i>All</i>	1160	1237	1407	1303	1141	814	685	7747
<i>Bases (unweighted)</i>								
<i>Men</i>	451	509	656	617	565	498	274	3570
<i>Women</i>	524	608	780	729	659	521	357	4178
<i>All</i>	975	1117	1436	1346	1224	1019	631	7748

## 7.3 At-risk gambling by socio-demographic, health, lifestyle and familial characteristics

### 7.3.1 At-risk gambling by socio-demographic characteristics

This section examines the socio-demographic characteristics of low risk and moderate risk gamblers. As Table 7.3 shows, marital status was significantly associated with low and moderate risk gambling with the highest rates being observed among those who were single (10.4% and 3.1% respectively). At-risk gambling rates were lowest among those who were widowed, though this may, in part, be a reflection of the association of at-risk gambling with age.

Like problem gambling, moderate risk gambling was higher among non-White ethnic groups than the White/White British group. Estimates varied from 1.5% of those who were White/White British to 4.8% of those who were Black/Black British and 5.0% of those who were of an 'other' ethnic group. Rates of low risk gambling did not vary significantly by ethnic group.

At-risk gambling varied across a number of markers of socio-economic status and area characteristics. For example, low risk and moderate risk gambling was highest among individuals who were unemployed (11.0% and 3.6%) as well as among those engaged in full time education (10.3% and 4.6%) and lowest among those who were retired (2.1% and 0.5%) or looking after family/home (4.8% and 0.5%). Low risk gambling was also significantly associated with educational qualifications; being highest among those whose highest level of educational attainment were A-levels or GCSEs (7.9%).

NS-SEC is a social classification system that has similarities to the Registrar General's Social Class. Respondents are assigned to a NS-SEC category based on the occupation of the household reference person. Low risk gambling was highest among individuals in semi-routine and routine households (7.7%) and lowest among those from managerial and professional households (4.4%). Moderate risk gambling did not vary by NS-SEC of the household reference person. Similarly, household income was associated with low risk but not moderate risk gambling; low risk gambling prevalence displayed an inverse relationship with household income and was highest among those living in the lowest household income households (7.1%) and lowest among those living in the highest income households (3.9%). Low risk gambling, but not moderate risk gambling, was also significantly associated with area deprivation with low risk gambling being most prevalent in areas of greatest deprivation (6.2% and 6.5% respectively for the 4th and 5th deprivation quintiles) and being least prevalent among the least deprived areas (4.1% and 5.3% respectively for the 1st and 2nd deprivation quintiles).

Finally, low risk and moderate risk gambling were both significantly associated with self-reported money problems with the low risk gambling rate being highest among those with definite money problems and moderate risk gambling being highest among those with severe money problems.

Many of the factors associated with either low risk or moderate risk gambling were similar to those associated with problem gambling. For example, the highest rates of low risk, moderate risk and problem gambling were observed among those who were male, single and were unemployed. At-risk gambling (either low risk or moderate risk) and problem gambling were also associated with area deprivation, educational qualifications and ethnicity. NS-SEC and household income were associated with low risk gambling only. Further analysis is needed to assess whether this indicates that the factors associated with low risk gambling are different to the factors associated with higher risk gambling or whether we simply did not have enough power within the 2010 survey to detect these differences among moderate risk or problem gamblers.



Table 7.3

**At-risk gambling prevalence, by socio-demographic characteristics**

All aged 16 and over with a valid PGSI score

2010

Socio-demographic characteristics		PGSI risk category		Bases (weighted)	Bases (un-weighted)
		PGSI low risk gamblers	PGSI moderate risk gamblers		
<b>Marital status</b>					
Married/living as married	%	4.2	1.4	4742	4789
Separated/divorced	%	3.6	1.8	627	720
Single, never married	%	10.4	3.1	1900	1721
Widowed	%	2.3	0.5	478	518
<b>Ethnic group</b>					
White/White British	%	5.5	1.5	6977	7073
Asian/Asian British	%	3.7	3.6	353	308
Black/Black British	%	7.8	4.8	229	202
Other ethnic group	%	7.2	5.0	174	151
<b>NS-SEC of Household Reference Person</b>					
Managerial & professional occupations	%	4.4	1.4	3042	3007
Intermediate occupations	%	5.6	1.5	699	740
Small employers & own account workers	%	4.9	1.7	917	913
Lower supervisory & technical occupations	%	5.4	1.8	806	801
Semi-routine & routine occupations	%	7.7	2.2	1941	1990
<b>Household income tertile</b>					
1st (lowest)	%	7.1	1.9	2079	2081
2nd	%	6.7	2.0	2110	2070
3rd (highest)	%	3.9	1.5	2018	2093
<b>Highest educational qualification</b>					
Professional qualification or above	%	4.0	1.6	2883	2884
GCSEs/'O' levels or 'A' levels or equivalent	%	7.9	2.2	2843	2761
None/other	%	4.4	1.5	2003	2086
<b>Index of Multiple Deprivation (England only)</b>					
1st (least deprived)	%	4.1	1.0	1315	1333
2nd	%	5.3	2.0	1400	1405
3rd	%	5.8	1.8	1384	1353
4th	%	6.2	1.7	1262	1216
5th (most deprived)	%	6.5	2.4	1301	1240
<b>Economic activity of individual</b>					
Paid work	%	5.7	1.8	4116	4054
Unemployed	%	11.0	3.6	240	222
Long-term disability	%	7.1	1.8	256	272
Looking after family/home	%	4.8	0.5	639	678
Retired	%	2.1	0.5	1621	1781
Full time education	%	10.3	4.6	667	537
Other	%	7.3	3.6	205	201
<b>Money problems</b>					
No problems	%	4.3	1.0	5517	5558
Slight problems	%	8.6	3.2	1749	1717
Definite problems	%	11.3	5.8	329	323
Severe problems	%	3.6	7.2	133	132

Table 7.4

**At-risk gambling prevalence, by health and lifestyle characteristics***All aged 16 and over with a valid PGSI score*

2010

Health and lifestyle characteristics	PGSI risk category		Bases (weighted)	Bases (un-weighted)	
	PGSI low risk gamblers	PGSI moderate risk gamblers			
<b>General health status</b>					
Very good/good	%	5.6	2.0	5910	5832
Fair	%	5.5	0.9	1395	1445
Bad/very bad	%	4.9	1.4	432	462
<b>Presence of a longstanding illness</b>					
Limiting longstanding illness	%	4.6	1.1	1404	1481
Non-limiting longstanding illness	%	4.6	0.7	791	829
No longstanding illness	%	5.9	2.1	5534	5422
<b>Cigarette smoking status</b>					
Current cigarette smoker	%	8.7	3.1	1882	1862
Not current cigarette smoker	%	4.5	1.4	5855	5877
<b>Units of alcohol consumed on heaviest drinking day in last week</b>					
Did not drink in last week	%	4.6	1.2	2929	2935
1-4 units	%	4.5	1.4	2627	2683
5-9 units	%	4.9	3.0	1136	1145
10-14 units	%	9.0	2.7	607	586
15-19 units	%	16.7	3.2	156	147
20 units or more	%	14.6	3.9	243	209

**7.3.2 At-risk gambling by health and lifestyle characteristics**

At-risk gambling was associated with a number of health and lifestyle factors.

Overall the prevalence of low risk or moderate gambling did not vary significantly by general health status (Table 7.4). However, the prevalence of moderate risk gambling was higher among those who reported that they did not have a longstanding illness (2.1%) and was lower among those who reported that they had a longstanding illness but that this did not limit their usual activities in any way (0.7%).

Respondents were also asked whether they smoked cigarettes at all nowadays. Both low risk and moderate risk gambling was significantly higher among current smokers (8.7% and 3.1% respectively) than those who did not currently smoke cigarettes (4.5% and 1.4% respectively). Finally, respondents were asked whether they drank alcohol nowadays and, if so, what was the highest number of units consumed on the heaviest drinking day within the last week. Results showed that those who drank the highest amount of alcohol were more likely to be low risk and moderate risk gamblers than those who reported drinking more moderately.

**7.3.3 At-risk gambling by self-reported parental gambling experience, familial gambling experience and early gambling experiences**

As noted in Chapter 6, two questions were asked to look at the relationship between parental gambling behaviour and the respondent's gambling behaviour. The first asked whether the respondent's parents/guardians had ever regularly gambled. If so, the respondent was asked to report whether they felt that either of their parents/guardians had ever had a problem with their gambling. In addition, respondents were also asked to report if a close relative had experienced gambling problems in the past 12 months.

Table 7.5

**At-risk gambling prevalence, by self-reported problem gambling status, parental and close relative's problem gambling status, age first gambled and gambling involvement**

All aged 16 and over with a valid PGSI score 2010

Self-reported problem gambling status, parental and close relative's problem gambling status and age first gambled		PGSI risk category		Bases (weighted)	Bases (un-weighted)
		PGSI low risk gamblers	PGSI moderate risk gamblers		
<b>Respondent considered themselves to ever have had a gambling problem</b>					
Yes	%	7.8	13.7	158	156
No	%	5.5	1.5	7583	7586
<b>Parents gambled regularly</b>					
Yes	%	7.6	2.4	1809	1846
No	%	4.9	1.6	5906	5869
<b>Whether either parent who regularly gambled had problems with their gambling</b>					
Yes	%	8.6	4.9	272	277
No	%	7.4	2.0	1534	1566
<b>Any close relative had a problem with gambling in last 12 months</b>					
Yes	%	9.8	2.9	291	293
No	%	5.4	1.7	7432	7432
<b>Age respondent first started gambling</b>					
15 or younger	%	7.5	2.5	1999	2011
16-17	%	9.7	3.0	1242	1206
18-21	%	6.7	1.8	1667	1680
22 or over	%	3.9	1.4	1181	1247
<b>Gambling involvement in past 12 months</b>					
Increased	%	18.6	7.9	337	319
Stayed the same	%	3.9	0.9	6377	6402
Decreased	%	11.8	5.0	1015	1011

Low risk gambling was associated with regular parental gambling as well as with the gambling of close relatives. Low risk gambling prevalence also tended to be higher the earlier the respondents started to gamble. Estimates were 7.5% among those who first gambled when they were 15 or younger, 9.7% among those who first gambled at age 16-17 and 3.9% among those who first gambled aged 22 or older. Low risk gambling was also associated with gambling involvement; 18.6% of those who reported that their gambling involvement had increased in the past year had PGSI scores consistent with being a low risk gambler. However, low risk gambling was not significantly associated with a parental gambling problem or whether respondents felt they had their own gambling problem.

Moderate risk gambling was significantly associated with all of the aforementioned experiences with the exception of whether a close relative had a gambling problem. With regard to self-reported changes in gambling involvement, it is notable that 33% of those who reported that their involvement had increased were either at-risk or problem gamblers (table not shown).

## 7.4 Factors associated with at-risk gambling

### 7.4.1 Introduction

Multi-variate logistic regression was used to examine the factors associated with being a PGSI low risk and PGSI moderate risk gambler. For each model, key variables of interest were entered into the analysis. These variables included key socio-demographic variables (age, sex, marital status, ethnic group, NS-SEC of the household reference person, household income, educational qualifications, and economic activity of the respondent) and key risk factors for at-risk gambling identified within this chapter. These were general health status, limiting longstanding illness, smoking, drinking and parental gambling behaviour.

Multi-variate logistic regression requires that the outcome variable is binary coded, so that the characteristic of the group of interest is modelled against others who do not have this characteristic. Consideration therefore must be given to defining the comparative population group. For example, when looking to identify the characteristics of low risk gamblers, we must consider who to include in our comparative group; all other people in the sample (which would include moderate risk and problem gamblers as well as non-problem gamblers) or, non-problem gamblers only. Our main interest was to examine the characteristics of being a low risk or moderate risk gambler compared with non-problem gamblers (in the case of the former) and non-problem and lower risk gamblers (in the case of the latter). Therefore in the first model, which examines the characteristics associated with being a low risk gambler, those with a PGSI score of 3 or more are excluded from the analysis. Likewise, in the second model, which examines the characteristics associated with being a moderate risk gambler, those with a PGSI score of 8 or more are excluded from the analysis.

The models presented within this chapter are the final models after the data were subjected to a number of exploratory analyses. Only variables that were significant in the final model are presented in the tables. As noted in Chapter 6, for all models presented, the independent variable is significantly associated with the outcome variable if  $p < 0.05$ . The odds associated with the outcome variable, in this case low risk or moderate risk gambling, are presented for each category of the independent variable. Odds are expressed relative to a reference category, which is given a value of 1. An odds ratio greater than 1 indicates higher odds of low risk or moderate risk gambling. An odds ratio less than 1 indicates lower odds of low risk or moderate risk gambling. 95% confidence intervals are also shown for each odds ratio. If the interval does not include 1, there is a significant difference between the odds ratio for the category and that of the reference category.

### 7.4.2 PGSI low risk gambling

Table 7.6 shows the odds of being a low risk gambler. A range of characteristics were associated with low risk gambling. These were sex, age, parental gambling behaviour, smoking status, general health status, alcohol consumption, educational qualifications and household income.

The odds of being a low risk gambler were 2.27 times higher among men than women. Low risk gambling displayed an inverse relationship with age as the odds of being a low risk gambler decreased as age increased. Among those aged 35-44, the odds of being a low risk gambler were 0.37 times lower than those aged 16-24 and the odds were 0.09 times lower among those aged 75 and over.

The odds of being a low risk gambler were higher among those who reported that their parents had gambled regularly, but did not have problems (1.51) or that their parents had gambled regularly and did experience problems (1.78) than among those whose parents had never regularly gambled.

Low risk gambling was significantly associated with a range of health and lifestyle choices. The odds of being a low risk gambler were higher among those who reported that their health was fair (1.40), higher among current cigarette smokers (1.39) and higher among

Table 7.6

**Odds of being classified a PGSI low risk gambler***All aged 16 and over with PGSI score <3 2010*

<b>Socio-demographic characteristics</b>	Odds ratio	95% CI
<b>Sex (p&lt;0.01)</b>		
Female	1	
Male	2.27	(1.79, 2.88)
<b>Age group (p&lt;0.01)</b>		
16-24	1	
25-34	0.71	(0.51, 0.99)
35-44	0.37	(0.26, 0.52)
45-54	0.29	(0.19, 0.43)
55-64	0.19	(0.12, 0.31)
65-74	0.19	(0.11, 0.32)
75 and over	0.09	(0.04, 0.19)
<b>Parental gambling behaviour (p&lt;0.01)</b>		
Parents did not regularly gamble	1	
Parents regularly gambled, but did not have a problem with their gambling	1.51	(1.19, 1.92)
Parents regularly gambled and did have problems with their gambling	1.78	(1.13, 2.82)
Parent regularly gambled, not known whether had problem with their gambling	0.60	(0.10, 3.72)
<b>Smoking status (p&lt;0.02)</b>		
Non-cigarette smoker	1	
Current cigarette smoker	1.39	(1.06, 1.81)
<b>General health (p&lt;0.01)</b>		
Very good/good	1	
Fair	1.40	(1.04, 1.89)
Bad/very bad	1.51	(0.97, 2.36)
<b>Alcohol consumption (p&lt;0.01)</b>		
Does not drink/did not drink in past week	1	
Drank 1-4 units on heaviest drinking day in past week	1.12	(0.85, 1.47)
Drank 5-9 units on heaviest drinking day in past week	1.03	(0.74, 1.45)
Drank 10-15 units on heaviest drinking day in past week	1.80	(1.28, 2.52)
Drank 16 units or more on heaviest drinking day	2.04	(1.37, 3.05)
<b>Educational qualifications (p&lt;0.01)</b>		
Degree/professional qualification or above	1	
A-levels/GCSEs/O levels	1.48	(1.13, 1.94)
None/other	1.56	(1.13, 2.15)
<b>Equalised household income tertile (p&lt;0.01)</b>		
1st (lowest)	1	
2nd	0.95	(0.73, 1.24)
3rd (highest)	0.65	(0.48, 0.90)
Not known	0.57	(0.40, 0.81)
<i>Base (unweighted)</i>	7557	

those who reported drinking 10 or more units on their heaviest drinking day in the past week. The odds were 1.80 times higher among those who drank between 10-15 units of alcohol on their heaviest drinking day and 2.04 times higher among those who drank over 16 units on their heaviest drinking day. This latter group is of interest: consuming over 16 units of alcohol per day means that among men, this group exceeded the recommended daily guidelines for alcohol consumption by four times or more and among women, the daily guidelines were exceeded by five times or more.<sup>5</sup>

Educational attainment was associated with low risk gambling, being higher among those who had lower levels of educational attainment. In particular, the odds of being a low risk gambler were higher among those with no formal educational qualifications (1.56) when compared to those with a degree or higher.

Finally, there was a relationship evident between low risk gambling and equivalised household income. Those living in the highest income households were less likely to be low risk gamblers (0.65) compared with those living in the lowest income households.

#### 7.4.3 **PGSI moderate risk gambling**

A range of characteristics were associated with moderate risk gambling, many of which were similar to those observed for low risk gambling. These were age, sex, parental gambling behaviour and smoking status (see Table 7.7).

Like low risk gambling, the odds of being a moderate risk gambler were higher among men (3.57), lower among older age groups and higher among current cigarette smokers (1.92).

The odds of being a moderate risk gambler by parental gambling status were only different from the reference category (parents who did not regularly gamble) among those who reported that the parents had gambled regularly and did experience problems. The odds were 3.25 times higher among this group.

Interestingly, ethnic group was significantly associated with PGSI moderate risk gambling. The odds of being a moderate risk gambler were 3.10 times higher among those who were Black/Black British than those who were White/White British. Chapter 6 demonstrated that DSM-IV problem gambling was associated with ethnic group, the odds being higher among those who were Asian/Asian British. The analysis presented in this section demonstrates a further relationship between ethnic group and gambling behaviour, not previously evident in the BGPS series.

#### 7.4.4 **Summary**

There is a great deal of correspondence in the range of characteristics associated with being a low risk gambler, a moderate risk gambler and a problem gambler. Sex, cigarette smoking status and parental gambling behaviour were all predictors of low risk gambling, moderate risk gambling and problem gambling. The observed relationships operate in much the same way across all three groups, with men, cigarette smokers and those with parents with gambling problems all being more likely to be low risk, moderate risk or problem gamblers. Likewise, age predicted low risk and moderate risk gambling (though not PGSI problem gambling) with older adults being less likely to be either low risk or moderate risk gamblers.

A greater range of variables were associated with low risk gambling, including some measures of socio-economic status (household income and educational attainment). Likewise, ethnic group was significantly associated with moderate risk gambling, a relationship not observed in the low risk or the PGSI problem gambling models, but supported in the DSM-IV analysis presented in Chapter 6. Interestingly, economic activity was associated with problem gambling, with those who were unemployed being more likely to be problem gamblers. Substantive importance should not necessarily be attached to these differences, which may in part be explained by the difficulties of modelling problem gambling behaviour when there are a small number of cases in the data. However, further investigation is warranted to explore these differences in full and to examine the extent to which these represent different sub-groups of gamblers.

Table 7.7

**Odds of being classified a PGSI moderate risk gambler***All aged 16 and over with PGSI score <8 2010*

Socio-demographic characteristics	Odds ratio	95% CI
<b>Sex (p&lt;0.01)</b>		
Female	1	
Male	3.57	(2.39, 5.34)
<b>Age group (p&lt;0.01)</b>		
16-24	1	
25-34	0.93	(0.53, 1.64)
35-44	0.53	(0.28, 0.99)
45-54	0.37	(0.19, 0.70)
55-64	0.31	(0.13, 0.71)
65-74	0.07	(0.02, 0.28)
75 and over	0.35	(0.13, 0.90)
<b>Parental gambling behaviour (p&lt;0.01)</b>		
Parents did not regularly gamble	1	
Parents regularly gambled, but did not have a problem with their gambling	1.37	(0.86, 2.18)
Parents regularly gambled and did have problems with their gambling	3.25	(1.62, 6.52)
Parent regularly gambled, not known whether had problem with their gambling	2.94	(0.33, 25.96)
<b>Smoking status (p&lt;0.01)</b>		
Non-cigarette smoker	1	
Current cigarette smoker	1.92	(1.26, 2.93)
<b>Ethnic group (p&lt;0.01)</b>		
White/White British	1	
Asian/Asian British	2.05	(0.81, 5.17)
Black/Black British	3.10	(1.16, 8.28)
Other ethnic group	2.66	(1.27, 5.58)
<i>Base (unweighted)</i>	7676	

**Notes and references**

- 1 Ferris, J., & Wynne, H. (2001). *The Canadian Problem Gambling Index: Final report*. Ottawa: Canadian Centre on Substance Abuse.
- 2 Maitland, S., & Adams, GR. (2005). *Assessing the factor structure of the Canadian Problem Gambling Index: Does qualitative stability allow quantitative comparison?* Guelph: Ontario Problem Gambling Research Centre; Maitland, S., & Adams, GR. (2007). *Replication and generalizability of the Problem Gambling Severity Index: Are results consistent and comparable across studies?* Guelph: Ontario Problem Gambling Research Centre.
- 3 The PGSI has been used in surveys in eleven Canadian provinces, three Australian states and New Zealand as well as the Nordic countries of Iceland, Norway and Sweden.
- 4 Holtgraves T. (2009). Evaluating the problem gambling severity index. *Journal of Gambling Studies*. 25(1), 105-20.
- 5 In the UK recommended daily guidelines for alcohol consumption are up to 4 units for men and up to 3 units for women.

**BLANK PAGE**



# 8 Reasons for gambling

## 8.1 Introduction

In 1999 and 2007, the main focus of the BGPS was to measure gambling behaviour, explore attitudes to gambling and examine the characteristics associated with different types of gambling behaviour. In 2010, a key aim of the survey was to better understand and measure varying levels of gambling involvement and to complement this information by examining reasons for gambling which, in turn, shape gambling behaviour. The importance of capturing information in this area has been supported by other researchers such as Per Binde who stated that understanding the reasons why people participate in gambling is of value for any research that aims to uncover determinants of varying levels of gambling involvement.<sup>1</sup> Therefore, it was agreed with the Gambling Commission, the BGPS Steering Group and the Advisory Group that questions measuring reasons for gambling should be included in the 2010 survey. This allows us, for the first time, to present empirical information about motivations for gambling among the British population and to examine how these reasons vary among socio-demographic sub-groups and among different types of gamblers.

The questions developed for the 2010 survey, the Reasons for Gambling Questionnaire (RGQ), built upon the work of Stewart and Zack and were designed to reflect broad motivations for gambling evident among gamblers in general.<sup>2</sup> Development of the RGQ is detailed in section 8.2. Results and factor analysis of the RGQ are presented in sections 8.3 and 8.4.

## 8.2 Development of the Reasons for Gambling Questionnaire (RGQ)

The main objectives for developing the RGQ were that:

1. It should measure broad reasons for gambling among the general population and be applicable to all different types of gamblers with a variety of gambling behaviours.
2. It should include measures relating to the fullest range of reasons for gambling and include items relating to all known domains of gambling motivations.
3. It should be sufficiently general that the questions could be used in identical forms at other times and in other English speaking countries.
4. It should measure reasons for gambling in general, rather than measuring reasons for gambling on particular activities. Although the latter would be of interest, it would be impossible to assess all reasons for gambling on individual activities given the time and space constraints of the BGPS questionnaire.

Existing questionnaire instruments such as Stewart and Zack's Gambling Motives Questionnaire (GMQ) or Chantal et al's Gambling Motives Scale (GMS) were reviewed against this criteria.<sup>3</sup> In particular, GMQ and GMS were critically evaluated using the Questionnaire Appraisal System (QAS), a tool which provides a systematic method for evaluating questionnaires.<sup>4</sup> It focuses on problems that interviewers might have with administering the questions, that respondents might have in being able to understand and answer them and that analysts might have in interpreting the answers.

Results of this evaluation suggested that Stewart and Zack's Gambling Motives Questionnaire was potentially the more useful instrument for our purposes. However, as this questionnaire was adapted from the Drinking Motives Questionnaire, there were some gaps in the range of reasons included in the question set and some concerns that particular items retained within the GMQ were less appropriate in a UK context as reasons for gambling.

To address these issues, a literature review was conducted to highlight the main reasons for gambling noted in the academic literature. Reasons for gambling were broadly divided into the following sub-groups:

- Social reasons
- Monetary reasons
- Excitement/amusement
- Challenge/learning/knowledge
- Escape/avoidance/coping

Question items from the GMQ were assessed against this list to identify gaps in the instrument and so that new question items could be developed. In addition, we also conducted secondary analysis of qualitative interviews with British gamblers to assess if the items included in the GMQ were reasons why people in Britain reported gambling. This process also highlighted other reasons for gambling not present within the GMQ and hence allowed us to develop new items which could potentially be added to the question set.

A preliminary list of 25 questions was developed and cognitively tested with respondents. Cognitive testing focused on examining how easy or difficult it was for respondents to understand the terms used, whether the range of reasons for gambling presented were endorsed by the general public and if there were any omissions. The result of this stage of work was to recommend including, excluding or amending the wording of the items. (See Wardle et al (2009) and Cripps & Blake (2009) for a fuller description of the development process.)<sup>5</sup>

The revised set of 20 questions was then subjected to a further round of cognitive testing and piloted alongside the main questionnaire in July 2009. Quantitative data from the pilot was analysed to reduce the question set from 20 to 15 items and to assess the performance of the question set. The process used to identify the final items was as follows:

1. If a pair of items were very highly correlated (0.7 or above)<sup>6</sup> the wording of these items was examined to assess if there was significant overlap in their meaning. If so, only one item was retained.
2. If an item had very low correlations with all other items, this item was examined in relation to our overall objectives and criteria for developing the RGQ and a decision taken about its contribution to the overall question set. For example, the item 'I have an urge to gamble' did not correlate well with any of the other items and was deemed to be too specifically focused on underlying reasons for gambling problems than reasons for gambling in general. Therefore, it was removed from the question set. However, the item 'I gamble because I am worried about not winning if I don't play', which did not correlate well with other items, was found to be substantively important in our review of the qualitative data and in the cognitive interviews. Because of the importance attached to this item in the development stages of the questionnaire, this was retained for the main stage of the survey, even though it displayed poor correlations with other items.
3. Examination of how well each item fit with the sense and logic of the broader BGPS questionnaire. It was important that the questionnaire flowed well, made sense to respondents and did not seem repetitive. Some reasons for gambling, such as 'gambling to win back money that I've lost or owe' are very similar to items included with the DSM-IV or PGSI problem gambling screens. As such, they were excluded from the RMQ.
4. Finally, an exploratory factor analysis was conducted to examine how the questions grouped together (known as factor loadings). Where an item did not load clearly onto an underlying factor/group, or loaded relatively weakly onto a number of factors/groups, it became a candidate for exclusion. Before excluding this item, it was subjected to the processes described above.

Cognitive testing revealed that some people attached negative associations to the term gambling and did not like to think that their participation was a gambling activity. They reported answering the questions differently and more conservatively if they were asked why they gambled rather than why they took part in a variety of activities. As such, the term 'gambling' was removed from the introduction to the RGQ and from all items. This was to encourage respondents to give more honest and open responses to these questions.

The final set of questions is shown in Table 8.1. The RGQ was prefaced with an introduction which summarised the respondent's past year gambling activity and asked whether they took part in these activities for a range of reasons.

### 8.3 Reasons for gambling by age and sex

Table 8.1 shows responses to the individual RGQ items among past year gamblers by sex. Overall, there were four individual items which most past year gamblers stated were reasons why they had gambled. These were gambling for the chance of winning big money (83% of past year gamblers answered affirmatively to this item), because it's fun (78%), to make money (59%) and because it's exciting (51%). Notably, 42% of past year gamblers reported that they always gambled for the chance of making big money, 30% reported that they always gambled because it's fun and 28% always gambled to make money.

The least endorsed items were gambling to impress others, gambling to compete with others and gambling because 'it helps when I'm feeling tense'. Only between 4% and 6% of past year gamblers endorsed these as motives for gambling in the past 12 months.

Past year gamblers aged 16 and over							2010
Gambled for these reasons in the past 12 months...	RGQ response category				Bases (weighted)	Bases (un-weighted)	
	Never	Some-times	Often	Always			
<b>Men</b>							
For the chance of winning big money	%	16	29	12	43	2860	2699
Because it's fun	%	22	30	18	30	2859	2698
As a hobby or a past time	%	59	21	9	11	2859	2698
To escape boredom or to fill my time	%	77	16	5	3	2859	2698
Because I'm worried about not winning if I don't play	%	79	12	4	5	2859	2699
To compete with others (e.g. bookmaker, other gamblers)	%	89	7	2	2	2862	2701
Because it's exciting	%	46	32	12	10	2861	2700
For the mental challenge or to learn about the game or activity	%	77	15	4	4	2859	2699
Because of the sense of achievement when I win	%	56	24	10	9	2860	2699
To impress other people	%	94	4	1	1	2862	2701
To be sociable	%	65	22	7	6	2860	2699
Because it helps when I'm feeling tense	%	93	5	1	0	2862	2701
To make money	%	36	22	10	32	2860	2699
To relax	%	74	17	5	4	2861	2700
Because it's something that I do with my friends or family	%	53	27	10	11	2862	2701

Continued...

Table 8.1 continued

Past year gamblers aged 16 and over

2010

Gambled for these reasons in the past 12 months...	RGQ response category				Bases (weighted)	Bases (un-weighted)	
	Never	Some-times	Often	Always			
<b>Women</b>							
For the chance of winning big money	%	19	31	11	40	2794	3002
Because it's fun	%	22	34	15	29	2794	3001
As a hobby or a past time	%	65	19	6	10	2794	3002
To escape boredom or to fill my time	%	84	11	3	2	2795	3003
Because I'm worried about not winning if I don't play	%	83	10	3	5	2796	3004
To compete with others (e.g. bookmaker, other gamblers)	%	96	3	0	0	2795	3003
Because it's exciting	%	53	32	8	7	2795	3003
For the mental challenge or to learn about the game or activity	%	89	8	2	1	2793	3001
Because of the sense of achievement when I win	%	62	24	7	7	2795	3002
To impress other people	%	98	2	0	0	2795	3003
To be sociable	%	69	20	5	7	2795	3003
Because it helps when I'm feeling tense	%	95	3	1	0	2795	3003
To make money	%	46	22	8	25	2795	3003
To relax	%	82	12	4	3	2794	3002
Because it's something that I do with my friends or family	%	58	23	8	12	2795	3003
<b>All</b>							
For the chance of winning big money	%	17	30	11	42	5654	5701
Because it's fun	%	22	32	16	30	5653	5699
As a hobby or a past time	%	62	20	8	10	5653	5700
To escape boredom or to fill my time	%	80	13	4	2	5654	5701
Because I'm worried about not winning if I don't play	%	81	11	3	5	5656	5703
To compete with others (e.g. bookmaker, other gamblers)	%	93	5	1	1	5657	5704
Because it's exciting	%	49	32	10	9	5656	5703
For the mental challenge or to learn about the game or activity	%	83	11	3	2	5653	5700
Because of the sense of achievement when I win	%	59	24	8	8	5655	5701
To impress other people	%	96	3	0	1	5657	5704
To be sociable	%	67	21	6	6	5655	5702
Because it helps when I'm feeling tense	%	94	4	1	0	5657	5704
To make money	%	41	22	9	28	5655	5702
To relax	%	78	15	4	3	5655	5702
Because it's something that I do with my friends or family	%	55	25	9	11	5657	5704

The general pattern of item endorsement was largely the same for men and women, with both being most likely to report gambling for the chance of winning big money, gambling because it's exciting and gambling to make money. Among both male and female gamblers, the least endorsed items were gambling to impress others, gambling to relieve tension and gambling to compete with others. With the exception of gambling for fun, men were more likely than women to endorse each item as a reason for gambling. The largest differences between men and women in item endorsements were observed for the items gambling for the mental challenge (23% of male gamblers gave this as a reason for gambling compared with 11% of female gamblers) and gambling to make money (64% of male gamblers reported at least sometimes gambling for this reason compared with 54% of female gamblers). This highlights some differences in gambling motivations between men and women, which is explored further in section 8.4.

Item endorsement, shown in Table 8.2, also varied by age group. Among past year gamblers aged 16-34, the majority reported that they had gambled in the past year because it's fun (84%), for the chance of winning big money (81%), because it's exciting (66%), to make money (64%) and because it's something that the gambler does with friends or family (52%). Among older gamblers aged 55 and over, fewer reasons were endorsed by the majority. The most popular motives were for the chance of winning big money (80%), because it's fun (74%) and to make money (54%).

Among all age groups, the least endorsed reasons for gambling were gambling to impress others, gambling to relieve tension and gambling to compete with others. However, it is worth noting that around 1 in 14 gamblers aged 16-34 reported that they had gambled in the past year to relieve tension (7%), 1 in 13 gambled to impress others (8%) and around 1 in 8 reported that they gambled in the past year to compete against others (13%). This compares with around 1 in 50 gamblers aged 55 and over who reported that they had gambled to impress others (2%), around 1 in 25 who reported that they had gambled in the past year to relieve tension (4%) and 1 in 33 who gambled to compete with others (3%).

Table 8.2

Response to RGQ items, by age group							
<i>Past year gamblers aged 16 and over</i>							2010
Gambled for these reasons in the past 12 months...		RGQ response category				Bases (weighted)	Bases (un-weighted)
		Never	Some-times	Often	Always		
<b>Age 16-34</b>							
For the chance of winning big money	%	19	37	14	31	1704	1505
Because it's fun	%	16	38	21	25	1704	1505
As a hobby or a past time	%	61	25	8	6	1704	1505
To escape boredom or to fill my time	%	70	22	5	3	1704	1505
Because I'm worried about not winning if I don't play	%	77	16	3	4	1704	1505
To compete with others (e.g. bookmaker, other gamblers)	%	87	9	3	1	1704	1505
Because it's exciting	%	34	40	14	11	1704	1505
For the mental challenge or to learn about the game or activity	%	73	19	5	3	1704	1505
Because of the sense of achievement when I win	%	50	29	12	9	1704	1505
To impress other people	%	92	6	1	1	1704	1505
To be sociable	%	58	28	9	5	1704	1505
Because it helps when I'm feeling tense	%	93	6	1	0	1704	1505
To make money	%	36	29	12	23	1704	1505
To relax	%	75	19	4	2	1704	1505
Because it's something that I do with my friends or family	%	48	31	12	9	1704	1505

Continued...

Table 8.2 continued

Gambled for these reasons in the past 12 months...		RGQ response category				Bases (weighted)	Bases (un-weighted)
		Never	Some-times	Often	Always		
<i>Past year gamblers aged 16 and over</i>						2010	
<b>Age 35-54</b>							
For the chance of winning big money	%	14	30	12	44	2053	2120
Because it's fun	%	22	34	16	28	2052	2119
As a hobby or a past time	%	63	20	7	10	2054	2121
To escape boredom or to fill my time	%	85	11	3	1	2053	2120
Because I'm worried about not winning if I don't play	%	80	11	4	5	2052	2120
To compete with others (e.g. bookmaker, other gamblers)	%	94	5	1	1	2054	2121
Because it's exciting	%	50	32	9	8	2054	2121
For the mental challenge or to learn about the game or activity	%	85	10	3	2	2052	2120
Because of the sense of achievement when I win	%	61	24	7	8	2053	2120
To impress other people	%	97	2	0	0	2054	2121
To be sociable	%	70	20	6	5	2054	2121
Because it helps when I'm feeling tense	%	94	5	1	0	2054	2121
To make money	%	40	22	8	30	2053	2120
To relax	%	79	14	4	3	2054	2121
Because it's something that I do with my friends or family	%	56	26	8	10	2054	2121
<b>Age 55 and over</b>							
For the chance of winning big money	%	20	23	8	49	1897	2076
Because it's fun	%	26	26	13	35	1897	2075
As a hobby or a past time	%	61	16	7	15	1896	2074
To escape boredom or to fill my time	%	85	8	4	3	1898	2076
Because I'm worried about not winning if I don't play	%	85	7	3	5	1899	2078
To compete with others (e.g. bookmaker, other gamblers)	%	97	2	1	1	1899	2078
Because it's exciting	%	62	24	7	7	1898	2077
For the mental challenge or to learn about the game or activity	%	90	6	2	2	1896	2075
Because of the sense of achievement when I win	%	66	20	6	8	1898	2076
To impress other people	%	98	1	0	0	1899	2078
To be sociable	%	72	15	4	9	1897	2076
Because it helps when I'm feeling tense	%	96	3	0	1	1899	2078
To make money	%	46	16	7	31	1898	2077
To relax	%	79	12	4	5	1897	2076
Because it's something that I do with my friends or family	%	60	18	7	15	1899	2078

## 8.4 Factor analysis of the Reasons for Gambling Questionnaire

### 8.4.1 Introduction

In order to gain a better understanding of the reasons for gambling, principal component factor analysis was used to combine and summarise the answers to each item in order to identify the more general motivations that underlie gambling behaviour. As discussed in section 8.2, the RGQ was developed based on the assumption that there are different sub-types of gambling motivations. The factor analysis presented in the following section explores whether similar sub-types are evident in the BGPS data and examines the extent to which different types of gambling motivations tend to be chosen by different people.

### 8.4.2 Identifying and classifying the factors

Table 8.3 shows the results of the exploratory factor analysis. Examination of responses to the individual RGQ questions shows that the data can be effectively summarised into five main groups (or factors). The numbers presented in the table (known as loadings) show the extent to which responses to an individual item correlate with the underlying factor. (See Appendix 2 for a fuller explanation of how this solution was chosen).

RGQ item <sup>b</sup>	Factor loading <sup>a</sup>				
	Factor 1: Enhancement	Factor 2: Recreation	Factor 3: Social	Factor 4: Coping	Factor 5: Money
For the mental challenge or to learn about the game or activity	0.70				
To compete with others (e.g. bookmaker, other gamblers)	0.67				
Because of the sense of achievement when I win	0.64			0.41	
Because it's exciting	0.62	0.36			
As a hobby or a past time		0.78			
To escape boredom or to fill my time		0.71		0.34	
Because it's fun		0.51	0.32		
To relax		0.46	0.45		
Because it's something that I do with my friends or family			0.86		
To be sociable			0.79		
Because it helps when I'm feeling tense				0.75	
To impress other people	0.34			0.71	
For the chance of winning big money					0.86
To make money					0.84

<sup>a</sup> Loadings less than 0.3 are not shown.

<sup>b</sup> The item 'because I'm worried about not winning if I don't play' was not included in this analysis. See Appendix 2 for a full explanation.

As can be seen from the item loadings in Table 8.3, there are some common features between items that load onto the same factor, which allowed us to summarise the data into groups. There were two factors that were relatively easy to interpret, these were:

- Factor 3: Social - this includes gambling either to be sociable or because it's something that one does with friends and family. We have therefore called this factor 'social'.
- Factor 5: Money - this includes gambling to make money or gambling for the chance of winning big money. This factor therefore encompasses monetary reasons for gambling and we have named this factor 'money'.



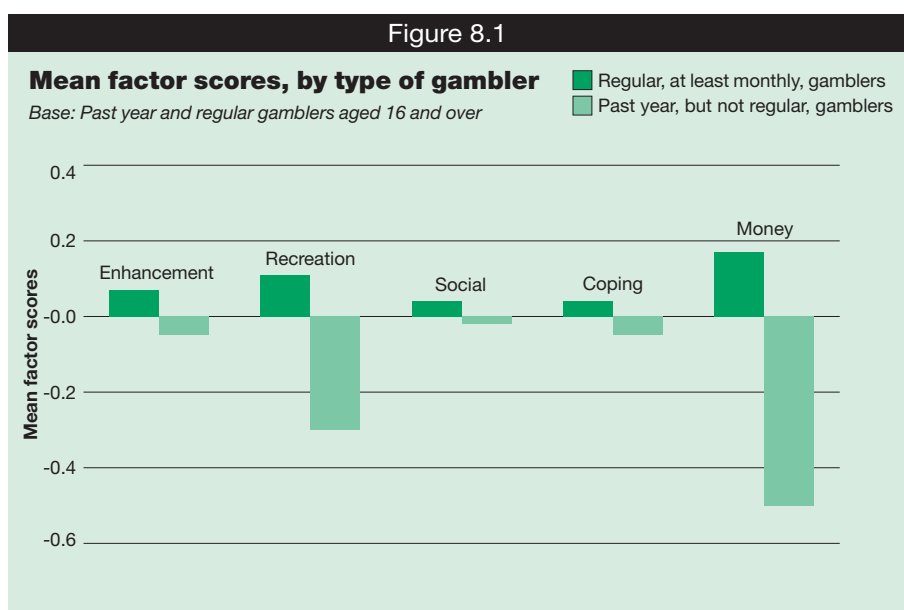
The pattern of item loading in factors 1, 2, 4 needed further examination and reference to the existing literature to be able to assign a common descriptor to each group. These groupings are described below:

- Factor 1: Enhancement - includes gambling for the challenge, to compete against others, for a sense of achievement and for the excitement. Stewart and Zack noted that the GMQ contained a subscale which they named enhancement. They defined this as internal, positive reinforcement and stated that it was gambling to increase positive emotions. There are some parallels with factor 1 observed in this survey, whereby reasons for gambling include excitement, achievement, competition and challenge. Therefore, we have named factor 1 'enhancement'.
- Factor 2: Recreation - includes motives related to filling time, hobbies and past times, fun and relaxation. We have named this factor 'recreation' as it specifically includes gambling as a recreational activity and denotes reasons why one would take part in recreational activities.
- Finally, factor 4: Coping - includes gambling to relieve tension or impress others. These items have parallels to items which, for Stewart and Zack, were 'coping' motives. They defined the characteristics of coping motives as being related to internal, negative reinforcement (i.e., gambling to reduce or avoid negative emotions). Gambling to relieve tension clearly falls under this definition and gambling to impress others may be viewed as a need for external validation. As such, we have also named factor 4 'coping'.

### 8.4.3 Results

Summary scores for each respondent were calculated from the five factors identified (termed factor scores). These summary scores take into account a respondent's responses to each individual item within the factor. The scores for each factor are standardised so that every factor has a mean of zero and standard deviation of 1. Mean factor scores are used in this section to compare scores obtained on each factor by socio-demographic characteristics and gambling behaviour. A positive mean factor score (i.e., greater than zero) indicates that these reasons for gambling are chosen more often than average, whilst a negative mean factor score (i.e., less than zero) indicates that these reasons are chosen less often than average.

Figure 8.1 shows mean factor scores for regular gamblers (that is those who gambled at least once a month) compared with past year gamblers who did not gamble as regularly. Among regular gamblers, mean scores on each factor are positive whereas among non-regular gamblers, mean scores were negative. Note, however, that among regular and non-regular gamblers, mean scores for social reasons were close to zero for both groups and the difference was not significant. Differences between regular and non-regular gamblers were significant for the four remaining factors, demonstrating that, on the whole, regular



gamblers were more likely than non-regular gamblers to report gambling for enhancement, recreation, coping and monetary reasons.

As Figure 8.1 shows, those who were regular gamblers displayed different motivations for gambling than those who were not regular gamblers. A key aim of this chapter is to explore how reasons for gambling vary among different sub-groups. Underlying reasons for gambling shape a respondent's gambling choices, be it choice of activity or levels of involvement. To examine the relationship between reasons for gambling, socio-demographic characteristics and gambling behaviour in more detail, the results presented in the following sections are limited to regular gamblers only. This sub-group has been chosen as they display relatively regular patterns of behaviour and results are therefore not confounded by those whose gambling participation is relatively sporadic or rare. They also represent a majority of gamblers, 73% of past year gamblers reported gambling regularly on at least one activity.

Table 8.4 shows mean factor scores among regular gamblers by a range of socio-demographic variables. Male and female regular gamblers were equally likely to report that they gambled for recreational or social reasons. However, men were more likely to report that they gambled for reasons relating to either enhancement or coping. Women, in particular, were less likely to report that they gambled for any enhancement reasons; mean scores were 0.25 for men and -0.13 for women. Likewise, although monetary reasons were key motivators for both male and female regular gamblers, this was most pronounced among male regular gamblers (mean scores were 0.21 for men and 0.13 for women).

Table 8.4

**Mean factor scores, by socio-demographic characteristics**

*Regular gamblers aged 16 and over with a valid RGQ score*

2010

Socio-demographic characteristics	Enhancement		Recreation		Social		Coping		Money		Bases (weighted)	Bases (unweighted)
	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean		
<b>Sex</b>												
Male	0.25	0.04	0.11	0.03	0.00	0.03	0.12	0.03	0.21	0.02	2178	2079
Female	-0.13	0.02	0.11	0.02	0.05	0.03	-0.06	0.02	0.13	0.03	1949	2114
All (regular gamblers)	0.07	0.02	0.11	0.02	0.03	0.02	0.04	0.02	0.17	0.02	4126	4193
<b>Age group</b>												
16-34	0.48	0.05	0.10	0.04	0.00	0.04	0.20	0.05	0.06	0.03	1089	970
35-54	0.02	0.03	0.04	0.03	0.00	0.03	-0.02	0.02	0.22	0.03	1545	1591
55 and over	-0.18	0.03	0.19	0.03	0.07	0.03	-0.03	0.03	0.20	0.03	1493	1632
<b>Marital status</b>												
Married/living as married	0.00	0.02	0.04	0.02	0.01	0.02	-0.02	0.02	0.22	0.02	2637	2680
Separated/divorced	-0.06	0.06	0.15	0.07	-0.03	0.05	0.06	0.05	0.20	0.05	358	409
Single, never married	0.43	0.06	0.16	0.04	0.03	0.04	0.23	0.06	0.06	0.04	850	797
Widowed	-0.24	0.06	0.54	0.09	0.20	0.08	0.00	0.06	-0.03	0.06	282	307
<b>Ethnic group</b>												
White/White British	0.05	0.02	0.12	0.02	0.03	0.02	0.01	0.02	0.17	0.02	3877	3969
Asian/Asian British	0.20	0.12	-0.13	0.10	0.02	0.16	0.44	0.17	0.22	0.16	101	88
Black/Black British	0.65	0.31	-0.15	0.17	-0.07	0.13	0.52	0.34	0.53	0.09	85	79
Other ethnic group	0.45	0.15	0.14	0.16	-0.15	0.14	0.54	0.24	-0.15	0.14	60	53
<b>NS-SEC of HRP</b>												
Managerial & professional occupations	0.08	0.04	-0.03	0.03	-0.01	0.03	-0.03	0.03	0.09	0.03	1435	1430
Intermediate occupations	0.14	0.08	-0.01	0.06	0.01	0.05	0.04	0.08	0.25	0.05	392	418
Small employers & own account workers	0.04	0.06	0.17	0.05	0.00	0.06	0.00	0.04	0.16	0.05	477	476
Lower supervisory & technical occupations	0.01	0.05	0.15	0.05	0.08	0.06	-0.01	0.05	0.23	0.05	500	502
Semi-routine & routine occupations	0.05	0.04	0.24	0.04	0.06	0.03	0.10	0.04	0.22	0.03	1204	1256

Continued...

Table 8.4 continued

Regular gamblers aged 16 and over with a valid RGQ score											2010	
Socio-demographic characteristics	Enhancement		Recreation		Social		Coping		Money		Bases (weight- ed)	Bases (un- weight- ed)
	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean		
<b>Household income tertile</b>												
1st (lowest)	0.14	0.05	0.22	0.04	0.03	0.04	0.14	0.05	0.18	0.03	1166	1195
2nd	0.03	0.03	0.06	0.03	0.00	0.03	-0.05	0.03	0.17	0.03	1178	1170
3rd (highest)	0.06	0.03	0.02	0.03	0.02	0.03	-0.03	0.03	0.18	0.03	1054	1104
<b>Highest educational qualification</b>												
Professional qualification or above	0.09	0.04	-0.03	0.03	0.01	0.03	0.02	0.04	0.10	0.03	1315	1316
GCSEs/'O' levels or 'A' levels or equivalent	0.18	0.04	0.07	0.03	0.02	0.03	0.04	0.03	0.20	0.03	1593	1586
Other	-0.03	0.12	0.11	0.12	-0.01	0.12	-0.01	0.14	0.39	0.13	77	80
None	-0.09	0.03	0.33	0.04	0.06	0.04	0.06	0.03	0.20	0.03	1135	1205
<b>Index of multiple deprivation (England only)</b>												
1st (least deprived)	0.08	0.05	0.00	0.04	-0.01	0.04	-0.09	0.04	0.18	0.04	647	656
2nd	0.10	0.05	0.06	0.04	0.01	0.04	-0.02	0.04	0.18	0.04	739	745
3rd	0.00	0.04	0.03	0.04	0.07	0.04	-0.06	0.04	0.22	0.04	754	754
4th	0.10	0.05	0.14	0.05	0.05	0.04	0.11	0.05	0.23	0.05	665	646
5th (most deprived)	0.16	0.07	0.20	0.05	0.06	0.04	0.18	0.06	0.18	0.04	695	695
<b>Economic activity of individual</b>												
Paid work	0.10	0.03	0.01	0.02	0.02	0.02	0.00	0.02	0.19	0.02	2378	2358
Unemployed	0.38	0.12	0.29	0.12	-0.05	0.08	0.32	0.14	0.16	0.09	134	130
Long-term disability	0.02	0.09	0.41	0.11	0.07	0.09	-0.01	0.08	0.38	0.09	136	148
Looking after family/home	-0.09	0.05	0.08	0.06	-0.10	0.06	0.13	0.08	0.14	0.05	308	336
Retired	-0.17	0.04	0.32	0.05	0.07	0.04	-0.03	0.04	0.13	0.04	886	979
Full time education	0.76	0.16	0.01	0.09	0.23	0.12	0.32	0.18	0.07	0.08	197	157
Other	0.26	0.14	0.30	0.12	-0.27	0.11	0.17	0.15	0.17	0.10	110	108

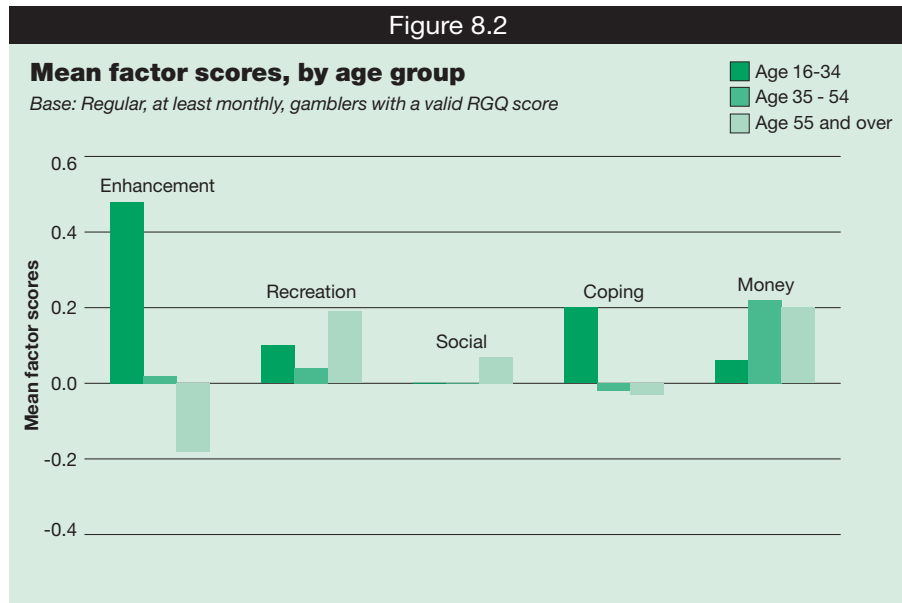
As Figure 8.2 shows, mean factor scores varied by age. For example, regular gamblers who were younger (aged 16-34) were much more likely to report that they gambled for enhancement and coping, whereas older gamblers (aged 55 and over) did not typically report that they gambled for these reasons. Interestingly, older gamblers were much more likely than younger gamblers to report that they gambled for monetary and recreation reasons, although money and recreation were noted motivations among regular gamblers of all ages.

A similar pattern emerges when factor scores are examined by marital status. Those who were single were more likely to report gambling for enhancement and coping reasons than all other groups. Although, gambling for recreational reasons was a key motivator for most regular gamblers, mean factor scores were highest among those who were widowed (0.54) and lowest among those who were married/living as married (0.04). These patterns may be largely explained by age differences. (Table 8.4)

Mean factor scores also varied by ethnic group. Those from Asian/Asian British groups and those from Black/Black British groups were more likely to report gambling for enhancement or coping reasons than those who were White/White British. Likewise, mean factor scores for monetary reasons were highest among those who were Black/Black British (0.53) and lowest among those whose ethnic group was 'other' (-0.15).

Mean factor scores for enhancement, recreation and monetary reasons varied by educational qualifications, but not in a way that is easy to summarise. One of the clear

Figure 8.2



features was that gambling for recreational reasons was highest among those who had no educational qualifications (0.33) and lowest among those whose highest educational qualifications was a degree or higher (-0.03).

Table 8.4 also shows mean factor scores by a range of variables which measure socio-economic position. This includes NS-SEC of the household reference person, household income and area deprivation. Across these measures there were some common features. Firstly, mean factor scores for enhancement, social or monetary reasons did not vary significantly across any of these measures. However, mean factor scores for recreation did vary; those from the lowest income households (0.22), the most deprived areas (0.20) and semi-routine and routine households (0.24) were more likely to report that they gambled for recreational reasons. Secondly, mean factor scores for coping were highest among those from the lowest income households (0.14) and more deprived areas (0.18).

Finally, mean factor scores for enhancement and recreational reasons varied by economic activity, though some of these differences may also be explained by age differences. Those who were retired were much less likely than other groups to report that they gambled for enhancement reasons (-0.17) whereas those who were in full time education were much more likely to report gambling for these reasons (0.76). Notably, those in full time education had the highest mean factor score for enhancement observed among any group presented in Table 8.4. When looking at gambling for recreational reasons, this pattern was reversed with those who were retired having the highest mean factor scores for recreation (0.32) and those who were in full time education or in paid work having the lowest means (0.01).

Mean factor scores were also examined by a range of gambling behaviours. Results are shown in Table 8.5. This showed some notable differences between different types of gamblers. For example, enhancement, recreation, social and coping reasons were more apparent among those who regularly took part in a greater number of gambling activities than those who regularly took part in just one or two activities. The mean factor score for enhancement among those who regularly gambled on seven or more activities was 1.34 compared with -0.06 for those who took regularly took part in only one or two activities. Notably the opposite pattern was evident for monetary reasons. Those who regularly gambled on seven or more activities were less likely than those who gambled regularly on one or two activities to report that they gambled for monetary reasons.

Mean factor scores varied significantly between problem and non-problem gamblers (the pattern was the same regardless of whether problem gambling was measured by the DSM-IV or the PGSI). Problem gamblers were more likely than non-problem gamblers to report that they gambled for enhancement, recreation and coping reasons. This disparity was most pronounced for coping reasons. DSM-IV problem gamblers had a mean factor score of 2.46 compared with -0.01 for non-problem gamblers. This indicates that problem

Table 8.5

**Mean factor scores, by gambling behaviour***Regular gamblers aged 16 and over with a valid RGQ score*

2010

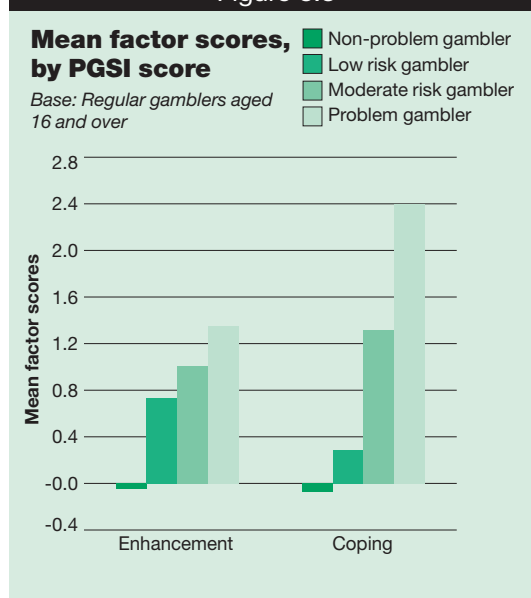
Gambling behaviour	Enhancement		Recreation		Social		Coping		Money		Bases (weighted)	Bases (unweighted)
	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean	Mean factor score	SE of mean		
<b>DSM-IV problem gambling</b>												
Non-problem gambler	0.05	0.02	0.10	0.02	0.03	0.02	-0.01	0.02	0.17	0.02	4056	4130
Problem gambler	1.19	0.25	0.67	0.18	-0.21	0.11	2.46	0.38	0.11	0.12	70	63
<b>PGSI score</b>												
Non problem gambler (score 0)	-0.05	0.02	0.06	0.02	0.02	0.02	-0.07	0.02	0.17	0.02	3584	3698
Low risk gambler (score 1-2)	0.73	0.08	0.41	0.07	0.20	0.05	0.29	0.07	0.16	0.05	358	336
Moderate risk gambler (score 3-7)	1.01	0.20	0.51	0.15	0.00	0.11	1.32	0.26	0.17	0.10	129	111
Problem gambler (score 8 or over)	[1.35]	0.27	[0.51]	0.25	[-0.36]	0.14	[2.40]	0.50	[0.34]	0.12	56	48
<b>Number of activities usually played per month</b>												
1-2	-0.06	0.02	-0.02	0.02	-0.07	0.02	-0.06	0.02	0.19	0.02	3220	3314
3-4	0.30	0.07	0.53	0.05	0.40	0.06	0.18	0.06	0.14	0.04	599	596
5-6	0.67	0.13	0.70	0.11	0.35	0.10	0.33	0.12	0.08	0.07	173	161
7 and over	1.34	0.15	0.62	0.13	0.11	0.09	1.26	0.26	0.00	0.07	134	122

gamblers are considerably more likely to gamble for coping reasons (here comprising of tension relief and to impress others) than regular gamblers without problems.

As noted above, the same pattern was evident whether problem gambling was measured by the PGSI or the DSM-IV. Figure 8.3 shows how mean factor scores for enhancement and coping were highly associated with PGSI scores, with mean factor scores increasing as PGSI score increased. Mean factor scores for recreation also increased as PGSI score increased, but the differences were not as pronounced.

Mean factor scores for monetary reasons did not vary by DSM-IV problem gambling status or by PGSI score, meaning that gambling for money was not a distinguishing factor between these two groups. However, problem gamblers were much less likely than non-problem gamblers to report that they gambled for social reasons. Mean factor scores were -0.21 among DSM-IV problem gamblers and were 0.03 among non-problem gamblers.

Figure 8.3



## 8.5 Summary

This is the first time, to our knowledge, that reasons for gambling have been measured in a large scale survey of the British population. We believe the RGQ has successfully measured the range of gambling motives and that within the RGQ, a set of five sub-scales exist which summarise reasons for gambling, these being enhancement, recreation, social, coping and money. Researchers such as Per Binde noted that motivational models are useful as far as they succeed in uncovering the true motives people have for gambling, but that when responding to questionnaires, actual motives may be overshadowed by the truism that people gamble to win money.<sup>1</sup> In this present survey, whilst it is evident that items relating to money or the chance of winning money were some of the most heavily endorsed by respondents, they were not the only items within the RGQ that received this level of affirmation. Gambling because it was fun and gambling for excitement received similar levels of endorsement as the two money items. This, along with the variation evident between sub-groups, suggests that the RGQ has been successful in capturing some of the range and diversity of gambling motives among the general population.

However, as this is the first time the RGQ has been used within the BGPS, it may still benefit from further refinement and assessment. The scale itself was designed to be relevant to all gamblers, ranging from those who gamble relatively rarely to those who are more involved in gambling. As such, it may not capture all motivations for gambling evident among those who engage much more heavily in gambling. Indeed, some items were specifically excluded from the final questionnaire as they were deemed to be too focused on the motivations of problem gamblers (i.e., I have an urge to gamble, I gamble to win back money that I've lost).

A broad conclusion from these results is that reasons for gambling vary significantly between different groups of gamblers. Regular female gamblers are less likely than regular male gamblers to gamble for enhancement or coping reasons and whilst monetary reasons are cited by women as reasons for gambling, men are more likely to report that this is an incentive for gambling. Younger gamblers are also more likely to report gambling for enhancement or coping reasons than their older counterparts, but interestingly gambling for money was not a prime motivation.

Some of the most interesting, and pronounced differences in reasons for gambling, were observed among different sub-types of gamblers. As observed in other studies, problem gamblers were more likely to gamble for enhancement reasons. These have been defined as gambling to promote positive emotions and include gambling for excitement, achievement, challenge and competition. Likewise, problem gamblers were also much more likely to report gambling for coping reasons, that is, gambling to avoid or reduce negative emotions. These factors are both intrinsic to the gambler and these motivations seemingly differentiate problem and non-problem gamblers. Perhaps unsurprisingly therefore, social (and extrinsic) motivations were less important to problem gamblers than non-problem gamblers.

In particular, examination of the RGQ shows some interesting patterns among the most engaged gamblers and the influence of monetary motivations. Among problem gamblers, monetary reasons were not as strong an incentive to gamble as they were among non-problem gamblers. Likewise, those who reported regularly taking part in seven or more activities were less likely to report gambling for monetary reasons than their counterparts who engaged in fewer activities. This suggests the possibility that those who are most engaged in gambling are less likely to be motivated by money and more likely to gamble for other reasons, including the full range of enhancement and coping motivations.

### Notes and references

- 1 Binde P. (2009). *Gambling motivation and involvement: a review of social science research*. <http://www.responsiblegambling.org/articles/binde-gambling-motivation-review.pdf>. Accessed 23 Nov 2010.

- 2 Stewart S., & Zack M. (2008). Development and psychometric evaluation of a three-dimensional Gambling Motives Questionnaire. *Addiction*. 103:1110-1117
- 3 Chantal Y., Vallerand R., & Vallieres E. (1995) Motivation and gambling involvement. *Journal of Social Psychology*. 135, 755-763
- 4 Willis GB, Lessler J. (1999) *Questionnaire Appraisal System QAS-99*. Research Triangle Institute, Rockville MD. See <http://appliedresearch.cancer.gov/areas/cognitive/qas99.pdf>
- 5 Wardle H., Dobbie F., Kerr J., Reith G. (2009) *Questionnaire development for a longitudinal study of gamblers: phase 1 report*. Gambling Commission; Cripps H & Blake M (2009) *Development of questions for a longitudinal study of gambling: phase 2 report. Findings from cognitive question testing*. Gambling Commission
- 6 Pearson's correlation is a number that measures the degree of association between two questions. A positive number indicates a positive association and a negative value indicates negative association.



# 9 Attitudes to gambling

## 9.1 Development of a short Attitudes Towards Gambling Scale (ATGS-8)

In the 2007 British Gambling Prevalence Survey (BGPS) population attitudes towards gambling were assessed for the first time. The aim was to measure attitudes towards gambling in general, rather than attitudes towards individual forms of gambling or towards currently topical gambling policy issues. The questions asked were designed to be sufficiently general that they could be asked in identical form, for comparative purposes, on future occasions and in other populations. To that end a 14-item Attitudes Towards Gambling Scale (ATGS) was developed using recognised methods of scale construction. The format was a conventional one consisting of a series of statements, each expressing an attitude towards gambling, with five response options: strongly agree; agree; neither agree or disagree; disagree; strongly disagree (known as a Likert scale). The development of the ATGS is described in greater detail in the report of the 2007 BGPS<sup>1</sup> and in a subsequent academic journal article.<sup>2</sup>

For the 2010 survey, pressure on questionnaire space made it desirable to reduce the number of attitude items. An examination of responses to the items in 2007, and the correlations between the items, suggested that the ATGS could be reduced to eight items without sacrificing too much important information. The 2010 survey therefore included a shortened 8-item scale, the ATGS-8. The criteria for selecting those eight items from the original 14 were as follows:

- Items were included which covered the full range of opinion expressed by the 2007 survey respondents. Hence, at one extreme, the two attitude statements which in 2007 had elicited the most positive attitudes to gambling were retained i.e., *People should have the right to gamble whenever they want*, with which most people agreed, and, *It would be better if gambling was banned altogether*, with which most had disagreed. At the other extreme, items were retained which elicited negative attitudes, such as, *There are too many opportunities for gambling nowadays*, and, *Gambling is dangerous for family life*, with which the majority agreed. Others, such as, *Most people who gamble do so sensibly*, and, *Gambling livens up life*, which elicited average responses intermediate between the two extremes, were also retained.
- Items were chosen to cover the range of content included in the longer ATGS. Some items referred to societal benefits or harms (e.g. *On balance gambling is good for society*), others to the personal pros or cons of gambling (e.g., *Gambling livens up life*) and others had a more general referent (e.g., *Gambling should be discouraged*).
- The balance of statements phrased in a way positive towards gambling and those phrased negatively towards gambling was retained (four of each in the ATGS-8).
- Using the 2007 data, the internal reliability (i.e., coherence) of the proposed set of eight items was checked and found to be good.

## 9.2 Scoring the ATGS-8 scale

Each response to an attitude statement was given a score between 1 and 5. For those items phrased in a way that is positive towards gambling the scoring was: strongly agree (score 5), agree (4), neither agree or disagree (3), disagree (2), strongly disagree (1). For those

statements phrased negatively towards gambling the scoring was reversed from strongly agree (score 1) to strongly disagree (5). Scores from the eight separate items were summed to create the total ATGS-8 score. Possible scores therefore ranged between 8 and 40. A score of 24 represents the exact mid-point, corresponding to an overall neutral attitude towards gambling. Scores above that point are interpreted as representing a departure from neutrality in the direction of a positive attitude towards gambling; scores below 24 are a departure from neutrality in the direction of negative attitudes.

A check on the internal reliability of the new scale using the new 2010 survey data showed the reliability to be satisfactory (a Cronbach's alpha of 0.76). This value is lower than the 0.89 achieved for the 14-item ATGS in the BGPS 2007. The reduction in reliability is to be expected since the alpha coefficient is highly dependent upon the number of items. All eight item-total correlations (a good indicator of whether an item is contributing satisfactorily to the total score) were satisfactory (ranging from 0.39 to 0.58).

### 9.3 Attitudes towards gambling among the population

Table 9.1 shows the mean total ATGS-8 scores, and scores for each of the constituent eight items, for men and women separately and for the total sample. The total sample ATGS-8 score of 22.33 is to the negative side of the neutral point of 24, indicating that on average attitudes towards gambling are somewhat negative. The standard deviation of 4.53 indicates that there is substantial individual variation around the mean, with 68% of the sample having an attitude score lying between 17.80 and 26.86. 32% obtained scores above 24 and 58% below 24 (11% obtained a score of exactly 24).

Table 9.1 also shows that average item scores lay to the negative side of the neutral point (an item score of 3) for six of the eight items, and to the positive side for two items (*People should have the right to gamble whenever they want*, and, *It would be better if gambling was banned altogether*).

Men expressed on average more positive attitudes to gambling than women on each of the eight individual items and in terms of the total ATGS-8 score. The mean ATGS-8 score among men was 23.20 and among women was 21.51.

ATGS-8 item	Sex				Total	
	Men		Women		Mean	Standard deviation
	Mean	Standard deviation	Mean	Standard deviation		
1. People should have the right to gamble whenever they want	3.72	0.89	3.42	0.91	3.57	0.92
2. There are too many opportunities for gambling nowadays*	2.16	0.92	2.00	0.84	2.08	0.89
3. Gambling should be discouraged*	2.81	0.98	2.57	0.95	2.69	0.97
4. Most people who gamble do so sensibly	3.03	0.96	2.92	0.97	2.98	0.97
5. Gambling is dangerous for family life*	2.41	0.95	2.29	0.94	2.35	0.94
6. On balance gambling is good for society	2.62	0.89	2.45	0.85	2.53	0.88
7. Gambling livens up life	2.82	0.96	2.56	0.91	2.69	0.94
8. It would be better if gambling was banned altogether*	3.63	0.95	3.30	0.97	3.46	0.97
<b>Total ATGS-8 score</b>	<b>23.20</b>	<b>4.48</b>	<b>21.51</b>	<b>4.42</b>	<b>22.33</b>	<b>4.53</b>
<i>Bases (weighted)</i>	3790		3952		7742	
<i>Bases (unweighted)<sup>a</sup></i>	3568		4174		7742	

\* These items have been reverse scored so that all item means above 3.0 indicate an average attitude favourable to gambling, and those below 3.0 indicate an average attitude that is unfavourable.

<sup>a</sup> Bases shown are for the first item, 'People should have the right to gamble whenever they want'. Unweighted bases for other items vary between 3565 and 3568 for men; were 4174 for all items for women and varied between 7739 and 7742 for all.

## 9.4 Attitude scores by socio-demographic characteristics

Table 9.2 shows how total ATGS-8 scores varied by a number of key socio-demographic variables. Mean attitude scores varied by sex, ethnic group and highest educational qualification. Men and those with 'other' highest educational qualifications stand out as having, on average, more positive attitudes towards gambling than other groups (although in both cases the average is still to the negative side of the neutral point). Women, those who were Black/Black British or those who were Asian/Asian British stand out as having on average the most negative attitudes. Notably, attitudes did not vary by age.

Table 9.2				
<b>Attitude score by socio-demographic characteristics</b>				
<i>All aged 16 and over with a valid ATGS-8 score</i>				2010
Socio-demographic characteristics	Attitude score		Bases (weighted)	Bases (un-weighted)
	Mean <sup>a</sup>	Standard deviation		
<b>Sex</b>				
Male	23.20	4.48	3788	3565
Female	21.51	4.42	3952	4174
<b>Age group</b>				
16-24	22.58	4.47	1161	975
25-34	22.38	4.52	1237	1117
35-44	22.37	4.65	1406	1435
45-54	22.24	4.72	1303	1346
55-64	22.33	4.34	1139	1221
65-74	22.14	4.52	813	1018
75 and over	22.18	4.34	681	627
<b>Marital status</b>				
Married/living as married	22.33	4.47	4739	4786
Separated/divorced	21.98	4.83	626	719
Single, never married	22.46	4.61	1899	1719
Widowed	22.33	5.51	475	515
<b>Ethnic group</b>				
White/White British	22.53	4.43	6971	7067
Asian/Asian British	19.45	4.61	355	309
Black/Black British	21.33	5.51	228	201
Other	21.88	4.60	174	151
<b>NS-SEC of household reference person</b>				
Managerial & professional occupations	22.26	4.53	3040	3005
Intermediate occupations	22.24	4.44	698	738
Small employers & own account workers	22.43	4.51	916	912
Lower supervisory & technical occupations	22.71	4.18	804	799
Semi-routine & routine occupations	22.50	4.68	1938	1987
<b>Equivalised household income quintile</b>				
1st (lowest)	22.15	4.82	1237	1245
2nd	22.27	4.44	1254	1249
3rd	22.49	4.37	1294	1247
4th	22.55	4.45	1238	1248
5th (highest)	22.52	4.48	1180	1248

Continued...

Table 9.2 continued

All aged 16 and over with a valid ATGS-8 score					2010
Socio-demographic characteristics	Attitude score		Bases (weighted)	Bases (un-weighted)	
	Mean <sup>a</sup>	Standard deviation			
<b>Highest educational qualification</b>					
Professional qualification or above	22.17	4.53	2881	2882	
GCSEs/'O' levels or 'A' levels	22.44	4.49	2846	2762	
Other	23.20	4.11	121	127	
None	22.38	4.60	1877	1954	
<b>Index of multiple deprivation (England only)</b>					
1st (least deprived)	22.45	4.43	1313	1332	
2nd	22.39	4.41	1399	1404	
3rd	22.58	4.33	1384	1353	
4th	22.36	4.64	1257	1210	
5th (most deprived)	22.04	4.90	1302	1240	
<b>Government Office Region</b>					
Scotland	22.33	4.51	682	763	
Wales	21.81	4.35	402	437	
North East	22.04	4.46	341	351	
North West	22.58	4.47	881	960	
Yorkshire and the Humber	22.15	4.62	673	581	
West Midlands	22.61	4.34	692	659	
East Midlands	22.50	4.53	580	627	
East of England	22.30	4.38	740	746	
London	21.88	4.93	981	826	
South East	22.56	4.33	1079	1054	
South West	22.60	4.66	688	735	

<sup>a</sup> The mid-point of 24.0 represents neutral attitudes to gambling. Mean scores of less than 24 represent less favourable attitudes to gambling and those higher than 24 represent more favourable attitudes to gambling.

## 9.5 Attitudes towards gambling by gambling behaviour

Table 9.3 shows how ATGS-8 total scores varied significantly by self-reported gambling behaviour. Past year gamblers had more positive attitude scores than those who did not gamble in the past year. Past week gamblers had higher scores than past year gamblers. Those who gambled at least once a month also had more positive scores than past year gamblers. However, all the mean scores shown in Table 9.3 are lower than the neutral mid-point of 24 indicating that past week and regular gamblers expressed, on average, negative attitudes toward gambling.

Table 9.3

<b>Attitude score by gambling behaviour</b>				
<i>All aged 16 and over with a valid ATGS-8 score</i>				
<b>Gambling behaviour</b>	<b>Attitude score</b>		<i>Bases (weighted)</i>	<i>Bases (un-weighted)</i>
	Mean <sup>a</sup>	Standard deviation		
<b>Gambling behaviour in past year:</b>				
Did not gamble in the past year	20.95	4.62	2085	2038
Past year gambler	22.85	4.39	5650	5697
Past week gambler	23.37	4.40	3360	3428
Regular gambler (gambles once a month or more often)	23.25	4.35	4145	4212

<sup>a</sup> The mid-point of 24.0 represents neutral attitudes to gambling. Mean scores of less than 24 represent less favourable attitudes to gambling and those higher than 24 represent more favourable attitudes to gambling.

## 9.6 Comparisons between 2007 and 2010

Table 9.4 shows a comparison of ATGS-8 scores between 2010 and 2007 by age, sex and for all respondents. The data presented for 2007 are limited to those items which are directly comparable to ATGS-8 items used in the 2010 survey. Therefore, the estimates for 2007 presented in this chapter differ from those shown in the main BGPS 2007 report, which used the fuller 14 item version of the ATGS. Table 9.4 shows that there has been an increase in mean attitude scores between 2007 and 2010. ATGS-8 estimates increased from 21.20 in 2007 to 22.33 in 2010 suggesting that overall attitudes have become more positive towards gambling, although the 2010 mean remains to the negative side of the neutral point.<sup>3</sup>

The table also shows that attitudes have moved in a more positive direction for both men and women and for each of the separate age groups. The change appears to have been of similar magnitude for men and women, but, as Figure 9.1 shows, in terms of age there is a suggestion that attitudes have changed most for those aged 55 and over and least for those aged under 35. This apparent shift in attitudes among those aged 55 and over corresponds to an increase in gambling participation observed among this group in the last decade (see Chapter 3 for further detail).

Figure 9.1



Table 9.4

**Comparison of attitudes to gambling, 2007 and 2010, by age and sex***All aged 16 and over with a valid ATGS-8 score 2007, 2010*

Age group and sex	Attitude score			
	2007		2010	
	Mean <sup>b</sup>	Standard deviation	Mean <sup>b</sup>	Standard deviation
<b>Sex</b>				
Male	22.05	5.15	23.20	4.48
Female	20.40	4.79	21.51	4.42
All	21.20	5.04	22.33	4.53
<b>Age group</b>				
16-24	21.97	5.05	22.58	4.47
25-34	22.12	4.94	22.38	4.52
25-44	21.34	5.03	22.37	4.65
45-54	21.09	5.15	22.24	4.72
55-64	20.34	5.04	22.33	4.34
65-74	20.65	4.82	22.14	4.52
75 and over	20.22	4.72	22.18	4.34
<i>Bases (weighted)<sup>a</sup></i>	8872		7740	
<i>Bases (unweighted)<sup>a</sup></i>	8880		7739	

<sup>a</sup> Bases presented are for all adults. For base sizes for each age group and for men and women, see BGPS 2007, chapter 6, table 6.1 and table 9.2 in this chapter for 2010.

<sup>b</sup> The mid-point of 24.0 represents neutral attitudes to gambling. Mean scores of less than 24 represent less favourable attitudes to gambling and those higher than 24 represent more favourable attitudes to gambling.

## 9.7 Summary

In the equivalent chapter in the report of the 2007 BGPS<sup>1</sup> it was concluded that British public attitudes towards gambling were, in general, more negative than positive. Whilst most people rejected total prohibition of gambling, most believed that gambling was more harmful than beneficial both for individuals and for society. Most thought that there were too many opportunities for gambling nowadays and that gambling should be discouraged. Overall, attitudes were on the negative side of the neutral mid-point of the scale for all socio-demographic and gambling sub-groups with the exception of the small minority who reported gambling on five or more separate gambling activities in the last seven days and those who reported gambling on six or more activities in the last 12 months. The first conclusion to be drawn from the results of using the ATGS-8 in the 2010 survey is that the general picture of attitudes being negative towards gambling overall (with the exception of attitudes towards gambling prohibition which is mostly rejected) remains true among all adults and for all socio-demographic and gambling sub-groups examined in this chapter. This is supported by studies in Canada<sup>4</sup> and Australia<sup>5,6</sup> which have suggested that public attitudes towards gambling are mostly negative in those countries also.

Comparison of the ATGS-8 results in 2010 and in 2007 suggests that attitudes have moved, slightly but significantly, in the direction of more positive attitudes towards gambling. It may be therefore that, whilst the public in general remains negative towards gambling, attitudes are changing. We should be cautious about interpreting these findings since it is conceivable that they could be accounted for by methodological factors; for example, the fact that the eight ATGS-8 items were included with six others in the attitudes section of the 2007 survey might have affected responses to those eight items. Nevertheless, the apparent change of attitudes between 2007 and 2010 is not unexpected since the 2005 Gambling Act, which came fully into operation in 2007, has resulted in gambling having

greater visibility in the form of legalised advertising. It will be important to repeat attitude questions in future years in order to monitor trends. It will be of importance for national gambling policy to know whether the public continues to have more negative than positive views of gambling, as is the case at the moment, or whether attitudes to gambling continue to move in a more positive direction in the future.

One outcome of the 2010 survey has been the endorsement of a short 8-item version of the ATGS which can be used in future British surveys and is available for use in other populations. Although inevitably a scale of eight items rather than 14 represents some loss of reliability, the ATGS-8 appears to be perfectly satisfactory and produces results consistent with the use of the 14-item longer version used in the 2007 survey.

## Notes and references

- 1 Wardle, H., Sproston, K., Orford, J., Erens, B., Griffiths, M., Constantine, R. and Pigott, S. (2007). *British Gambling Prevalence Survey 2007*. National Centre for Social Research, prepared for the Gambling Commission.
- 2 Orford, J., Griffiths, M., Wardle, H., Sproston, K. and Erens, B. (2009). Negative public attitudes towards gambling: findings from the 2007 British Gambling Prevalence Survey using a new attitude scale, *International Gambling Studies*, 9, 39-54.
- 3 It should be noted that the figures in Table 9.4 may slightly overestimate change in attitudes. Half of the 2010 sample, chosen at random, were given extra instructions, not given to the other half of the 2010 sample nor to any of the 2007 sample, drawing their attention to the breadth of the definition of gambling (By 'gambling' we mean any of the activities listed on showcard E, including the National Lottery, sports betting, bingo, casino games, fruit machines, and gambling via the internet or in any other way). This experiment was conducted as cognitive testing revealed that some respondents do not classify certain activities, such as the lottery or bingo as gambling activities. As expected, that extra instruction produced a slight, but statistically significant, increase in attitude scores compared with those who did not receive the extra instruction. The difference, however, was a slight one (extra instruction overall mean = 22.49; no extra instruction = 22.18) and the overall conclusions to be drawn from Table 9.4 are not altered when results for 2010 are analysed by instruction sub-group.
- 4 Azmier, J. (2000). Canadian gambling behaviour and attitudes. Gambling in Canada Research Report No. 8, Calgary: Canada.
- 5 Australian Productivity Commission (APC) (1999). *Australia's Gambling Industries*. Report No. 10, Canberra: Ausinfo.
- 6 Centre for Gambling Research (2004). *Victorian longitudinal community attitudes survey*. Gambling Research Panel Report No. 6, Victoria, Australia.



**BLANK PAGE**

# Appendix 1

## Characteristics of the sample

### A1.1 Introduction

This appendix provides an overview of the socio-demographic characteristics of the achieved sample. 9,775 addresses were selected from the small users Postcode Address File. 4,842 households took part in the survey. At each selected address, every person aged 16 and over was eligible to complete a questionnaire. Questionnaires were completed by 7,756 individuals.

The achieved sample was weighted to reflect the sex, age and regional distribution of the general population in Britain. However, there are other characteristics where differences between the achieved sample and the general population could affect the representativeness of the results. Where possible, the socio-demographic characteristics of the achieved sample are compared with characteristics of the general population in Britain to identify potential differences between the BGPS 2010 sample and the adult population of Britain. However, it should be noted that some of the sources used to obtain figures for the general population of Britain are from a different time period than when the BGPS sample was interviewed (2009/2010), ranging from 2007 to 2009 estimates. The sample profile is also compared with that from the previous surveys, in 1999 and 2007.

Details of sample selection, response and weighting can be found in Appendix 2.

### A1.2 Age and sex distribution

The sample contained slightly more women than men: 51% and 49% respectively. This reflects the Office of National Statistics (ONS) mid-2009 population estimates data, which show a slightly greater proportion of women than men (also 51% and 49%).<sup>1</sup>

In terms of the age distribution, 15% were aged 16-24, 34% were aged between 25-44, 32% were aged 45-64, and 19% were 65 and over. Men were more likely than women to be in the youngest age categories (51% of men compared with 48% of women were aged under 45). Correspondingly, women were more likely to be aged 65 and over (21%, compared with 18% of men). This distribution closely reflects the ONS mid-2009 population estimates data. (See Table A1.1)

The age profile of both men and women is broadly the same as that of the 1999 and 2007 surveys.

Table A.1

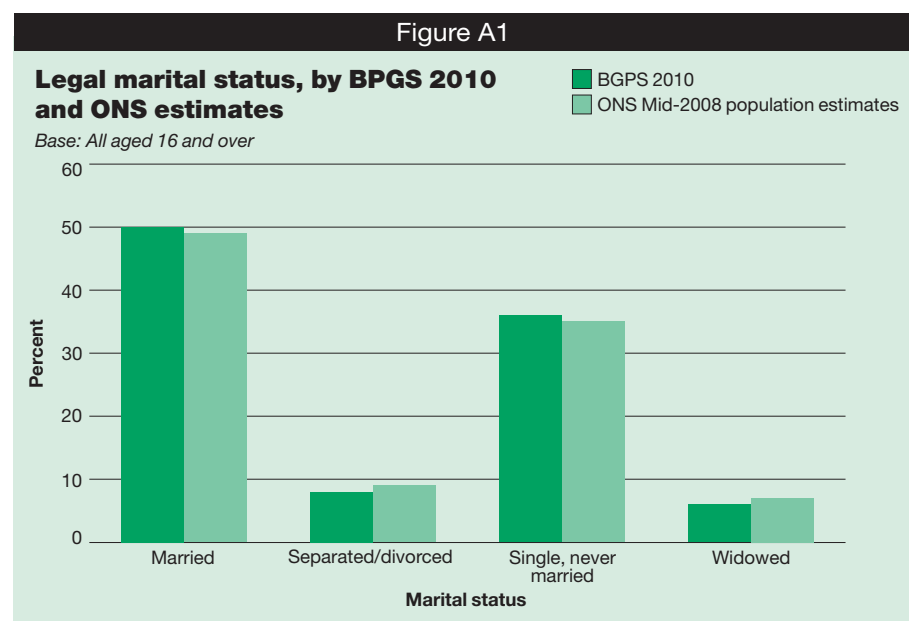
**Age, by sex, survey year and source***All aged 16 and over*

Age group	BGPS									ONS		
	2010			2007			1999			Mid-2009		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
	%	%	%	%	%	%	%	%	%	%	%	%
16-24	16	14	15	15	14	14	14	13	14	16	14	15
25-34	16	15	16	17	16	16	21	19	20	17	15	16
35-44	18	18	18	20	19	19	19	17	18	18	18	18
45-54	17	17	17	16	16	16	17	16	16	17	16	17
55-64	15	15	15	15	15	15	13	12	13	15	15	15
65-74	10	11	11	10	10	10	10	11	11	10	11	11
75+	7	10	9	7	10	9	7	12	9	8	11	10
<i>Bases (weighted)</i>	3798	3958	7756	4351	4631	8985	3738	3945	7682			
<i>Bases (unweighted)</i>	3575	4181	7756	4255	4725	8984	3603	4059	7662			

**A1.3 Marital Status**

Just over half (61%) of respondents were married (or living as married) while 25% were single and 14% were separated, divorced or widowed. Men were more likely than women to be single (28% compared with 21%), while women were more likely than men to be widowed (9% compared with 3% of men). The percentage of married respondents has increased since 2007 (from 55%), and, correspondingly, the percentage of single people has decreased (from 30%).

The definition of marital status used by the BGPS differs from the classification used by ONS, as the definition used by ONS relates only to legal marital status. The definition of marital status used by the BGPS series is a broader definition and includes those who are living with partners 'as married'. To compare the achieved BGPS sample with the national estimates, Figure A1 presents the sample profile using the ONS definition. This is for the sake of comparison only and does not represent the same categories used in chapters 3 and 6. Looking only at legal marital status, 50% of respondents were married and 36% were single. This mirrors the distribution among the general population according to the ONS mid-2008 population estimates, where 49% of adults aged 16 and over were married and 35% were single.<sup>2</sup>

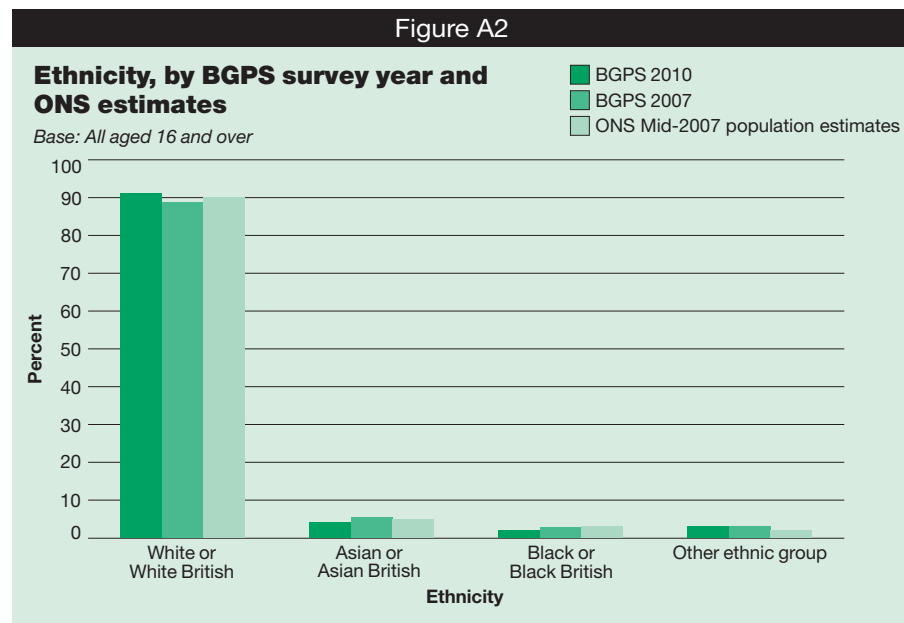


## A1.4 Ethnic Group

Respondents were asked to specify the ethnic group to which they considered they belonged. The vast majority of respondents classified themselves as White/White British (90%). 5% of respondents were Asian/Asian British, 3% were Black/Black British and 2% were in the 'other' ethnic group category.

These figures are almost identical to those from the ONS Mid-2007 Population Estimates for England<sup>3</sup> (White/White British: 89%, Asian/Asian British: 5%, Black/Black British: 3%, Other: 3%) and to the 2007 BGPS (shown in Table A2).

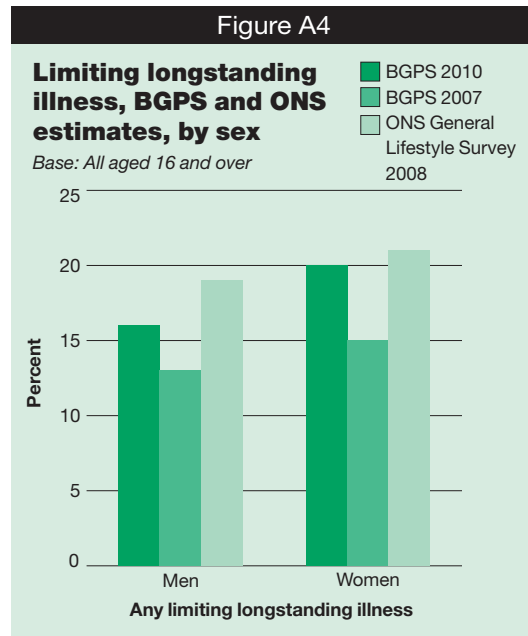
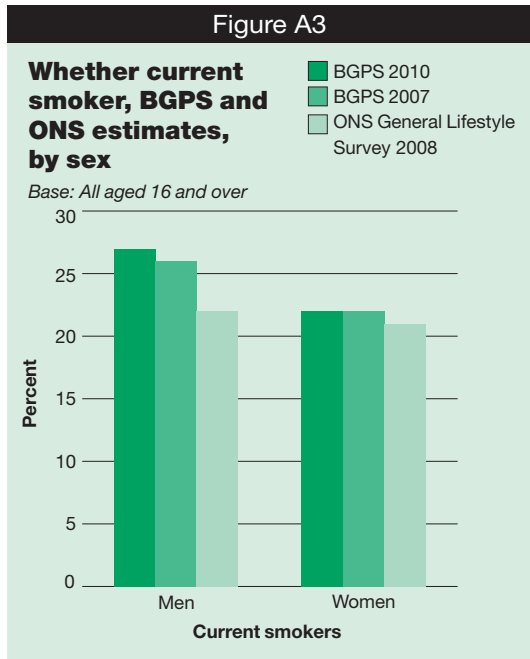
Ethnicity	Survey year and sex					
	2010			2007		
	Men	Women	Total	Men	Women	Total
	%	%	%	%	%	%
White/White British	90	90	90	91	91	91
Asian/Asian British	5	4	5	4	4	4
Black/Black British	3	3	3	2	2	2
Other ethnic group	2	2	2	3	3	3
<i>Bases (weighted)</i>	3787	3950	7737	4265	4582	8847
<i>Bases (unweighted)</i>	3566	4172	7738	4181	4683	8864



## A1.5 Smoking

All respondents were asked if they smoke cigarettes at all nowadays. Overall one in four respondents (24%) reported that they smoked, with a higher percentage of men (27%) than women (22%) being current smokers. These estimates are equivalent to BGPS 2007 estimates (26% and 22% for men and women respectively).

As shown in Figure A3 there were slightly more male smokers in the BGPS samples (27% in 2010) compared with the national estimates from the 2008 ONS General Lifestyle Survey (22%).<sup>5</sup>



## A1.6 Limiting longstanding illness

Respondents were asked whether they had any longstanding illnesses, disabilities or infirmities and if so, if these limited the respondent's activities in any way. Overall, 18% of respondents reported having a limiting longstanding illness, with a higher percentage of women (20%) than men (16%) reporting a limiting longstanding illness.

The percentage of respondents reporting a limiting longstanding illness increased from 14% in the 2007 BGPS to 18% in the 2010 BGPS. As shown in Figure A4 there was a slightly lower rate of limiting longstanding illnesses among men in the BGPS 2010 sample (16%) compared with national estimates from the 2008 ONS General Lifestyle Survey (19%).<sup>5</sup>

## A1.7 Self reported general health status

All respondents were asked to rate their general health on a five point scale ranging from very good to very bad. The majority of respondents reported that they had 'very good' or 'good' general health (76%), with a further 18% reporting that they had 'fair' health and 6% reporting 'bad' or 'very bad' health.

Compared to 2007 the percentage of people reporting very good/good health has decreased (from 79%). As shown in Figure A5 there were slightly fewer respondents (76%) in the BGPS 2010 sample who rated their general health as very good/good compared with national estimates from the 2008 ONS General Lifestyle Survey (79%).<sup>5</sup>

Figure A5

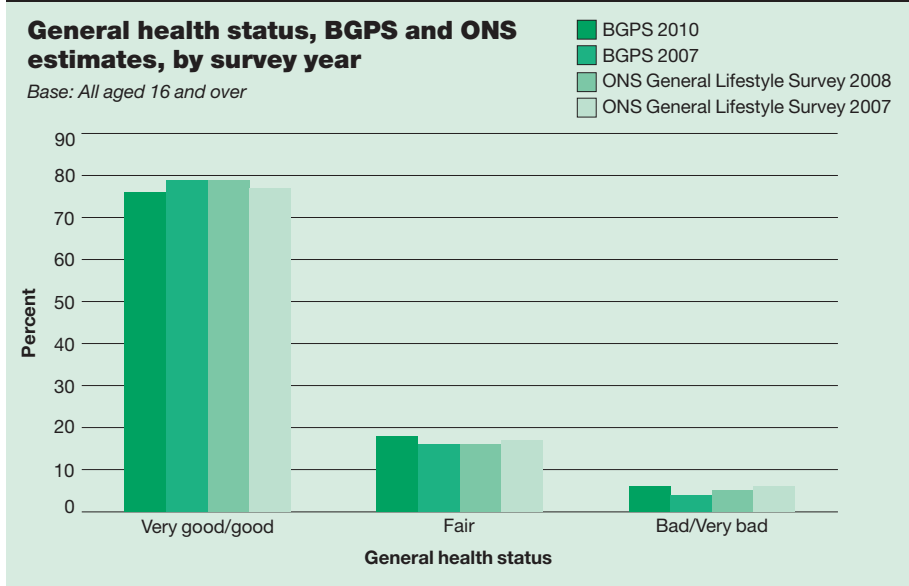


Table A.3

**Self-reported general health, by survey year and sex**

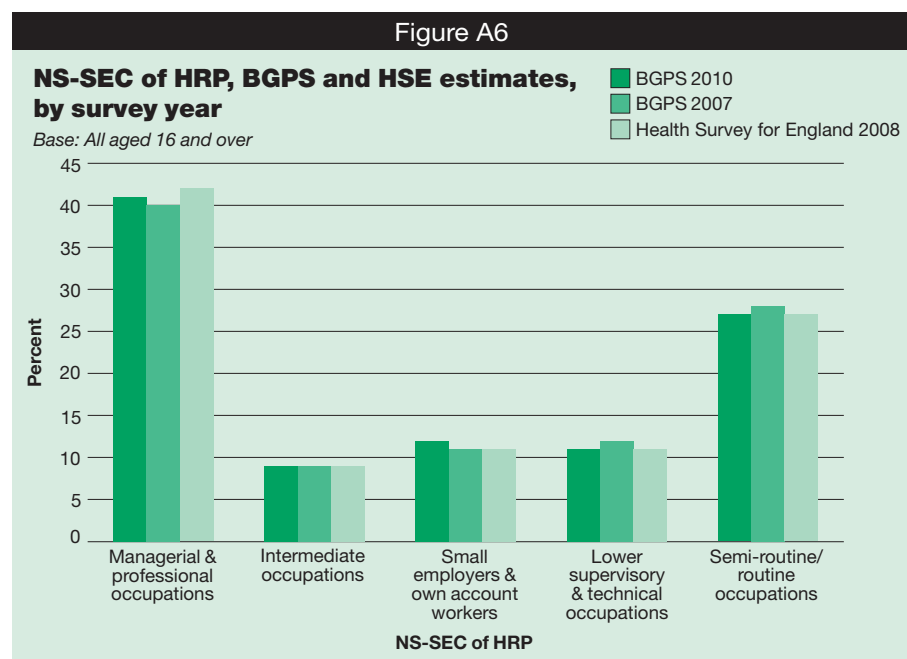
All aged 16 and over

Self-reported general health	Survey year and sex					
	2010			2007		
	Men	Women	Total	Men	Women	Total
	%	%	%	%	%	%
Very good/good	78	75	76	80	79	79
Fair	16	20	18	16	17	16
Bad/very bad	5	6	6	4	4	4
Bases (weighted)	3787	3954	7742	4354	4646	8865
Bases (unweighted)	3566	4177	7743	4258	4741	8875

## A1.8 NS-SEC of Household Reference Person

Information was collected about the main job of the household reference person and this was used to place respondents into one of five NS-SEC categories.

In order to assess how representative the sample was in terms of NS-SEC, the survey data were compared with data from the Health Survey for England 2008<sup>6</sup>. Figure A6 highlights that the sample, in terms of NS-SEC of the household reference person, for the BGPS and HSE 2008 were almost identical and that the sample did not change between 2007 and 2010.



**Table A.4**

### NS-SEC of HRP, by survey year and source

*All aged 16 and over*

NS-SEC of HRP	Survey year and source		
	BGPS 2010	BGPS 2007	HSE 2008
	%	%	%
Managerial & professional occupations	41	40	42
Intermediate occupations	9	9	9
Small employers & own account workers	12	11	11
Lower supervisory & technical occupations	11	12	11
Semi-routine & routine occupations	27	28	27
<i>Bases (weighted)</i>	<i>7412</i>	<i>8449</i>	<i>14965</i>
<i>Bases (unweighted)</i>	<i>7458</i>	<i>8485</i>	<i>15061</i>

## A1.9 Country of residence

The achieved sample was distributed throughout Britain as follows: 85% England, 10% Scotland, and 6% Wales. This closely mirrors the ONS mid-2009 population estimates, which show the adult population of Britain to be distributed as follows: 86% England, 9% Scotland, 5% Wales.<sup>1</sup>



## A1.10 Summary

In 2007, we noted that the 2007 BGPS was similar to ONS national estimates or estimates from the Health Survey for England on the characteristics of age, sex, geography, NS-SEC and ethnicity. The sample differed slightly from national estimates on marital status and general health.

In 2010, the sample is again similar to national estimates on the characteristics of age, sex, geography, NS-SEC and ethnicity. The sample is also representative on the characteristic of legal marital status.

However, the 2010 sample over and under represents some groups, but at a very small magnitude. The BGPS 2010 sample has slightly more male smokers, fewer males with a limiting long standing illness and slightly less people with very good/good health.

### Notes and references

- 1 ONS, Mid Population Estimates, 2009 See <http://www.statistics.gov.uk/statbase/product.asp?vlnk=15106>
- 2 ONS, Mid Population Estimates, 2008 See <http://www.statistics.gov.uk/statbase/Product.asp?vlnk=15107>
- 3 ONS, Mid Population Estimates, 2007 See <http://www.statistics.gov.uk/STATBASE/Product.asp?vlnk=14238>
- 4 1999 estimates are not presented due to category changes.
- 5 ONS, General Lifestyle Survey, 2008 See [http://www.statistics.gov.uk/downloads/theme\\_compendia/GLF08/GLFSmoking&DrinkingAmongAdults2008.pdf](http://www.statistics.gov.uk/downloads/theme_compendia/GLF08/GLFSmoking&DrinkingAmongAdults2008.pdf)
- 6 Natcen, Health Survey for England, 2008 See <http://www.natcen.ac.uk/study/health-survey-for-england-2008/findings>.

**BLANK PAGE**

# Appendix 2

## Methodology

### A2.1 Introduction

The British Gambling Prevalence Survey 2010 (BGPS 2010) is the third in a series of general population surveys of gambling behaviour in Britain. The BGPS survey series is part of a programme of surveys with the first survey commissioned by *GamCare* in 1999, and subsequent studies in 2007 and 2010 sponsored by the Gambling Commission. All surveys have covered the adult population aged 16 and over living in private households in England, Scotland and Wales.

The BGPS 2010 presented the opportunity for methodological advancements and for the survey content to be revised. Unlike the preceding surveys, the 2010 survey used computer-assisted self-interviewing (CASI). The BGPS 2010 survey included core topics that were included in previous years such as measuring gambling participation, problem gambling and attitudes to gambling. New topic areas included in the 2010 survey were awareness of gambling advertisements, changes in gambling behaviour, measures of gambling involvement and reasons for gambling.

This chapter provides a descriptive summary of the survey methodology used on the BGPS 2010, including accounts of:

- Questionnaire development and piloting.
- Topic coverage.
- Sample design.
- Data collection procedures.
- Survey response.
- Data processing and analysis.
- Weighting strategies.
- Development, scoring and analysis of specific survey instruments.
- Data analysis and reporting.

### A2.2 Questionnaire development and piloting

#### A2.2.1 Mode of questionnaire administration

As noted above, the BGPS 2010 used computer-assisted self-interviewing (CASI). Previously, respondents were asked to answer questions by filling in a paper self-completion questionnaire. Introducing CASI in 2010 represents a break with the previous methodology used in the BGPS series. This decision was taken in consultation with the Gambling Commission and the BGPS Steering Group and was underpinned by a number of considerations:

- Firstly, it is well documented that sensitive topics may be subject to social desirability bias. Interviewer administration is more likely to be subject to social desirability bias than self-completion, where survey respondents may over-report 'desirable' behaviour (such as voting) or under-report 'undesirable' behaviour (such as smoking). Because of this, best practice recommends using self-completion modes for collecting information on sensitive behaviour, such as gambling.
- Secondly, a change in mode of administration may affect comparability of estimates due to social desirability bias and other mode effects. A change from paper to computer

assisted self-completion is less problematic, as the research literature shows that these two types of self-completion are not subject to mode effects. For example, in a study comparing a general health measure, the SF-36, researchers found the majority of respondents (71%) preferred the electronic version, completion time was slightly shorter, and there were no missing or problematical responses (whereas 44% of participants had at least one missing or problematical response in the paper version). Most importantly, there was very little difference between the overall results from the two versions. The authors concluded that the electronic SF-36 was equivalent in performance and more effective than the paper version.<sup>1</sup> Similarly, Wright et al compared computer-assisted versus paper-and-pencil self-administered questionnaires in a survey on smoking, alcohol, and drug use.<sup>2</sup> They found that adults were hardly affected by type of self-completion mode (though adolescents reported slightly higher rates of substance use in CASI than on paper).

- Thirdly, it was important to be able to design a questionnaire that captured the level of information required by the Gambling Commission. The aims of the 2010 survey were broader ranging than previous studies, with greater level of detail being required on mode of access to gambling and gambling involvement. With a paper questionnaire, the questions and routing have to be very simple and straightforward. This is a constraint on questionnaire design. However, with CASI, the questionnaire can be routed in complex ways by the program, different questions asked for different sub-groups and greater level of detail collected. This was a high priority for the survey and therefore CASI administration was recommended.
- Finally, we wanted to minimise the level of item non-response. Examination of the 2007 BGPS data showed a high level of item non-response to key survey items. For example, 5% of respondents did not answer the problem gambling screens. CASI typically lowers item non-response as it is more difficult for respondents to skip questions accidentally. In 2010, only 0.09% of respondents did not answer the problem gambling screens.

Taking these considerations together, a change in mode to CASI data collection was recommended for the BGPS 2010. Once this had been agreed, the structure and content of the BGPS 2010 questionnaire was developed.

#### A2.2.2 **Critical evaluation of BGPS 2007**

The first stage of questionnaire design involved a critical evaluation of the BGPS 2007 questionnaire to examine where improvements could be made. Data from the 2007 survey was used to review existing questions and to highlight those that elicited high item-non response, or produced results that were not comparable with other data sources. In addition to this, the research team also examined how the data was used and which parts were most useful for policy purposes. The Gambling Commission and BGPS Steering and Advisory Groups were consulted and agreed improvements or changes. Findings from this process were used to develop a preliminary draft of the 2010 questionnaire, using 2007 as a base.

A number of core items were retained. These were questions aimed at measuring past year participation, frequency of participation in each activity in the past year and past week participation in each gambling activity. Measuring problem gambling prevalence was a key objective of the survey and after evaluating alternatives, the DSM-IV measure used in 1999 and 2007 and the PGSI screen used in 2007 were retained. Other useful and relevant explanatory items were retained, such as general health status, smoking and alcohol consumption questions, income, ethnicity, marital status, educational attainment and employment. The Attitudes Towards Gambling Scale (ATGS) developed for the 2007 survey was also retained, but in a shortened form to make room for other questionnaire items.

Some questions included in 2007 either performed poorly (for example, the net expenditure questions), or were answered by too few people to be useful in analysis (debt, help seeking of named institutions) and were therefore removed from the questionnaire.

Following the critical review, the 2010 questionnaire was drafted taking into account the review conclusions and adding questions on new areas of interest. These were:

- Leisure activities (to place gambling participation in a wider context).
- Volume of gambling questions (time and money spent, to add to the existing measures of number activities and frequency of participation. (See Chapter 4 for more detail.)
- Self-reported changes in gambling involvement (see Chapter 4).
- Reasons for gambling (see Chapter 8).
- A single item measuring happiness and wellbeing.

### A2.2.3 **Expert panel**

Two expert panels were held in May/June 2009 to review the first draft of the questionnaire. The first was an in-house expert panel with a small number of colleagues experienced in the field of questionnaire design. The second was a small group of academics and experts in the field of gambling studies. Advice and guidance from the two panels, together with discussions with the Gambling Commission and BGPS Steering and Advisory Groups, were incorporated into the drafting of questionnaire and helped inform the subsequent cognitive testing.

### A2.2.4 **Cognitive question testing**

Cognitive interviewing draws on insights from cognitive and motivational psychology and provides extremely useful insights about how respondents interpret survey questions. The aim of the cognitive interviewing phase was to test questions that were new to the 2010 survey or those identified by the expert panel as needing modification and improvement. Two phases of cognitive testing were conducted. The first was carried out by interviewers from NatCen's Cognitive Testing Panel and the second by key members of the research team. The interview was administered in the mode that would be used for the main stage of the survey, i.e., computer-assisted self-interviewing (CASI).

Seventeen cognitive interviews were carried out in phase one with respondents who had taken part in the BGPS 2007 and had agreed to be recontacted for further research. The sample was selected to include those who had taken part in more than one gambling activity in the year prior to their 2007 interview. Quotas were set on activity type to ensure a range of respondents were interviewed.

A second phase was conducted with four further respondents, recruited through general advertisement, to test modifications made to the questionnaire after phase one had been completed.

There were two main cognitive interviewing techniques used, 'think aloud' and probing. In the former, respondents were asked to say aloud what they are thinking as they answered the survey questions. In the latter, they were asked specific questions about how they went about answering the survey questions. Probes may be asked concurrently, as respondents answer the survey questions, or retrospectively, after a set of questions had been completed.<sup>3</sup> Probing was used in conjunction with the think aloud technique, to elicit further information from each respondent.

Respondents' interpretations of the survey questions were explored, as well as their views on the language and terminology used. A report of the main findings and recommendations were submitted to the Gambling Commission and recommendations were discussed with the Steering Group. As a result of the cognitive testing, a number of improvements were made to the questionnaire. Main findings are summarised below:

- Activity descriptions: testing showed that respondents often read only the main part of activity descriptions if they felt they could make a quick decision that way, missing out the important 'include / do not include' information beneath the main question. Activity descriptions were therefore improved by placing more of the key information within the main body of the question. Respondents confirmed that they understood and found it easy to say which activities they had done first of all, and then to choose whether this had been online or 'in person'. The definition of 'in person' used by respondents matched the researcher's intentions, in that this included all other methods of access that were not online.
- The testing showed that recall of money spent on gambling worked well, but that

respondents preferred to choose between bands of money rather than provide an exact figure. Total money spent over a week or month was easier to recall than calculating an average or usual spend per session. Time spent per session was less precise, because of differing views over what should be included as 'time spent gambling' i.e., whether it should include time spent at the venue eating or drinking. This was clarified for each activity. However, further testing revealed that respondents preferred to include time spent at a venue, or in the case of betting activities, included time spent planning their bets. As such, it was agreed that these questions should use a broad definition of 'time spent' and this was included in the body of the question. Respondents also found it easier to report bands of time rather than calculate an exact number of minutes. The use of bands for both questions also reflected our intention to use this information to categorise levels of gambling involvement rather than to calculate expenditure or time spent exactly for each person.

- Respondents typically understood the term 'gambling involvement' to include the number of activities people take part in, the frequency of participation and the amount of time/money spent on these activities.
- Respondents found the reasons for gambling questions relatively easy to understand and endorsed these as reasons why they gambled. Some, however, reported that they did not think that the lottery or bingo was a gambling activity and did not like to answer questions about these activities which were phrased using the word 'gambling'. The introduction to this question was changed, with a reminder added that people should think about the range of activities undertaken and the word gambling was removed from the item descriptions.

#### A2.2.5 **Pilot**

Based on the results of the cognitive tests, the questionnaire was modified and further tested in a pilot 'dress rehearsal' conducted in September 2009. The pilot enabled the structure, flow and length of the interview as whole to be tested. This also enabled the research team to examine issues relating to the CASI for the first time in a field test. The pilot was used to test other aspects of the survey design, such as the advance letter and to assess methods of marketing the survey to potential respondents.

To test the survey procedures, six interviewers from a range of areas in Great Britain were issued with 25 addresses each. Addresses were drawn from the Postcode Address file, thereby replicating the sample design of the main stage survey. Data was collected from 121 individuals aged 16 and over, residing in 55 households.

Interviewers working on the pilot attended a pilot debrief with researchers and respondents were asked to complete a pilot feedback questionnaire. A report of pilot recommendations was submitted to the Gambling Commission. The content of the questionnaire was finalised based on this report and in agreement with the Gambling Commission and the BGPS Steering Group.

The pilot data was also used to carry out a factor analysis and item reduction of the Reasons for Gambling Questionnaire. As well as amendments to the questionnaire, the pilot also provided feedback and recommendations for the interviewer training, respondent documents, and general survey approach.

### A2.3 **Topic coverage**

#### A2.3.1 **Coverage of the 1999, 2007 and 2010 BGPS interviews**

Figure A1 summarises the topic coverage and main differences between the 1999, 2007 and 2010 BGPS questionnaires. In 2010, the interview structure consisted of an initial set of questions administered face-to-face by the interviewer, a respondent self-completion section using the laptop computer, and further interviewer administered questions. The full 2010 questionnaire documentation is reproduced in Appendix 3.

Comparisons of the different activity description and the distinctions made between each survey year are shown in Figure A2.

Figure A1

### British Gambling Prevalence Survey coverage in 1999, 2007 and 2010

	1999	2007	2010
<b>Face to face interview (PAPI 1999, 2007, CAPI 2010)</b>			
Household data:			
Household size, composition and relationships			
Economic status/occupation of Household Reference Person			
Household income			
<b>Face to face interview (CAPI 2010)</b>			
Leisure activities	x	x	•
<b>Self-completion (PAPI 1999, 2007, CASI 2010)</b>			
Past year participation in each activity	•	•	•
Frequency of participation in each activity in the past year	x	•	•
Mode of participation in past year	x	x	•
Volume of participation among regular gamblers:			
Number of gambling days per month	x	x	•
Money spent per month	x	x	•
Time spent gambling on usual gambling day	x	x	•
Stake on certain activities	•	x	x
Net losses on certain activities	•	•	x
Net wins on certain activities	•	•	x
Past week participation in each activity	•	•	•
Mode of participation in past week	•	•	•
Changes in gambling behaviour	x	x	•
Awareness of gambling advertising	x	x	•
Problem gambling screens:			
South Oaks Problem Gambling Screen	•	x	x
DSM-IV	•	•	•
Problem Gambling Severity Index (PGSI)	x	•	•
Reasons for gambling	x	x	•
Attitudes to gambling:			
8-item attitude scale	x	x	•
14-item attitude scale	x	•	x
Familial gambling problems	•	•	•
Early experience of gambling	•	•	•
Help-seeking and awareness of services	•	•	•
Wellbeing	x	x	•
<b>Face to face interview in 2010; self-completion in 1999, 2007</b>			
General health, longstanding illness, limiting longstanding illness	x	•	•
Cigarette smoking status	x	•	•
Alcohol consumption (past week)	x	•	•
Socio-demographics	•	•	•



Figure A2

**British Gambling Prevalence Survey gambling activities in 1999, 2007 and 2010**

Self-completion (PAPI 1999, 2007, CASI 2010)

	1999	2007	2010
National Lottery Draw	•	•	•
Scratchcards	•	•	•
Another lottery	•	•	• <sup>a</sup>
Bingo in person	•	•	• <sup>b</sup>
Bingo online	x	x <sup>c</sup>	• <sup>b</sup>
Football pools	• <sup>d</sup>	•	•
Betting on horse races	•	•	• <sup>e</sup>
Betting on dog races	•	•	• <sup>e</sup>
Betting on sports events	x	x	• <sup>f</sup>
Betting on other events	x	x	• <sup>f</sup>
Other betting with a bookmaker	• <sup>f</sup>	• <sup>f</sup>	x
Online betting with a bookmaker	x	•	• <sup>g</sup>
Using a betting exchange	x	•	• <sup>h</sup>
Spread betting	•	•	•
Fixed odds betting terminals	x	•	•
Fruit machines/slot machines	•	•	•
Poker in a pub tournament	x	x	•
Casino table games in person	•	•	• <sup>i</sup>
Casino games online	x	x	• <sup>i</sup>
Other online gambling	•	•	• <sup>k</sup>
Online slot machine style games	x <sup>k</sup>	x <sup>k</sup>	•
Private betting with friends or colleagues	•	•	•
Other gambling activities	•	•	•

<sup>a</sup> In 2010, this activity description was altered slightly to include reference to charity lotteries and other lotteries.

<sup>b</sup> In 1999, bingo referred to playing in person only. In 2007, the main 'bingo' category referred to playing in person only. In 2010 respondents were first asked whether they had played any bingo (including in person or online) and then asked if this was played 'in person', online, or both.

<sup>c</sup> In BGPS 2007, online bingo was included within the general 'online gambling' category and could not be identified separately.

<sup>d</sup> In BGPS 1999, this category also included 'fixed odds coupons'.

<sup>e</sup> In 1999 and 2007, this category referred to betting with a bookmaker only. In 2010, respondents were asked whether they had bet with a bookmaker, in person or online, or betting exchange. Respondents were then asked how they placed their bet: at a bookmakers, at the course/track/venue, on the phone to a bookmaker, online with a bookmaker, with a betting exchange.

<sup>f</sup> In 1999 and 2007, betting on sports and other events was a single category. These were separated for the 2010 survey.

<sup>g</sup> In 2007, a single activity captured all online betting with a bookmaker on all activities and this activity was presented in the main activity listing. In 2010, betting with a bookmaker online was treated as a method of access to betting, rather than as an activity type in its own right.

<sup>h</sup> As with online betting, use of betting exchanges for any type of betting was treated as an activity in its own right in 2007. In 2010, this type of betting was treated as a mode of access to gambling and not presented as a main activity to respondents.

<sup>i</sup> In 1999 and 2007, casino table games referred to playing in person at the casino only. In 2010 respondents were first asked whether they had played any casino games (including in person or online) and if so, whether this had been done online or not.

<sup>j</sup> In BGPS 2007, online casino games was included within the general 'online gambling' category and could not be identified separately.

<sup>k</sup> In 1999, online games were not included. In 2007, online gambling on casino games, slot machine style games and bingo games were presented to respondents as an individual category. This was called 'online gambling' in the main 2007 report. In 2010, online bingo and online casino table games were captured as modes of access under these respective activities. Therefore, in 2010 this category referred to online slot machine style games or instant wins only.

### A2.3.2 **Key differences in content between BGPS 2007 and 2010**

In addition to the differences in activity descriptions outlined in Figure A2, other changes to the questionnaire are outlined in this section.

#### **Topics added**

The following topics were included for the first time in the BGPS 2010 survey:

Changes in gambling	A short set of questions asking about recent changes in gambling involvement were added to the 2010 survey.
Awareness of gambling advertising	Respondents were asked to indicate whether they had seen any gambling advertisements e.g., on billboards, newspapers and on TV.
Reasons for Gambling	Respondents who had gambled in the last year were given a series of possible reasons for gambling were asked how often these applied to them.
Wellbeing	This involved a single item measuring self-rated happiness on a scale of one to ten.

#### **Amendments to existing questions**

Some modifications and refinements were made to existing modules and questions following recommendations from the testing stages. These included:

Gambling activities descriptions	The activity descriptions were updated to reflect any changes in gambling since 2007 and to give greater detail on mode of access to gambling (see Figure A2)
Gambling expenditure	<p>The measurement of gambling expenditure is complex. The 2007 survey captured this information by asking respondents to report how much they won or lost on each activity they had participated in. This enabled total wins, total losses and net expenditure to be calculated. However, respondents tended to recall their wins and discount their losses, leading to the BGPS 2007 data showing an apparent net expenditure gain for some activities. This showed that respondents were not making realistic assessments of their spending.</p> <p>For the 2010 survey, new questions were developed to measure gambling spend and to measure time spent gambling.</p>
Venue/type of online play	Questions about venue and type of online play were modified to reflect changes since 2007.
Attitudes to gambling	In 2010, the 14-item Attitudes to Gambling Scale (ATGS) was replaced with a reduced 8-item measure.
Debt	<p>The 2007 survey included a question intended to measure debts arising from gambling. Some respondents were unable to identify, or unwilling to declare, gambling-related debt when asked this way, therefore a more useful question was sought.</p> <p>The 2010 survey used a single item measure from the Social Functioning Questionnaire as a measure of money problems.</p>

## A2.4 **Sample design**

### A2.4.1 **Overview of the sample design**

The BGPS 2010 was designed to provide a nationally representative sample of adults aged 16 and over living in private households (that is, people not living in communal establishments) in England, Scotland and Wales. People living in institutions, such as care homes, prisons or student halls of residence were not included.

As in the 1999 and 2007 studies, the sample was drawn following a multistage design. The sampling frame was the small user Postcode Address File (PAF). 391 postcode sectors were selected (with probability proportional to size). Before selection, sectors were stratified by Government Office Region (11 categories), NS-SEC (12 categories) and the percentage of persons from non-white ethnic groups. These were the same stratifiers as used in the 2007 survey. 25 addresses were randomly selected from each postcode sector. In total, 9,775 addresses were selected. Within each household, all adults aged 16 and over were eligible to be included in the survey.

#### A2.4.2 **Sampling dwelling units and households**

Most addresses selected from the PAF contain a single dwelling unit and/or household. However, a small proportion of addresses (about 1%) are multi-occupied. At addresses with more than one dwelling unit (with a separate entrance), one dwelling unit is selected at random by the interviewer using a Kish Grid. For dwelling units with more than one household, interviewers also used a Kish Grid to select a single household. Within each eligible household all adults aged 16 and over were eligible to take part.

### A2.5 **Data collection procedures**

#### A2.5.1 **Timing of fieldwork**

Fieldwork took place between November 2009 and June 2010.

#### A2.5.2 **Training and supervision of interviewers**

Experienced NatCen interviewers were selected to work on the survey. Interviewers were fully briefed by the research team on the administration of the survey. Topics covered on the half-day survey-specific training included questionnaire content, introducing the survey and countering reluctance at the doorstep, and respondent confidentiality.

Interviewers were issued with comprehensive project instructions covering all stages of the project administration and fieldwork protocols. In addition to formal training, interviewers were supported through a network of team leaders and mentors to ensure that any problems were resolved in field. Routine supervision of interviewer work was subsequently carried out.

#### A2.5.3 **Ethical approval**

Ethical approval for the survey was obtained from NatCen's independent ethics review panel. This panel consists of experienced NatCen researchers and other external members. Their remit is to review all survey procedures and ensure the project meets standard requirements for ethical research.

#### A2.5.4 **Approach**

##### **Advance letter**

An advance letter was sent by the interviewer to all sampled addresses. This informed potential respondents that their household had been selected for the survey, explained the purpose, confirmed that it was anonymous and confidential and let them know that an interviewer would be visiting to seek their co-operation.

##### **Making contact**

At initial contact, the interviewer established the number of dwelling units and/or households at an address, and made any necessary selections.

The interviewer then made contact with the selected household and attempted to interview all adults aged 16 and over residing at the address. Unlike previous surveys, the 2010 survey was given a survey title that did not explicitly mention the term gambling (i.e., 'Leisure time: Lottery and Recreation Study 2010'), as this was felt to be more readily

appealing to respondents.<sup>4</sup> Interviewers had copies of a survey leaflet outlining the purpose of the survey, which they could use on the doorstep or leave with respondents at their discretion.

### **Collection of individual information**

Unlike previous surveys which were paper based, the 2010 interview involved computer-assisted interviewing (CAPI), with some parts completed confidentially by the respondent, using a laptop computer (CASI). This method allowed for more complex routing, which enabled a greater level of detail to be collected on specific activities and modules.

If the respondent was unable or unwilling to complete the CASI, the option was available for questions to be read out and completed with the help of the interviewer. In these cases, interviewers were trained to protect the respondent's privacy by asking that other household members leave the room. A full copy of the questionnaire is provided in Appendix 3.

### **Telephone unit recontact**

In order to maximise individual response to the survey, NatCen's Telephone Unit were used to make contact with individuals within co-operating households who had either refused to participate or with whom the interviewer could not make direct contact.

All telephone interviewers received personal training about the survey from the research team and were briefed to encourage respondents to complete the questionnaire over the telephone. Data from 366 respondents were collected using this method. Similar methods were used in 1999 and 2007.

### **Token of appreciation and help-lines**

As a token of appreciation for the respondent's time, a £5 high street voucher was given to all those completing the survey. All respondents were given a voucher receipt which also contained a list of helpline numbers they could call, should they wish to discuss any issues raised within the survey. These included numbers for organisations such as the Samaritans, GamCare, Gamblers Anonymous and the Gordon Moody Association.

#### **A2.5.5 Quality control**

A number of quality control measures were built into the survey at data collection and subsequent stages to check the quality of interviewers' performance. The computer program used by the interviewers had built-in soft-checks (which can be suppressed) and hard-checks (which cannot be suppressed) which included messages querying uncommon or unlikely answers, and answers out of the acceptable range.

Telephone recall checks were carried out with respondents at 10% of productive households to ensure the interview had been conducted in a proper manner.

## **A2.6 Survey response**

### **A2.6.1 Introduction to response analysis**

This section presents response rates achieved for the BGPS 2010 survey at two levels, among sampled households in the general population and then among eligible individuals within those households.

#### **Household response**

Table A2.1 shows response at the household level. Overall, 55% of eligible households (4,842) took part in the 2010 survey.

<b>Household response rates</b>		
	n	%
Addresses issued	9775	
Non-residential addresses	984	
In-scope addresses	8791	100
No contact at address	370	4.2
All interviews refused	3183	36.2
Other reason no interview	396	4.5
Productive household interview	4842	<b>55.1</b>

### **Individual and overall response rates**

Table A2.2 shows response to the survey among individuals living in co-operating households.

<b>Individual response rates among adults in co-operating households</b>		
	n	%
Number of adults within co-operating households	9104	
Refusal	658	7.2
No contact	409	4.5
Away/ill/incapacitated/other	281	3.1
Productive interview	7756	<b>85.2</b>

In total, questionnaires were completed by 7,756 out of 9,104 eligible individuals, a response rate of 85%. In previous BGPS reports the method used to calculate the overall response rate was a multiplication of the household response and the individual response. Using this method, the overall response rate achieved in 2010 is 47% (55% at the household level multiplied by the individual response rate: 0.85).

It should be noted that this method of calculating overall response rates is a conservative estimate as it makes the assumption that households which co-operate are similar in household size and composition to those who do not co-operate. However, surveys like the Health Survey for England (HSE), which is used by the Department of Health to monitor progress towards a number of national policies, have consistently demonstrated that non co-operating households tend to have fewer adult household members. These surveys have routinely asked interviewers to collect information from non co-operating households about household size and composition. It is this data which is used to estimate the total number of adults eligible to take part in the survey and used to calculate overall response rates. Taking HSE 2008 as an example and using the BGPS method of calculating response, the overall response rate would be 56.7%. However, the method used by the HSE, where non-response information is used to provide a more accurate estimate of the total number of adults eligible to participate, serves to increase response rates by 1.2 percentage points to 57.9%. It is not possible to perform a similar calculation for the BGPS series as this data was not routinely collected. However, evidence from long-standing national surveys shows that the BGPS method of calculating overall response rates is conservative and the true estimate is likely to be marginally higher than the figure presented.

## A2.7 Data processing

Completed interviews were processed in office using an edit program. A computer edit program was written to check all code ranges, routing, numeric values and consistency. This program alerted trained coders to areas in the data which required attention and guided them through the four main areas of data processing for each questionnaire:

1. Review of occupations, which were coded to the Standard Occupational Classification (SOC) from which NS-SEC is derived.
2. Review of 'Other' answers, such as 'other gambling activity', which were coded into pre-existing or new code frames. The code frame for 'other gambling activity' was developed in conjunction with the Gambling Commission, to ensure that activities were being correctly classified, and was cross-referenced with the instructions given to coders in 2007 to ensure consistency.
3. Review of implausible or inconsistent answers. These were examined and changed where there was a good reason for doing so. For example, if an interviewer had provided a note to further explain the respondent's circumstances or reasons for their answer. Examples of some inconsistent answers are people saying they gambled online in the past 7 days for a particular answer, but not that they gambled online in the past 12 months. These responses were edited to ensure consistency (i.e., they were coded as past year online gamblers).
4. Finally, all other notes from the interviewers were read, and actioned as appropriate.

All information was treated confidentially and data records were anonymised prior to analysis.

## A2.8 Weighting

The data were weighted in three stages. The first stage was to correct for dwelling unit and household selection probabilities, for the small number of addresses where either more than one dwelling unit or household was identified. The second stage calibrated the achieved sample so that the distributions for age/sex and Government Office Region (GOR) matched the ONS 2009 mid-year population estimates. The third stage corrected for individual non-response within participating households.

Comparisons of the age and sex profile of the British population according to estimates from the Office of National Statistics show that the achieved sample was, in fact, a close reflection of the general population and therefore the weights were, typically, small. Table A2.3 compares population estimates with the *unweighted* sample for the 2010 survey and shows the mean weight for each sub-group.

Age	Population estimates – ONS Mid 2009		2010 British Gambling Prevalence survey		Mean weights	
	% Male	% Female	% Male	% Female	Men	Women
16-24	3.3	3.1	2.5	3.1	1.30	1.08
20-24	4.3	4.1	3.3	3.7	1.34	1.07
25-34	8.0	7.8	6.6	7.8	1.23	1.01
35-44	8.9	9.0	8.5	10.1	1.06	0.91
45-54	8.2	8.4	8.0	9.4	1.04	0.90
55-64	7.2	7.4	7.3	8.5	0.99	0.88
65-74	5.0	5.5	6.4	6.7	0.78	0.82
75 and over	3.8	5.8	3.5	4.6	1.03	1.13
Total	48.7	51.3	46.1	53.9	1.06	0.95

## A2.9 Scoring the problem gambling screening instruments

### A2.9.1 Introduction

Two screening instruments were used to identify problem gamblers: the DSM-IV and the PGSI. This section explains how each instrument was scored and the thresholds used to classify a problem gambler.

### A2.9.2 Scoring the DSM-IV: dichotomous scoring

The bulk of this report uses the dichotomous scoring system for the DSM-IV. The DSM-IV criteria, and which responses were counted as positive are shown in Table A2.4.

The threshold for 'problem gambling' was three or over, in line with previous research<sup>5</sup> and the 2007 and 1999 prevalence surveys. Cases were excluded from the problem gambling analysis if more than half the DSM-IV items were missing (and the score was less than three). Only four cases were excluded for this reason.

Item	'Positive'
Chasing losses	Every time I lost/Most of the time I lost
A preoccupation with gambling	Fairly Often/Very Often
A need to gambling with increasing amounts of money	Fairly Often/Very Often
Being restless or irritable when trying to stop gambling	Fairly Often/Very Often
Gambling as escapism	Fairly Often/Very Often
Lying to people to conceal the extent of gambling	Fairly Often/Very Often
Having tried but failed to cut back on gambling	Fairly Often/Very Often
Having committed a crime to finance gambling	Occasionally/Fairly Often/Very Often
Having risked or lost a relationship/job/educational opportunity because of gambling	Occasionally/Fairly Often/Very Often
Reliance on others to help in a financial crisis caused by gambling	Occasionally/Fairly Often/Very Often

### A2.9.3 Scoring the DSM-IV: continuous scoring

Chapter 7 discusses an alternative way of scoring the DSM-IV screen which is similar to the scoring method used by the PGSI. The DSM-IV items presented in Table A2.4 had the following response codes: never, occasionally, fairly often, very often (with the exception of item 1, chasing losses which uses never, some of the time I lost, most of the time I lost, every time I lost).

The response codes for each item were scored in the following way:

- Score 0 for each response of 'never'.
- Score 1 for each response of 'occasionally/some of the time I lost'.
- Score 2 for each 'fairly often/most of the time I lost'.
- Score 3 for each 'very often/every time I lost'.

This means a total DSM-IV score of between zero and 30 is possible.

### A2.9.4 Scoring the PGSI

The PGSI items are shown in Table A2.5.

All nine PGSI items have the following response codes: never, sometimes, most of the time, almost always. The response codes for each item are scored in the following way:



Table A2.5

<b>PGSI items</b>	
<b>Item</b>	
Bet more than can afford to lose	
A need to gambling with increasing amounts of money	
Chasing losses	
Borrowed money or sold items to get money to gamble	
Felt had a problem with gambling	
Gambling causing health problems including stress and anxiety	
People criticising gambling behaviour	
Gambling causing financial problems for you or your household	
Felt guilty about way that you gamble or what happens when you gamble	

- Score 0 for each response of 'never'.
- Score 1 for each response of 'sometimes'.
- Score 2 for each 'most of the time'.
- Score 3 for each 'almost always'.

This means a PSGI score of between zero and 27 is possible. There are four classification categories for PSGI scores. Their description and scored cut-off points are shown in Table A2.6.

Table A2.6

<b>PGSI classification categories</b>	
<b>PGSI classification category</b>	<b>PGSI score</b>
Non problem gambler	0
Low risk gambler	1-2
Moderate risk gambler	3-7
Problem gambler	8+

The threshold for 'problem gambling' was eight or over, in line with previous research.<sup>6</sup> Cases were excluded from the problem gambling analysis if more than half the PSGI items were missing (and the score was less than eight). A total of four cases were excluded for this reason (these are the same four cases as were excluded from the DSM-IV analysis).

## A2.10 Scoring the attitude scale

The attitude scale consists of eight questions (see Appendix 3). To produce a scale the following steps were taken. Firstly, the four positively worded items were recoded so that a higher number was indicative of more favourable attitudes towards gambling. The midpoint of three on any item, therefore, indicated neither agreement nor disagreement; scores above three indicated an attitude favourable to gambling; scores below three indicated an attitude unfavourable to gambling. A total attitude score, based on responses to the 8 items, was calculated. The maximum total score was 40 (eight times five). A score of 24 indicates an overall neutral attitude (eight times three); higher scores indicate an overall favourable attitude towards gambling; those below 24 show an overall unfavourable attitude.



Table A2.7

**Scoring the attitude scale**

Item	Scale
Att1	1=Strongly disagree, 2=Disagree, 3=Neither agree/disagree, 4=Agree, 5=Strongly agree
Att2	1=Strongly agree, 2=Agree, 3=Neither agree/disagree, 4=Disagree, 5=Strongly disagree
Att3	1=Strongly agree, 2=Agree, 3=Neither agree/disagree, 4=Disagree, 5=Strongly disagree
Att4	1=Strongly disagree, 2=Disagree, 3=Neither agree/disagree, 4=Agree, 5=Strongly agree
Att5	1=Strongly agree, 2=Agree, 3=Neither agree/disagree, 4=Disagree, 5=Strongly disagree
Att6	1=Strongly disagree, 2=Disagree, 3=Neither agree/disagree, 4=Agree, 5=Strongly agree
Att7	1=Strongly disagree, 2=Disagree, 3=Neither agree/disagree, 4=Agree, 5=Strongly agree
Att8	1=Strongly agree, 2=Agree, 3=Neither agree/disagree, 4=Disagree, 5=Strongly disagree

## A2.11 Detecting changes in problem gambling between survey years

Chapter 5 notes the range of considerations that should be examined when assessing changes between survey years. One of these is the possibility that small changes in the profile of the responding sample between survey years may affect estimates. To account for this possibility in relation to problem gambling scores, two multi-variate logistic regression models were run and results examined.

The first model looked at differences in the socio-demographic and health profile of the responding sample between survey years. Survey year was the outcome variable and the model examined the odds of being classified within a certain demographic group in 2010 comparative to 2007. Only variables which were directly comparable between survey years were entered into the model. These were age, sex, marital status, ethnic group, NS-SEC of household reference person, general health status and cigarette smoking status. The results showed some differences in the profiles of the responding samples in 2007 and 2010. In 2010, respondents were slightly younger (in 2007, 14% of respondents were aged 16-24, in 2010, this increased to 15%), though overall respondents were less likely to be single or widowed or separated and more likely to be in poor health than in 2007. The profile of the responding sample did not vary significantly by ethnic group and NS-SEC of household reference person. However, as the age profile varied slightly between survey years and as problem gambling is associated with age, a second model was run to examine the potential impact of these profile differences upon changes in problem gambling estimates.

In the second model, DSM-IV problem gambling was outcome variable and survey year, age, sex, marital status, ethnic group, NS-SEC of household reference person, general health status and cigarette smoking status were entered into the model as independent variables. This model looked at whether the odds of being a problem gambler were higher in 2010 than in 2007 after taking into account the other variables in the model (age, sex, marital status, ethnic group, NS-SEC of household reference person, general health status and cigarette smoking status). The results showed that survey year was significantly associated with problem gambling (the odds of being a problem gambler were 1.5 times higher in 2010 than 2007. The confidence interval was 1.01 – 2.33) when differences by age, sex, marital status, ethnic group, NS-SEC, general health and cigarette smoking status were taken into account.

## A2.12 Calculating gambling days per year, time spent gambling per month and money spent gambling

### Calculating the number of gambling days per year

To produce an overall measure of gambling days per year, we first calculated the total number of days per year that respondents took part in each activity. The methods varied based on respondent's responses and are shown in the table below.-

Respondents response for each activity	Question	Calculation to produce yearly estimate
Weekly or more	How many times a week did you do activity x?	Answers multiplied by 52
Once a month, but less than weekly	How many times a month did you do activity x?	Answers multiplied by 12
Between 6-11 days per year or between 1-5 days per year	How often in the last year did you do activity x?	The mid-point was used to give a yearly estimate: 1-5 days a year = 3 days per year 6-11 days a year = 8.5 days per year

Participation, expressed as number of days, was then summed across all activities.

### Calculating time spent gambling per month, among regular gamblers

To calculate the amount of time spent gambling per month among regular gamblers, two stages were undertaken. Firstly, for certain activities,<sup>7</sup> all respondents who did these activities once a month or more regularly, were asked to report how much time they spent on these activities on a usual gambling day. Respondents were asked to indicate the approximate band that applied to them; the mid-point of this range was used in our calculations. The mid-points used are shown in the table below.

Time spent on usual gambling day	Estimated number of hours per day
1. Less than 30 minutes per day	.25 hours (15 minutes)
2. More than 30 minutes, less than 1 hour per day	.75 hours (45 minutes)
3. 1-2 hours per day	1.5 hours
4. 2-3 hours per day	2.5 hours
5. 3-4 hours per day	3.5 hours
6. 4-6 hours per day	5 hours
7. 6-8 hours per day	7 hours
8. 8 hours or more per day	8 hours

For each activity, this mid-point was then multiplied by the total number of days per month that the respondent reported taking part in this activity, to give a total number of gambling hours per month.

Secondly, once this was calculated for each activity individually, it was summed for all 14 applicable activities, to give an overall measure of time spent on all regular gambling activities.

Amount of money spent per month	Estimated mid-point	Amount of money spent per month	Estimated mid-point
£1 – £10 per month	£5.5	Less than £10 per month	£5
£11 – £30 per month	£20.5	£10 - £50 per month	£30
£31 – £50 per month	£40.5	£51 - £100 per month	£75.5
£51 - £100 per month	£75.5	£101 - £200 per month	£149.5
£101 - £200 per month	£150.5	£201 - £300 per month	£250.5
£201 - £500 per month	£350.5	£301 - £500 per month	£400.5
£501 or more per month	£501	£501 - £1000 per month	£750.5
		£1001 or more per month	£1001

### **Calculating the amount of money spent per month, among regular gamblers**

The amount of money spent in an average month was asked for each activity undertaken monthly or more often. As with time spent, this was asked as a selection of bands. For the overall calculation, the mid-point of each band was used. These are shown above.

A total amount of money spent was then calculated by summing together the figure for all activities.

## **A2.13 Factor analysis for the Reasons for Gambling Questionnaire**

### **Overview**

Chapter 8 discusses the development of the Reasons for Gambling Questionnaire (RGQ) and presents the results of a principal component factor analysis. This section provides more detail on this factor analysis and how the final factor solution was chosen.

### **Scoring the data and missing values**

The RGQ consists of 15 items. Responses to each item were: Never, sometimes, often, always. Each item was scored in the following way:

- 1 for 'Never'.
- 2 for 'Sometimes'.
- 3 for 'Often'.
- 4 for 'Always'.

For each respondent, the number of valid responses across the 15 items was calculated. Overall, 34 respondents failed to provide a valid answer to all 15 RGQ items. As this number was low, these cases were excluded from the factor analysis.

### **Items included in the factor analysis**

Pearson correlations between all pairs of the 15 items were examined. Most items displayed some degree of correlation with other items. However, the item 'I gamble because I'm worried about not winning if I don't play' displayed the lowest correlations with other items (the maximum correlation for this item with others was 0.28). This item was one which was identified in analysis of pilot data as a potential candidate for deletion from the question set. However, it was retained as it received relatively strong endorsement during the cognitive testing phases of questionnaire development; these strong levels of endorsement were not evident in the mainstage survey.

We included this item in our initial factor analysis. However, it did not appear to group sensibly with other items in the factor solutions we examined, including the six factor solution where it formed a factor by itself (i.e., it was the only item loading on to one of the factors). In the three, four and five factor solutions, this item had the lowest communality (less than 0.38) meaning that these solutions, which were most robust according to a range of other indices, explained a low proportion of the variation within this item. Taking all this together, the decision was made to exclude this item from analysis and should the RGQ be repeated, consideration would again be given to whether this item should be included or not.

## **Final factor solution**

The final factor solution presented in Chapter 8 was the end product of a number of exploratory phases. To decide which solution best fit the data, a number of criteria were used.

1. Firstly, all factors with eigenvalues greater than 1 were retained. This produced a 3 factor solution, which was then rotated using varimax rotation.<sup>8</sup>
2. Secondly, a scree plot was examined to see if other factors were evident. This suggested the presence of a fourth and potentially a fifth factor (depending on interpretation). The fourth factor had an eigenvalue just below 1 (0.96) and so was retained (and rotated as previously).
3. Finally, the rotated factors were examined to assess which solution was easiest to interpret.

The five factor solution described in Chapter 8 gave the clearest pattern of item loadings onto each factor and the most interpretable factors (see Chapter 8 for more detail). The proportion of variance explained by this solution was acceptable at 65%.

## **A2.14 Data analysis and reporting**

### **A2.14.1 Presentation of results**

In general, the commentary highlights differences that are statistically significant at the 95% level. This means that there is a 5 in 100 chance that the variation seen is simply due to random chance. It should be noted that statistical significance is not intended to imply substantive importance.

### **A2.14.2 Statistical packages and computing confidence intervals**

All survey data are estimates of the true proportion of the population sampled. With random sampling, it is possible to estimate the margin of error either side of each percentage, indicating a range within which the true value will fall.

These margins of error vary according to different features of a survey, including the percentage of the estimate for the sampled population, the number of people included in the sample, and the sample design.

Survey data are typically characterised by two principal design features: unequal probability of selection requiring sample weights, and sampling within clusters. Both of these features have been considered when presenting the 2010 survey results. Firstly, weighting was used to minimise response bias and ensure that the achieved sample was representative of the general population living in private households. Secondly, results have been analysed using the complex survey module in SPSS v15 and the survey module in STATA, which can account for the variability introduced through the use of a complex, clustered, survey design.

The survey module in STATA is designed to handle clustered sample designs and account for sample-to-sample variability when estimating standard errors, confidence intervals and performing significance testing. Given the relatively low prevalences of problem gambling estimates, the tabulate command was used to compute 95% confidence intervals for these estimates. The distinctive feature of the tabulate command is that confidence intervals for proportions are constructed using a logit transformation so that their end point always lies between 0 and 1. (The standard errors are exactly the same as those produced by the mean command).

## **Notes and references**

- 1 Ryan R, Judy M et al (2002). A comparison of an electronic version of the SF-36 General Health Questionnaire to the standard paper version, *Quality of Life Research*, 11, 19-26

- 2 Wright, DL., Aquilino WS, & Supple AJ. (1998). A comparison of computer-assisted and paper-and-pencil self-administered questionnaires in a survey on smoking, alcohol, and drug use. *Public Opinion Quarterly* 62, 331-353.
- 3 For more details on cognitive testing see Collins D. (2003). Pretesting survey instruments: An overview of cognitive methods in *Quality of Life Research: 12*. Kluwer Academic Publishers.
- 4 Williams and Volberg have demonstrated how survey title can influence the accuracy of results: Williams RJ & Volberg RA (2009). Impact of Survey Description, Administration Format, and Exclusionary Criteria on Population Prevalence Rates of Problem Gambling. *International Gambling Studies*, 9(2), 101-117.
- 5 Lesieur HR., & Rosenthal MD. (1993). *Analysis of pathological gambling for the Task Force on DSM-IV* in Widiger T., Frances A., Pincus H., Ross R (eds) (1993). Source book for the Diagnostic and Statistical Manual, Fourth edition: Volume Four, Washington D.C: American Psychiatric Association.
- 6 Wynne H. (2003). *Introducing the Canadian Problem Gambling Index, Canada*  
<http://www.gamblingresearch.org/download.sz/The%20CPGI%20V5%20-%20from%20Hal.pdf?docid=6446>
- 7 Time spent gambling per month was calculated for those who took part in one or more of the following activities at least once a month: bingo in person, bingo online, betting on horses, dogs, sports or other events, spread betting, playing on virtual gaming machines, slot machines, poker in a tournament, casino games in person, casino games online, online slot machine style games, or private betting. Those who played only the National Lottery, charity or other lotteries, bought scratchcards, or entered the football pools were not asked about time spent gambling. Regularly gambling on these four activities was included in the overall time spent calculation, but time spent was set to zero.
- 8 An oblimin rotation method was also tested, which gave very similar results.

# Appendix 3

## Questionnaire documentation

### APPENDIX 3: QUESTIONNAIRE DOCUMENTATION

#### Household Questionnaire

##### **IntroN**

First of all I'd like to collect some details about you and anyone else who lives here.

##### **Name**

RECORD THE FIRST NAME OF EACH MEMBER OF THE HOUSEHOLD.  
INTERVIEWER: FIRST NAME ENTERED SHOULD BE PERSON YOU ARE SPEAKING TO.

##### **Sex**

INTERVIEWER: Ask sex of (*name of respondent*) or just code.

- 1) Male
- 2) female

##### **AgeOf**

What was (*yours/name of respondent's*) age last birthday?

INTERVIEWER: If respondents refuse to give their age, or cannot, then give your best estimate.

##### **IF (AgeOf >=16) THEN**

###### **MarStat**

Are (*you/name of respondent*)..

INTERVIEWER: Ask or record.

Code first that applies.

- 1) Single, that is, never married
- 2) Married and living with husband/wife
- 3) A civil partner in a legally-recognised Civil Partnership
- 4) Married and separated from husband/wife
- 5) Divorced
- 6) Widowed
- 7) Spontaneous only - In a legally-recognised Civil Partnership and separated from his/her civil partner
- 8) Spontaneous only - Formerly a civil partner, the Civil Partnership is now legally dissolved.
- 9) Spontaneous only - A surviving civil partner: his/her partner having since died)

**IF (more than one person aged 16+ in household) AND (MarStat = single OR married and separated OR divorced OR widowed) THEN**

###### **LiveWith**

May I just check, (*are you/is name of respondent*) living with someone in the household as a couple?

- 1) Yes
- 2) No
- 3) Spontaneous only: Same sex couple

**ENDIF**

**ENDIF**

**IF more than 1 person in household THEN**

**R**

SHOWCARD A

INTERVIEWER: Code relationship of each household member to the others :-

What is (name of respondent's) relationship to (name)? Just tell me the number on this card.

- 1) Husband/Wife
- 2) Partner/Cohabitee
- 3) Natural son/daughter
- 4) Adopted son/daughter
- 5) Foster child
- 6) Stepson/stepdaughter
- 7) Son-in-law/daughter-in-law
- 8) Natural parent
- 9) Adoptive parent
- 10) Foster carer
- 11) Step-parent
- 12) Parent-in-law
- 13) Natural brother/sister
- 14) Half-brother/sister
- 15) Step-brother/sister
- 16) Adopted brother/sister
- 17) Foster brother/sister
- 18) Brother/sister-in-law
- 19) Grand-child
- 20) Grand-parent
- 21) Other relative
- 22) Other non-relative

**HigInc**

Can I just check, who has the highest income (from earnings, benefits, pensions and any other sources)?

INTERVIEWER: ENTER PERSON NUMBER - IF THEY HAVE SAME INCOME,

ENTER 17:

**IF (HigInc = 17) THEN**

**HigEld**

ENTER PERSON NUMBER OF THE ELDEST HOUSEHOLDER FROM THOSE WITH THE HIGHEST INCOME.

**ENDIF**

**ENDIF**

2

Asked of or about the Household Reference Person

**NHActiv**

SHOW CARD B:

Which of these descriptions applies to what (you were / respondent's name) was doing last week, that is in the seven days ending (date /last Sunday)

INTERVIEWER: Code first to apply. :

1. Going to school or college full-time (incl on vacation)
2. In paid employment or self-employed (or temporarily away)
3. On a Government scheme for employment training
4. Doing unpaid work for a business that you own, or that a relative owns
5. Waiting to take up paid work already obtained
6. Looking for paid work or a Government training scheme
7. Intending to look for work but prevented by temporary sickness or injury (CHECK MAX 28 DAYS)
8. Permanently unable to work because of long-term sickness or disability (USE ONLY FOR MEN OR WOMEN AGED 16-64)
9. Retired from paid work
10. Looking after home or family
11. Doing something else (specify)

**IF (NHActiv <> Job) OR NHActiv<> wait) THEN**

**HEverJob**

(Have you / Has respondent's name) ever been in paid employment or self-employed?:

1. Yes
2. No

**ENDIF**

**IF (HEverJob = Yes) OR (NHActiv = Job) OR (NHActiv = WAIT) THEN**

**HJobTitl**

What (/s / was) the name or title of the job?:

STRING[60]

**HwtMake**

What (do / does) the firm or organisation that (you / respondent's name) (work / worked) for mainly make or do?:

STRING[120]

**HwtWork**

What kind of work (do you)/(did respondent's name) do most of the time?:

STRING[50]

**HMatUsed**

IF RELEVANT: What materials or machinery (do you)/(did respondent's name) use?

IF NONE USED, WRITE IN NONE.:

STRING[50]

**HSkillNee**

What skills or qualifications (are/were) needed for the job?:

STRING[120]

**HEmploye**

(Are/were you) / (is/was respondent's name) READ OUT....:

1. an employee
2. or, self-employed?

3



**IF (HEmploy = Employee) THEN****HEmpStat***(Are/were you) / (is/was respondent's name) READ OUT...*

1. manager
2. foreman or supervisor
3. or other employee?

**HNEmployee**Including *(you/respondent's name)* about how many people *(are/were)* employed at the place where you/they work(ed)?:

1. 1 or 2
2. 3-24
3. 25-499
4. 500+

**ENDIF****IF (HEmploy = Self Employed) THEN****HSNEmp***(Do you / did respondent's name) have any employees?:*

1. None
2. 1-24
3. 25-499
4. 500+

**ENDIF****HFTIME***(Are/were you) / (is/was respondent's name) working full-time or part-time?*

FULL-TIME = MORE THAN 30 HOURS

PART-TIME = 30 HOURS OR LESS

**ENDIF****HHInc**

SHOW CARD C

Thinking of the income of your household as a whole, which of the groups on this card represents the total income of the whole household before deductions for income tax, National Insurance, etc? Just tell me the number on the card that applies to your household.

INTERVIEWER: Enter band number.

4

**Individual Questionnaire****Leisure Activities: To be asked face to face by interviewer****LeIntro**

The first few questions are about your leisure activities.

**Leisure****SHOWCARD D**

In a month, which of the following activities, if any, do you usually do?

Interviewer: code all that apply.

PROBE: What else?

1. Spend time with friends/family
2. Read for pleasure
3. Listen to music
4. Watch TV
5. Eat out at restaurants
6. Go to pubs/bars/clubs
7. Do DIY or gardening
8. Go shopping (to the high street or shopping centre)
9. Do sports/exercise
10. Betting or gambling
11. Do arts or crafts
12. Play a musical instrument
13. Go to the cinema, theatre or music concerts
14. Visit museums or galleries
15. Attend religious service/place of worship
16. Play computer games
17. Shop online
18. Online chat rooms/social networking sites
19. Browsing the internet
20. Other
21. None of these

**CASInt****SHOWCARD E**

Please look at the different activities listed on Showcard E. In a moment, I'll ask you to answer some questions for yourself about which, if any, of these you have done in the last 12 months. For these questions we would like you to read and answer the questions for yourself using the computer. This way no-one will know your answers. The computer is very easy to use

INTERVIEWER: PAUSE TO ALLOW RESPONDENT TIME TO LOOK AT SHOWCARD E.

1. CASI to be completed by respondent
2. CASI to be asked face to face by interviewer (ONLY TO BE USED EXCEPTIONAL CIRCUMSTANCES)
3. CASI refused

5

**IF (CASInt = CASI to be completed by respondent) THEN**

**CASInst**

The first set of questions are to show you how to answer the questions using the computer. For the majority of questions you just need to choose one answer from a list presented. Where other answer options are available, directions about what to do are shown on the screen.

**INTERVIEWER: HANDOVER LAPTOP AND EXPLAIN TO THE RESPONDENT HOW TO ANSWER THE QUESTIONS.**

**InPrac**

Have you ever used a computer before?

- Press 1 for Yes, press 2 for no then press enter (the key with the red sticker)
1. Yes
  2. No

**IF (Inprac = Yes) THEN**

**Prac1a**

Where have you used a computer before?

Please enter the numbers of ALL the places you have used a computer; press the space bar between numbers

1. At work
2. At my home
3. At another person's home
4. At some other place

**ENDIF**

**IF (Inprac = No) THEN**

**Prac1b**

Which of the following have you ever used?

Please enter the numbers of ALL the things you have ever used; press the space bar between numbers.

1. A telephone
2. A television
3. A bicycle
4. A typewriter
5. A radio or wireless

**ENDIF**

**Inprac2**

What was your age last birthday?

Please type in your age in years.  
16..100

**Inprac3**

Have you ever bought anything online? By online we mean using the internet through a computer, using mobile phone internet, WAP on mobile phone or accessing the internet through interactive TV.

Press 1 for Yes OR press 2 for no, then press enter (the key with the red sticker)

1. Yes
2. No

**ENDIF**

6

**Gambling behaviour in the past year**

**IF (CASInt = CASI to be completed by respondent) OR (CASInt = CASI to asked face to face by interviewer) THEN**

**IntroGY**

The next few questions are about whether you have taken part in any of the activities listed on showcard E in the last 12 months, that is since (date 1 year ago). Please press 1 and then <enter> to continue.

**Aia**

In the last 12 months, have you spent money on tickets for the National Lottery Draws (Lotto, Euromillions, Thunderball, Daily Play, Hotpicks)?

Include: Syndicates

Do not include: Scratchcards or betting on the Irish Lottery

1. Yes
2. No

**Alb**

In the last 12 months, have you bought any scratchcards?

Do not include: Newspaper or magazine scratchcards, or instant win games played online

1. Yes
2. No

**Aic**

In the last 12 months, have you spent money on tickets for a charity lottery or other lottery?

Include: charity lotteries for hospices, sports or social clubs

Do not include: betting on the Irish Lottery

1. Yes
2. No

**Aid**

In the last 12 months, have you spent money on bingo, including bingo played online?

Include: playing boards in a bingo club

Do not include: newspaper bingo tickets

1. Yes
2. No

**Aie**

In the last 12 months, have you spent money on the football pools?

Do not include: betting on football matches with a bookmaker

1. Yes
2. No

7

**Alk**

In the last 12 months, have you spent money betting on horse races?  
Include: betting online with a betting exchange or with a bookmaker.

1. Yes
2. No

**Alix**

In the last 12 months, have you spent money **betting on dog races**?  
Include: betting online with a betting exchange or with a bookmaker.

1. Yes
2. No

**Alm**

In the last 12 months, have you spent money betting on sports events?  
Include: betting online with a betting exchange or with a bookmaker.  
Do not include: private betting with friends/family/others or spread-betting

1. Yes
2. No

**Aln**

In the last 12 months, have you spent money betting on other events?  
Include: betting online with a betting exchange or with a bookmaker, betting on virtual horse/dog races, the Irish lottery, 49's,  
Do not include: private betting with friends/family/other people or spread-betting

1. Yes
2. No

**Alp**

In the last 12 months, have you spent money spread-betting?  
(In spread-betting you assume that the outcome of an event will be higher or lower than the bookmaker's prediction and you can lose more than your initial stake. The amount you win or lose depends on how right or wrong you are)

1. Yes
2. No

**Alq**

In the last 12 months, have you spent money on virtual gaming machines in a bookmaker's to bet on virtual roulette, poker, blackjack or other games?  
Please only include: machines played in a bookmaker's

Do not include: quiz machines, betting on virtual horse/dog races.

1. Yes
2. No

**Alf**

In the last 12 months, have you spent money on fruit/slot machines?  
Do not include: quiz machines, online fruit/slot machine style games

1. Yes
2. No

**Alh**

In the last 12 months, have you spent money playing poker in a pub tournament/league, or at a club?

Do not include: playing poker in a casino, online, or private games with friends/family/others

1. Yes
2. No

8

**Ali**

In the last 12 months, have you spent money on roulette, poker, cards or dice in a casino or online?

Include: live roulette played through a video machine in a casino  
Do not include: private games with friends/family/others

1. Yes
2. No

**Alj**

In the last 12 months, have you spent money on online fruit/slot machine style games or online instant win games?

Include: online National Lottery instant win games

Do not include: online bingo, online casino games or poker

1. Yes
2. No

**Alp**

In the last 12 months, have you spent money on private betting (sweepstakes, bets between friends) or gambling (playing cards or games for money) with friends, family or colleagues?

1. Yes
2. No

**Alq**

In the last 12 months, have you spent money on another form of gambling activity?

1. Yes
2. No

**IF (Alq=Yes) THEN****Alr**

Please describe the other gambling that you spent money on: WRITE IN

**ENDIF****Check1**

This screen shows which of the activities listed on Showcard E you have done in the last year.  
Is this correct?

1. Yes, it's correct
2. No, there's a mistake

**IF (Check1 = No) THEN****Check2**

Please ask the interviewer for help to change your answers

**ENDIF****ENDIF**

9

Frequency of gambling, mode of participation and gambling involvement

**IF (Ala = YES) THEN**

**NatLot1**

In the last 12 months, did you buy tickets for the National Lottery Draws (Lotto, Euromillions, Thunderball, Daily Play, Hopicks) in person, online, or both?

Include: Syndicates

Do not include: Scratchcards or betting on the Irish Lottery

1. In person (including syndicates or where someone has bought the ticket for you)
2. Online (including computer or mobile phone internet or WAP)
3. Both

**Natlot2**

In the last 12 months, how often have you spent money on tickets for National Lottery Draws (Lotto, Euromillions, Thunderball, Daily Play, Hopicks)

Include: Syndicates

Do not include: Scratchcards or betting on the Irish Lottery

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Natlot2 = about once a month or more) THEN**

**Natlot3**

In a month, how much money do you usually spend on tickets for the National Lottery Draws (Lotto, Euromillions, Thunderball, Daily Play, Hopicks)

1. £1 – £10 per month
2. £11 – £30 per month
3. £31 – £50 per month
4. £51 – £100 per month
5. £101 – £200 per month
6. £201 – £500 per month
7. £501 or more per month

**IF (Natlot2 = about once a month) OR (Natlot2=2 to 3 days per month)**

**THEN**

**Natlot4a**

On how many days per month do you usually play National Lottery Draws (Lotto, Euromillions, Thunderball, Daily Play, Hopicks)?

Please enter number of DAYS per month

**ENDIF**

**IF (Natlot2 = about once a week or more) THEN**

**Natlot4b**

On how many days per week do you usually play National Lottery Draws (Lotto, Euromillions, Thunderball, Daily Play, Hopicks)?

Please enter number of DAYS per week

**ENDIF**

**ENDIF**

10

**IF (Alb = Yes) THEN**

**Scratch2**

In the last 12 months, how often have you bought scratchcards?

Do not include: Newspaper or magazine scratchcards or instant win games played online

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Scratch2 = about once a month or more often) THEN**

**Scratch3**

In a month, how much money do you usually spend on scratchcards?

1. £1 – £10 per month
2. £11 – £30 per month
3. £31 – £50 per month
4. £51 – £100 per month
5. £101 – £200 per month
6. £201 – £500 per month
7. £501 or more per month

**IF (Scratch2 = about once a month) OR (Scratch2 = 2 or 3 days a month) THEN**

**Scratch4**

On how many days a month do you usually buy scratchcards?

Please enter number of DAYS per month

**ENDIF**

**IF (Scratch2 = about once a week or more) THEN**

**Scratchb**

On how many days a week do you usually buy scratchcards?

Please enter number of DAYS per week

**ENDIF**

**ENDIF**

**IF (Aic = Yes) THEN**

**OthLot1**

In the last 12 months, did you buy tickets for a charity lottery or other lottery in person, online, or both?

Include: charity lotteries for hospices, sports or social clubs  
Do not include: betting on the Irish Lottery

1. In person
2. Online (including computer or mobile internet, or WAP)
3. Both

11

**OthLot2**  
 In the last 12 months, how often have you spent money on tickets for a charity lottery or other lottery?  
 Include: charity lotteries for hospices, sports or social clubs  
 Do not include: betting on the Irish Lottery

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (OthLot2 = about once a month or more) THEN**

**OthLot3**  
 In a month, how much money do you usually spend on tickets for a charity lottery or other lottery?

1. £1 – £10 per month
2. £11 – £30 per month
3. £31 – £50 per month
4. £51 – £100 per month
5. £101 – £200 per month
6. £201 – £500 per month
7. £501 or more per month

**IF (OthLot2 = about once a month) OR (OthLot2 = 2 or 3 days a month) THEN**

**OthLot4a**

On how many days a month do you usually enter a charity lottery or other lottery?

Please enter number of DAYS per month

**ENDIF**

**IF (OthLot2 = about once a week or more)**

**OthLot4b**

On how many days a week do you usually enter a charity lottery or other lottery?

Please enter number of DAYS per week

**ENDIF**

**ENDIF**

**IF (Aid = Yes) THEN**

**Bingo1**

In the last 12 months, did you play bingo in person, online, or both?  
 Include: playing boards in a bingo club

1. In person
2. Online (including computer or mobile internet, or WAP)
3. Both

12

**IF (Bingo1 = In person) or (Bingo1 = Both) THEN**

**Bingo2**

In the last 12 months, how often have you spent money on bingo in person at a club, hall or at another venue?

Include: playing boards in a bingo club

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Bingo2 = about once a month or more) THEN**

**Bingo3**

In a month, how much money do you usually spend on bingo in person at a club, hall or at another venue?

Include: playing boards at a bingo club

1. £1 – £10 per month
2. £11 – £30 per month
3. £31 – £50 per month
4. £51 – £100 per month
5. £101 – £200 per month
6. £201 – £500 per month
7. £501 or more per month

**IF (Bingo2 = about once a month) OR (Bingo2 = 2 or 3 days a month) THEN**

**Bingo4a**

On how many days a month do you usually play bingo, in person at a club, hall or at another venue?

Please enter number of DAYS per month

1..31

**ENDIF**

**IF (Bingo2 = about once a week or more) THEN**

**Bingo4b**

On how many days a week do you usually play bingo, in person at a club, hall or at another venue?

Please enter number of DAYS per week

1..7

**ENDIF**

**Bingo5**

And on days when you play bingo, in person at a club, hall or at another venue, how long do you usually play for in a day?

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

**ENDIF**

13

ENDIF

**IF (Bingo1 = Online) or (Bingo1 = Both) THEN**

**Bing20**

In the last 12 months, how often have you spent money playing bingo online?

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Bing20 = about once a month or more) THEN**

**Bing30**

In a month, how much money do you usually spend playing bingo online?

1. £1 - £10 per month
2. £11 - £30 per month
3. £31 - £50 per month
4. £51 - £100 per month
5. £101 - £200 per month
6. £201 - £500 per month
7. £501 or more per month

**IF (Bing30 = about once a month) or (Bing30 = 2 or 3 days a month) THEN**

**Bing40a**

On how many days a month do you usually play bingo online?

Please enter number of DAYS per month

1..31

ENDIF

**IF (Bing30 = about once a week or more) THEN**

**Bing40b**

On how many days a week do you usually play bingo online?

Please enter number of DAYS per week

1..7

ENDIF

**Bing50**

And on days when you play bingo online, how long do you usually play for in a day?

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

ENDIF

ENDIF

14

**IF (Aik = Yes) THEN**

**Foot1**

In the last 12 months, did you buy the football pools entry in person, online, or both?

Do not include: betting on football matches with a bookmaker

1. In person
2. Online (including computer or mobile internet, or WAP)
3. Both

**Foot2**

In the last 12 months, how often have you spent money on the football pools?

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Foot2 = about once a month or more) THEN**

**Foot3**

In a month, how much money do you usually spend on football pools?

1. £1 - £10 per month
2. £11 - £30 per month
3. £31 - £50 per month
4. £51 - £100 per month
5. £101 - £200 per month
6. £201 - £500 per month
7. £501 or more per month

**IF (Foot2 = about once a month) OR (Foot2 = 2 or 3 days a month) THEN**

**Foot4a**

On how many days a month do you usually enter the football pools?

Please enter number of DAYS per month

1..31

ENDIF

**IF (Foot2 = about once a week or more) THEN**

**Foot4b**

On how many days a week do you usually enter the football pools?

Please enter number of DAYS per week

1..7

ENDIF

ENDIF

ENDIF

**IF (Aik = Yes) THEN**

**Horse1**

In the last 12 months, how did you bet on horse races?

Please select ALL that apply.

1. In person at a bookmakers
2. In person at the track
3. On the phone to the bookmakers
4. Online with a bookmaker
5. Online with a betting exchange

15

**Horse2**  
In the last 12 months, how often have you spent money betting on horse races?  
 1. Everyday/ almost every day  
 2. 4-5 days a week  
 3. 2-3 days a week  
 4. About once a week  
 5. 2-3 days a month  
 6. About once a month  
 7. 6-11 times a year  
 8. 1-5 times a year

**IF (Horse2 = about once a month or more) THEN**  
**Horse3**  
 In a month, how much money do you usually spend betting on horse races?  
 Include: money spent betting online with a betting exchange or with a bookmaker.  
 1. Less than £10 per month  
 2. £10 - £50 per month  
 3. £51 - £100 per month  
 4. £101 - £200 per month  
 5. £201 - £300 per month  
 6. £301 - £500 per month  
 7. £501 - £1000 per month  
 8. £1001 or more per month

**IF (Horse2 = about once a month) or (Horse2 = 2-3 days a month) THEN**  
**Horse4a**  
 On how many days a month do you usually bet on horse races?  
 Please enter number of DAYS per month:  
 1..31  
**ENDIF**

**IF (Horse2 = about once a week or more) THEN**  
**Horse4b**  
 On how many days a week do you usually bet on horse races?  
 Please enter number of DAYS per week:  
 1..7  
**ENDIF**

**Horse5**  
 And on days when you bet on horse races, how much time do you usually spend in a day planning and placing your bets?  
 1. Less than 30 minutes per day  
 2. More than 30 minutes, less than 1 hour per day  
 3. 1-2 hours per day  
 4. 2-3 hours per day  
 5. 3-4 hours per day  
 6. 4-6 hours per day  
 7. 6-8 hours per day  
 8. 8 hours or more per day  
**ENDIF**

16

**IF (Alix = Yes) THEN**  
**Dogs1**  
 In the last 12 months, how did you bet on dog races?  
 Please select ALL that apply.  
 1. In person at a bookmakers  
 2. In person at the track  
 3. On the phone to the bookmakers  
 4. Online with a bookmaker  
 5. Online with a betting exchange

**Dogs2**  
 In the last 12 months, how often have you spent money betting on dog races?  
 1. Everyday/ almost every day  
 2. 4-5 days a week  
 3. 2-3 days a week  
 4. About once a week  
 5. 2-3 days a month  
 6. About once a month  
 7. 6-11 times a year  
 8. 1-5 times a year

**IF (Dogs1 = about once a month or more) THEN**  
**Dogs3**  
 In a month, how much money do you usually spend betting on dog races?  
 Include: money spent online with a betting exchange or with a bookmaker.  
 1. £1 - £10 per month  
 2. £11 - £30 per month  
 3. £31 - £50 per month  
 4. £51 - £100 per month  
 5. £101 - £200 per month  
 6. £201 - £500 per month  
 7. £501 or more per month

**IF (Dogs1 = about once a month) or (Dogs1 = 2-3 days a month) THEN**  
**Dogs4a**  
 On how many days a month do you usually bet on dog races?  
 Please enter number of DAYS per month:  
 1..31  
**ENDIF**

**IF (Dogs1 = about once a week) THEN**  
**Dogs4b**  
 On how many days a week do you usually bet on dog races?  
 Please enter number of DAYS per week:  
 1..7  
**ENDIF**

17

#### Dogs5

And on days when you bet on dog races, how much time do you usually spend in a day planning and placing your bets?  
Include time spent online with a betting exchange or with a bookmaker.

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

ENDIF

ENDIF

IF (Aim = Yes) THEN

**Sport1**

In the last 12 months, how did you bet on sports events?

Please select ALL that apply.

1. In person at a bookmakers
2. In person at the track
3. On the phone to the bookmakers
4. Online with a bookmaker
5. Online with a betting exchange

**Sport2**

In the last 12 months, how often have you spent money betting on sports events?

Do not include: private betting with friends/family/others, or spread-betting

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

IF (Sport2 = about once a month or more) THEN

**Sport3**

In a month, how much money do you usually spend betting on sports events?

Do not include: money spent betting privately with friends/family/others, or spread-betting

1. Less than £10 per month
2. £10 - £50 per month
3. £51 - £100 per month
4. £101 - £200 per month
5. £201 - £300 per month
6. £301 - £500 per month
7. £501 - £1000 per month
8. £1001 or more per month

18

IF (Sport2 = about once a month) or (Sport2 = 2-3 days a month) THEN

**Sport4a**

On how many days a month do you usually bet on sports events?  
Do not include: private betting with friends/family/others, or spread-betting

Please enter number of DAYS per month:

1..31

ENDIF

IF (Sport2 = about once a week or more) THEN

**Sport4b**

On how many days a week do you usually bet on sports events?

Do not include: private betting with friends/family/others, or spread-betting

Please enter number of DAYS per week:

1..7

ENDIF

**Sports5**

And on the days when you bet on sports events, how much time do you spend in a day planning and placing your bets?

Do not include time spent betting privately with friends/family/others, or spread-betting.

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

ENDIF

ENDIF

IF (Aim = Yes) THEN

**Othbet1**

In the last 12 months, how did you bet on other events?

Include: betting on virtual horse/dog races, Irish Lottery, 49s

Do not include: private betting with friends/family/others, or spread betting

Please select ALL that apply.

1. In person at a bookmakers
2. In person at the track
3. On the phone to the bookmakers
4. Online with a bookmaker
5. Online with a betting exchange

19



**Othbet2**  
 In the last 12 months, how often have you spent money betting on other events?  
 Include: betting on virtual horse/dog races, Irish lottery, 49s  
 Do not include: private betting with friends/family/other people, spread-betting

1. Every day/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Othbet2 = about once a month or more) THEN**

**Othbet3**  
 In a month, how much money do you usually spend betting on other events?  
 Include: money spent betting on virtual horse/dog races, the Irish Lottery, 49s  
 Do not include: money spent private betting with friends/family/other people, or spread-betting

1. £1 - £10 per month
2. £11 - £30 per month
3. £31 - £50 per month
4. £51 - £100 per month
5. £101 - £200 per month
6. £201 - £500 per month
7. £501 or more per month

**IF (Othbet2 = about once a month) or (Othbet2 = 2-3 days a month) THEN**

**Othbet4a**  
 On how many days a month do you usually bet on other events?  
 Please enter number of DAYS per month:

1..31

**ENDIF**

**IF (Othbet2 = about once a week or more) THEN**

**Othbet4b**  
 On how many days a week do you usually bet on other events?  
 Please enter number of DAYS per week:

1..7

**ENDIF**

**Othbet5**  
 And on the days when you bet on other events, how much time do you spend in a day planning and placing your bets?  
 Do not include time spent private betting with friends/family/other people, spread-betting

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

**ENDIF**

20

**IF (Alo = Yes) THEN**

**Spread1**  
 In the last 12 months, what did you spread-bet on? Was it...

1. ...financial markets,
2. ...sports events,
3. or both?

**Spread2**  
 In the last 12 months, how often have you spent money on spread-betting?

1. Every day/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Spread2 = about once a month or more) THEN**

**Spread3**  
 In a month, how much money do you usually spend on spread-betting?

1. Less than £10 per month
2. £10 - £50 per month
3. £51 - £100 per month
4. £101 - £200 per month
5. £201 - £300 per month
6. £301 - £500 per month
7. £501 - £1000 per month
8. £1001 or more per month

**IF (Spread2 = about once a month) or (Spread2 = 2-3 days a month) THEN**

**Spread4a**  
 On how many days a month do you usually spread-bet?  
 Please enter number of DAYS per month:

1..31

**ENDIF**

**IF (Spread2 = about once a week or more) THEN**

**Spread4b**  
 On how many days a week do you usually spread-bet?  
 Please enter number of DAYS per week:

1..7

**ENDIF**

**Spread5**  
 And on days when you spread-bet, how much time do you usually spend in a day planning and placing your bets?

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

21

**ENDIF**  
**ENDIF**

**IF (Alg = Yes) THEN**  
**Virgam1**

In the last 12 months, which games did you bet on using a virtual gaming machine in a bookmakers?  
Do not include: quiz machines, virtual horse/dog races  
Please select all that apply.

1. Roulette,
2. Poker
3. Blackjack
4. Jackpot games (eg, Rainbow Riches, Mummy Money, Neptune's Treasure or Little Devil Slotto etc)
5. Other fruit/slot machine style games

**Virgam2**

In the last 12 months, how often have you spent money on Virtual Gaming Machines in a bookmaker's to bet on virtual roulette, poker or blackjack or other games?

1. Every day/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Virgam2 = about once a month or more) THEN**

**Virgam3**

In a month, how much money do you usually spend on Virtual Gaming Machines in a bookmaker's to bet on roulette, poker, blackjack or other games?

Do not include: money spent on quiz machines or betting on virtual horse/dog races.

1. Less than £10 per month
2. £10 - £50 per month
3. £51 - £100 per month
4. £101 - £200 per month
5. £201 - £300 per month
6. £301 - £500 per month
7. £501 - £1000 per month
8. £1001 or more per month

**IF (Virgam2 = about once a month) or (Virgam2 = 2-3 days a month) THEN**  
**Virgam4a**

On how many days a month do you usually bet on Virtual Gaming Machines in a bookmaker's

Please enter number of DAYS per month:  
1..31

**ENDIF**

**IF (Virgam2 = about once a week or more) THEN**  
**Virgam4b**

On how many days a week do you usually bet on Virtual Gaming Machines in a bookmaker's  
Please enter number of DAYS per week:  
1..7

**ENDIF**

**Virgam5**

And on days when you bet on virtual gaming machines in a bookmakers, how long do you usually do this for in a day?

Please only include time spent playing machines in a bookmaker's.

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

**ENDIF**

**IF (Aif = Yes) THEN**  
**Fruit1**

In the last 12 months, where did you play fruit/slot machines?

Do not include: quiz machines, online fruit/slot machine style games  
Please select ALL that apply.

1. Pub or bar
2. Amusement arcade
3. Bingo club
4. Bookmaker's
5. Sports or social club
6. Casino
7. Motorway service station
8. Somewhere else

**Fruit2**

In the last 12 months, how often have you spent money on fruit/slot machines?

Do not include: quiz machines, online fruit/slot machine style games

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Fruit2 = about once a month or more) THEN****Fruit3**

In a month, how much money do you usually spend on fruit/slot machines?

1. £1 - £10 per month
2. £11 - £30 per month
3. £31 - £50 per month
4. £51 - £100 per month
5. £101 - £200 per month
6. £201 - £500 per month
7. £501 or more per month

**IF (Fruit2 = about once a month) or (Fruit2 = 2-3 days a month) THEN****Fruit4a**

On how many days a month do you usually play fruit/slot machines?

Please enter number of DAYS per month:

1..31

**ENDIF****IF (Fruit2 = about once a week) THEN****Fruit4b**

On how many days a week do you usually play fruit/slot machines?

Please enter number of DAYS per week.

1..7

**ENDIF**

**Fruit5**  
And on days when you play fruit/slot machines, how long do you usually play for in a day?

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

**ENDIF****ENDIF****IF (Ath = Yes) THEN****Poker2**

In the last 12 months, how often have you spent money playing poker in a pub tournament/league or at a club?

Do not include: any poker played online, in a casino, or privately with friends/family/others

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Poker2 = about once a month or more) THEN****Poker3**

In a month, how much money do you usually spend on poker in a pub tournament/league or at a club?

Do not include: money spent on poker played on line or in a casino or privately with friends/family/others

1. Less than £10 per month
2. £10 - £50 per month
3. £51 - £100 per month
4. £101 - £200 per month
5. £201 - £300 per month
6. £301 - £500 per month
7. £501 - £1000 per month
8. £1001 or more per month

**IF (Poker2 = about once a month) or (Poker2 = 2-3 days a month) THEN****Poker4a**

On how many days a month do you usually spend money on poker in a pub tournament/league or at a club?

Do not include: any poker played online or in a casino, or privately with friends/family/others

Please enter number of DAYS per month:

1..31

**ENDIF****IF (Poker2 = about once a week or more) THEN****Poker4b**

On how many days a WEEK do you usually spend money on poker in a pub tournament/league or at a club?

Do not include: any poker played online or in a casino, or privately with friends/family/others

Please enter number of DAYS per WEEK:

1..7

**ENDIF****Poker5**

And on days when you play poker in a pub tournament/league or at a club, how long do you play poker for in a day?

Do not include time spent playing poker online, or in a casino, or privately with friends/family/others

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day.

**ENDIF****ENDIF**

**IF (Ali = Yes) THEN**

**Casino1**

In the last 12 months, did you play roulette, poker, cards or dice in a casino, online or both?

- Include: live roulette played through a video machine in a casino
1. In person at a casino
  2. Online (including computer or mobile internet, or WAP)
  3. Both

**IF (Casino1 = In person) or (Casino1 = Both) THEN**

**Casp1**

In the last 12 months, which games did you play in a casino?

1. Roulette
2. Poker played in a poker room (against other people)
3. Poker played against the banker/dealer
4. Blackjack
5. Dice
6. Punto Banco
7. Other games

**Casp2**

In the last 12 months, how often have you spent money on roulette, poker, cards or dice in a casino?

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Casp2 = about once a month or more) THEN**

**Casp3**

In a month, how much money do you usually spend on roulette, poker, cards or dice in a casino?

Include: money spent on 'live' roulette played through a video machine.

1. Less than £10 per month
2. £10 - £50 per month
3. £51 - £100 per month
4. £101 - £200 per month
5. £201 - £300 per month
6. £301 - £500 per month
7. £500 - £1000 per month
8. £1001 or more per month

**IF (Casp2 = about once a month) or (Casp2 = 2-3 days a month) THEN**

**Casp4a**

On how many days a month do you usually spend money on roulette, poker cards or dice in a casino?

Please enter number of DAYS per month

1...31

**ENDIF**

**IF (Casp2 = about once a week or more) THEN**

**Casp4b**

On how many days a week do you usually spend money on roulette, poker cards or dice in a casino?

Please enter number of DAYS per week

1..7

**ENDIF**

**Casp5**

And on days when you play roulette, poker, cards or dice in a casino, how long do you usually play for in a day?

Include time spent on 'live' roulette played through a video machine.

Please only include time spent playing casino games when in the casino

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

**ENDIF**

**ENDIF**

**IF (Casino1 = online) or (Casino1 = both) THEN**

**Caso1**

In the last 12 months, which games did you play online?

1. Roulette
2. Poker played against other people
3. Poker played against the banker/dealer/computer
4. Blackjack
5. Dice
6. Punto Banco
7. Other games.

**Caso2**

In the last 12 months, how often have you spent money playing roulette, poker, cards or dice online?

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Caso2 = about once a month or more) THEN****Caso3**

In a month, how much money do you usually spend playing roulette, poker, cards or dice online?

1. Less than £10 per month
2. £10 - £50 per month
3. £51 - £100 per month
4. £101 - £200 per month
5. £201 - £300 per month
6. £301 - £500 per month
7. £500 - £1000 per month
8. £1001 or more per month

**IF (Caso2 = about once a month) or (Caso2 = 2-3 days a month) THEN**

**Caso4a**

On how many days a month do you usually play roulette, poker, cards or dice online?

Please enter number of DAYS per month

1..31

**ENDIF**

**IF (Caso2 = about once a week or more) THEN**

**Caso4b**

On how many days a week do you usually play roulette, poker, cards or dice online?

Please enter number of DAYS per week

1..7

**ENDIF**

**Caso5**

And on days when you play roulette, poker, cards or dice online, how long do you usually play for in a day?

Please only include time spent playing casino games online for money

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

**ENDIF**

**ENDIF**

**ENDIF**

28

**IF (Aij = Yes) THEN****OthOn2**

In the last 12 months, how often have you spent money on online fruit/slot machine style games, or online instant win games?

Include: online National Lottery instant win games

Do not include: online bingo or online casino games/poker

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (OthOn2 = about once a month or more) THEN**

**OthOn3**

In a month, how much money do you usually spend on online fruit /slot machine style games or online instant win games?

Include: money spent on online National Lottery instant win games

Do not include: money on playing online bingo or online casino games/poker

1. £1 - £10 per month
2. £11 - £30 per month
3. £31 - £50 per month
4. £51 - £100 per month
5. £101 - £200 per month
6. £201 - £500 per month
7. £501 or more per month

**IF (OthOn2 = about once a month) or (OthOn2 = 2-3 days a month) THEN**

**OthOn4a**

On how many days a month do you usually play online fruit/slot machine style games or online instant win games?

Please enter number of DAYS per month:

1..31

**ENDIF**

**IF (OthOn2 = about once a week or more) THEN**

**OthOn4b**

On how many days a week do you usually play online fruit/slot machine style games or online instant win games?

Please enter number of DAYS per week:

1..7

**ENDIF**

29

**OthOn5**  
 And on days when you play online fruit/slot machine style games or online instant win games, how long do you usually play for in a day?  
 Please only include time spent playing casino games online for money.

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

**ENDIF**

**IF (Alp = Yes) THEN**  
**Privat2**  
 In the last 12 months, how often have you spent money on private betting (sweepstakes, bets between friends) or gambling (playing cards or games for money) with friends, family or colleagues?

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (Privat2 = about once a month or more) THEN**  
**Privat3**  
 In a month, how much money do you usually spend on private betting (sweepstakes, bets between friends) or gambling (playing cards or games for money) with friends, family or colleagues?

1. £1 - £10 per month
2. £11 - £30 per month
3. £31 - £50 per month
4. £51 - £100 per month
5. £101 - £200 per month
6. £201 - £500 per month
7. £501 or more per month

**IF (Privat2 = about once a month) or (Privat2 = 2-3 days a week) THEN**  
**Privat4a**  
 On how many days a month do you usually bet privately (sweepstakes, bets between friends) or gamble (playing cards or games for money) with friends, family or colleagues?  
 Please enter number of DAYS per month:  
 1...31

**ENDIF**

30

**IF (Privat2 = about once a week or more) THEN**  
**Privat4b**  
 On how many days a week do you usually bet privately (sweepstakes, bets between friends) or gamble (playing cards or games for money) with friends, family or colleagues?  
 Please enter number of DAYS per week:  
 1...31

**ENDIF**

**Privat5**  
 And on days when you bet privately or gamble with friends, family or colleagues, how much time in a day do you usually spend doing this?

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 2-3 hours per day
5. 3-4 hours per day
6. 4-6 hours per day
7. 6-8 hours per day
8. 8 hours or more per day

**ENDIF**

**IF (Alq = Yes) THEN**  
**OthGam1**  
 You mentioned that you had done (name of activity that respondent entered) in the last 12 months, how did you spend money on this activity?  
 Please select ALL that apply?

1. In person
2. Online (including computer or mobile internet, or WAP)
3. Both

**OthGam2**  
 In the last 12 months, how often have you spent money on this activity?

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**IF (OthGam2 = about once a month or more) THEN**  
**OthGam4**  
 In a month, how much money do you usually spend on this activity?

1. £1 - £10 per month
2. £11 - £30 per month
3. £31 - £50 per month
4. £51 - £100 per month
5. £101 - £200 per month
6. £201 - £500 per month
7. £501 or more per month

31

**IF (OthGam2 = about once a month) or (OthGam2 = 2-3 days a month)**

**THEN**

**OthGam3a**

On how many days a month do you usually do this activity?  
Please enter number of DAYS per month:

1..31

**ENDIF**

**IF (OthGam2 = about once a week or more) THEN**

**OthGam3b**

On how many days a week do you usually do this activity?  
Please enter number of DAYS per week:

1..7

**ENDIF**

**OthGam5**

And on days when you do this activity, how much time do you usually spend in a day doing this?

1. Less than 30 minutes per day
2. More than 30 minutes, less than 1 hour per day
3. 1-2 hours per day
4. 3-4 hours per day
5. 5-6 hours per day
6. 7-8 hours per day
7. 9-12 hours per day
8. 13 hours per day or more

**ENDIF**

**ENDIF**

**IF (Horse1 = online OR Dogs1 = online OR Sports1 = online OR Othbet1 = online) THEN**

**Online1a**

You mentioned that you've done the following activities online in the last 12 months.  
(List of betting activities undertaken online)

All together, in the last 12 months how often have you used online methods, including WAP and interactive TV, with a bookmaker or betting exchange.

1. Every day/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**ENDIF**

**IF (Bingo1 = Online or Both OR Casino1 = Online or Both OR Aij = Yes) THEN**

**Online1b**

You mentioned that you've done the following activities online in the last 12 months.  
(List of other gambling activities undertaken online)

All together, in the last 12 months how often have you gambled online on <list activities>?

1. Everyday/ almost every day
2. 4-5 days a week
3. 2-3 days a week
4. About once a week
5. 2-3 days a month
6. About once a month
7. 6-11 times a year
8. 1-5 times a year

**ENDIF**

**IF (respondent has done any online gambling in past year) THEN**

**Online2**

How many different accounts do you have online gambling or betting exchanges which you currently use?

Please enter total number of accounts.

0..30

**ENDIF**

**Gambling behaviour in the last 7 days**

**Inwk**

The next few questions are about things you may have done in the last 7 days.

**IF (Ala = Yes) THEN**

**Nat7mon**

In the last 7 days, have you spent money on tickets for the National Lottery Draws (Lotto, Euromillions, Thunderball, Daily Play, Hotpicks)?

Include: Syndicates

Do not include: Scratchcards or betting on the Irish Lottery

1. Yes
2. No

**IF (Nat7Mon = Yes) THEN**

**Nat7how**

How or where did you buy tickets for the National Lottery Draws (Lotto, Euromillions, Thunderball, Daily Play, Hotpicks) in the last 7 days?

Please select ALL that apply.

1. At a shop
2. As part of a syndicate
3. Online (including computer or mobile phone internet or WAP)

**ENDIF**

**ENDIF**

<p><b>IF (A1b = Yes) THEN</b>  <b>Scr7mon</b>            In the last 7 days, have you bought any scratchcards?            Do not include: Newspaper or magazine scratchcards, or instant win games played online            1. Yes            2. No</p> <p><b>IF (Scr7mon = Yes) THEN</b>  <b>Scr7how</b>            How or where did you buy scratchcards in the last 7 days?            Please select ALL that apply.            1. At a shop            2. Online (including computer or mobile phone internet or WAP)            3. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1c = Yes) THEN</b>  <b>Olot7mon</b>            In the last 7 days, have you spent money on tickets for a charity lottery or other lottery?            Include: charity lotteries for hospices, sports or social clubs            Do not include: betting on the Irish Lottery            1. Yes            2. No</p> <p><b>IF (Olot7mon = Yes) THEN</b>  <b>Olot7how</b>            How or where did you buy charity lottery or other lottery tickets in the last 7 days?            Please select ALL that apply.            1. At a shop            2. Lottery dispenser            3. Friend, family or colleague            4. Online (including computer or mobile phone internet or WAP)            5. Direct Debit            6. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1d = Yes) THEN</b>  <b>Bing7mon</b>            In the last 7 days, have you spent money playing bingo, including bingo played online?            Include: playing boards in a bingo club            Do not include: newspaper bingo tickets            1. Yes            2. No</p>	<p><b>IF (A1b = Yes) THEN</b>  <b>Scr7mon</b>            In the last 7 days, have you bought any scratchcards?            Do not include: Newspaper or magazine scratchcards, or instant win games played online            1. Yes            2. No</p> <p><b>IF (Scr7mon = Yes) THEN</b>  <b>Scr7how</b>            How or where did you buy scratchcards in the last 7 days?            Please select ALL that apply.            1. At a shop            2. Online (including computer or mobile phone internet or WAP)            3. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1c = Yes) THEN</b>  <b>Olot7mon</b>            In the last 7 days, have you spent money on tickets for a charity lottery or other lottery?            Include: charity lotteries for hospices, sports or social clubs            Do not include: betting on the Irish Lottery            1. Yes            2. No</p> <p><b>IF (Olot7mon = Yes) THEN</b>  <b>Olot7how</b>            How or where did you buy charity lottery or other lottery tickets in the last 7 days?            Please select ALL that apply.            1. At a shop            2. Lottery dispenser            3. Friend, family or colleague            4. Online (including computer or mobile phone internet or WAP)            5. Direct Debit            6. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1d = Yes) THEN</b>  <b>Bing7mon</b>            In the last 7 days, have you spent money playing bingo, including bingo played online?            Include: playing boards in a bingo club            Do not include: newspaper bingo tickets            1. Yes            2. No</p>
<p><b>IF (A1b = Yes) THEN</b>  <b>Scr7mon</b>            In the last 7 days, have you bought any scratchcards?            Do not include: Newspaper or magazine scratchcards, or instant win games played online            1. Yes            2. No</p> <p><b>IF (Scr7mon = Yes) THEN</b>  <b>Scr7how</b>            How or where did you buy scratchcards in the last 7 days?            Please select ALL that apply.            1. At a shop            2. Online (including computer or mobile phone internet or WAP)            3. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1c = Yes) THEN</b>  <b>Olot7mon</b>            In the last 7 days, have you spent money on tickets for a charity lottery or other lottery?            Include: charity lotteries for hospices, sports or social clubs            Do not include: betting on the Irish Lottery            1. Yes            2. No</p> <p><b>IF (Olot7mon = Yes) THEN</b>  <b>Olot7how</b>            How or where did you buy charity lottery or other lottery tickets in the last 7 days?            Please select ALL that apply.            1. At a shop            2. Lottery dispenser            3. Friend, family or colleague            4. Online (including computer or mobile phone internet or WAP)            5. Direct Debit            6. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1d = Yes) THEN</b>  <b>Bing7mon</b>            In the last 7 days, have you spent money playing bingo, including bingo played online?            Include: playing boards in a bingo club            Do not include: newspaper bingo tickets            1. Yes            2. No</p>	<p><b>IF (A1b = Yes) THEN</b>  <b>Scr7mon</b>            In the last 7 days, have you bought any scratchcards?            Do not include: Newspaper or magazine scratchcards, or instant win games played online            1. Yes            2. No</p> <p><b>IF (Scr7mon = Yes) THEN</b>  <b>Scr7how</b>            How or where did you buy scratchcards in the last 7 days?            Please select ALL that apply.            1. At a shop            2. Online (including computer or mobile phone internet or WAP)            3. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1c = Yes) THEN</b>  <b>Olot7mon</b>            In the last 7 days, have you spent money on tickets for a charity lottery or other lottery?            Include: charity lotteries for hospices, sports or social clubs            Do not include: betting on the Irish Lottery            1. Yes            2. No</p> <p><b>IF (Olot7mon = Yes) THEN</b>  <b>Olot7how</b>            How or where did you buy charity lottery or other lottery tickets in the last 7 days?            Please select ALL that apply.            1. At a shop            2. Lottery dispenser            3. Friend, family or colleague            4. Online (including computer or mobile phone internet or WAP)            5. Direct Debit            6. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1d = Yes) THEN</b>  <b>Bing7mon</b>            In the last 7 days, have you spent money playing bingo, including bingo played online?            Include: playing boards in a bingo club            Do not include: newspaper bingo tickets            1. Yes            2. No</p>

<p><b>IF (Bing7Mon = Yes) THEN</b>  <b>Bing7how</b>            How or where have you played bingo, including bingo played online in the last 7 days?            Please select ALL that apply.            1. Bingo club            2. Amusement centre/arcade            3. At a sports or social club            4. At a church hall            5. Pub or bar            6. Online (including computer or mobile phone internet or WAP)            7. Interactive TV            8. By sending SMS / text            9. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1e = Yes) THEN</b>  <b>Foot7mon</b>            In the last 7 days, have you spent money on football pools?            Do not include: betting on football matches with a bookmaker            1. Yes            2. No</p> <p><b>IF (Foot7mon = Yes) THEN</b>  <b>Foot7how</b>            How or where did you buy your entries to the football pools?            Please select ALL that apply            1. Pools collector            2. At a shop            3. By post            4. In person at a bookmakers            5. At work            6. Online (including computer or mobile phone internet or WAP)            7. Interactive TV            8. By sending SMS / text            9. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1f = Yes) THEN</b>  <b>Hrse7mon</b>            In the last 7 days, have you spent money betting on horse races?            Include: betting online with a betting exchange or bookmaker.            1. Yes            2. No</p>	<p><b>IF (Bing7Mon = Yes) THEN</b>  <b>Bing7how</b>            How or where have you played bingo, including bingo played online in the last 7 days?            Please select ALL that apply.            1. Bingo club            2. Amusement centre/arcade            3. At a sports or social club            4. At a church hall            5. Pub or bar            6. Online (including computer or mobile phone internet or WAP)            7. Interactive TV            8. By sending SMS / text            9. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1e = Yes) THEN</b>  <b>Foot7mon</b>            In the last 7 days, have you spent money on football pools?            Do not include: betting on football matches with a bookmaker            1. Yes            2. No</p> <p><b>IF (Foot7mon = Yes) THEN</b>  <b>Foot7how</b>            How or where did you buy your entries to the football pools?            Please select ALL that apply            1. Pools collector            2. At a shop            3. By post            4. In person at a bookmakers            5. At work            6. Online (including computer or mobile phone internet or WAP)            7. Interactive TV            8. By sending SMS / text            9. Somewhere else / another way</p> <p><b>ENDIF</b></p> <p><b>IF (A1f = Yes) THEN</b>  <b>Hrse7mon</b>            In the last 7 days, have you spent money betting on horse races?            Include: betting online with a betting exchange or bookmaker.            1. Yes            2. No</p>
---	---



**IF (Hrse7mon = Yes) THEN****Hrse7how**

How or where did you bet on horse races in the last 7 days?

Please select ALL that apply.

1. In person at a bookmakers
2. In person at the track
3. On the phone to the bookmakers
4. Online (including computer or mobile phone internet or WAP)
5. Interactive TV
6. By sending a text (SMS)
7. Somewhere else / another way

**IF (Hrse7how = online) THEN****Hrs7bet**

Was that online with a betting exchange, a bookmaker or both?

1. Betting exchange
2. Bookmaker
3. Both

**ENDIF**

**ENDIF**

**IF (Alix = Yes) THEN****Dog7mon**

In the last 7 days, have you spent money betting on dog races?

Include: betting online with a betting exchange or bookmaker.

1. Yes
2. No

**if (Dog7mon = Yes) THEN****Dog7how**

How or where did you bet on dog races in the last 7 days?

Please select ALL that apply.

1. In person at a bookmakers
2. In person at the track
3. On the phone to the bookmakers
4. Online (including computer or mobile phone internet or WAP)
5. Interactive TV
6. By sending text (SMS)
7. Somewhere else / another way

**IF (Dog7how = online) THEN****Dog7bet**

Was that online with a betting exchange, a bookmaker or both?

1. Betting exchange
2. Bookmaker
3. Both

**ENDIF**

**ENDIF**

**IF (AIn = Yes) THEN****Sprt7mon**

In the last 7 days, have you spent money betting on sports events?

Include: betting online with a betting exchange or bookmaker.

Do not include: private betting with friends/family/other people or spread-betting

1. Yes
2. No

**IF (Sprt7mon = Yes) THEN****Sprt7how**

How or where did you bet on sports events in the last 7 days?

Please select ALL that apply.

1. In person at a bookmakers
2. In person at the venue
3. On the phone to the bookmakers
4. Online (including computer or mobile phone internet or WAP)
5. Interactive TV
6. By sending a text (SMS)
7. Somewhere else / another way

**IF (sprt7how = Online) THEN****Sprt7bet**

Was that online with a betting exchange, a bookmaker or both?

1. Betting exchange
2. Bookmaker
3. Both

**ENDIF**

**ENDIF**

**IF (AIn = Yes) THEN****Bet7mon**

In the last 7 days, have you spent money betting on other events?

Include: betting online with a betting exchange or bookmaker, betting on virtual horse/dog races, the Irish Lottery, 49s.

Do not include: private betting with friends/family/other people or spread-betting

1. Yes
2. No

**IF (Bet7mon=yes) THEN****Bet7how**

How or where did you bet on other events in the last 7 days?

Please select ALL that apply.

1. In person at a bookmakers
2. In person at the track
3. On the phone to the bookmakers
4. Online (including computer or mobile phone internet or WAP)
5. Interactive TV
6. By sending text (SMS)
7. Somewhere else / another way

**IF (Bet7How = Online) THEN**

**Bet7bet**

Was that online with a betting exchange, a bookmaker or both?

1. Betting exchange
2. Bookmaker
3. Both

**ENDIF**

**ENDIF**

**IF (Alo = Yes) THEN**

**Spd7mon**

In the last 7 days, have you spent money on spread-betting?  
(In spread-betting you assume that the outcome of an event will be higher or lower than the bookmaker's prediction and you can lose more than your initial stake. The amount you win or lose depends on how right or wrong you are)

1. Yes
2. No

**IF (Spd7mon) THEN**

**Spd7how**

How did you spread-bet in the last 7 days?

Please select ALL that apply.

1. In person
2. Online (including computer or mobile internet, or WAP)
3. Both

**ENDIF**

**ENDIF**

**IF (Alg = Yes) THEN**

**Vgm7mon**

In the last 7 days, have you spent any money on virtual gaming machines in a bookmaker's to bet on virtual roulette, poker or blackjack or other games?

Please only include: machines played in a bookmaker's.

Do not include: quiz machines, betting on virtual horse/dog races.

1. Yes
2. No

**IF (vgm7mon = Yes) THEN**

**Vgm7how**

Which games did you bet on in the last 7 days?

Please select ALL that apply.

1. Roulette
2. Poker
3. Blackjack
4. Jackpot games (e.g. Rainbow Riches, Mummy Money, Neptune's Treasure, Little Devil, Slotto etc)
5. Other fruit/slot machine style games

**ENDIF**

**ENDIF**

**IF (Aif = Yes) THEN**

**Fruit7m**

In the last 7 days, have you spent any money playing fruit/slot machines?

Do not include: quiz machines, online fruit/slot machine style games

1. Yes
2. No

**IF (Fruit7mon = Yes) THEN**

**Fruit7h**

Where did you play fruit / slot machines in the last 7 days?

Please select ALL that apply.

1. Pub or bar
2. Bookmaker's shop
3. Amusement arcade
4. Casino
5. Bingo club
6. Sports or social club
7. Motorway service station
8. Somewhere else/another way

**ENDIF**

**ENDIF**

**IF (Aih = Yes) THEN**

**Poke7mon**

In the last 7 days, have you spent money on poker in a pub tournament/league or at a club?

Do not include: any poker played online, playing poker in a casino, or privately with friends/family/others

1. Yes
2. No

**IF (Poke7mon) THEN**

**Poke7how**

How or where did you spend money playing poker in the last 7 days?

Please select ALL that apply.

1. In a pub
2. In a club
3. Somewhere else

**ENDIF**

**ENDIF**

**IF (Ali = Yes) THEN**

**Cas7mon**

In the last 7 days, have you spent money on roulette, poker, cards or dice in a casino or online?

Include: live roulette played through a video machine in a casino

Do not include: poker played privately with friends/family/others

1. Yes
2. No

**IF (Cas7mon = Yes) THEN**

**Cas7How**

In the last 7 days, did you play these in a casino, online, or both?

1. In a casino
2. Online
3. Both

**IF (Cas7how = in a casino or both) THEN**  
**Cas7how**  
 Which table games did you play in a casino in the last 7 days?  
 Please select ALL that apply.

1. Roulette at the table
2. Roulette at a live video machine in the casino
3. Poker played against other people
4. Poker played against the banker/dealer/computer
5. Cards
6. Dice
7. Punto banco

**ENDIF**

**IF (Cas7how = online or both) THEN**

**Cas7how**  
 Which table games did you play online in the last 7 days?  
 Please select ALL that apply.

1. Roulette
2. Poker played against other people
3. Poker played against the banker/dealer/computer
4. Blackjack
5. Dice
6. Punto banco
7. Something else

**ENDIF**

**ENDIF**

**IF (AIj = Yes) THEN**

**On7mon**  
 In the last 7 days, have you spent money on online fruit/slot machine style games or online instant win games?  
 Include: online National Lottery instant win games  
 Do not include: online bingo or online casino games

1. Yes
2. No

**IF (On7mon = Yes) THEN**

**On7how**  
 How did you access online gambling in the last 7 days?  
 Please select ALL that apply.

1. Online through a computer
2. Online through a mobile phone or WAP mobile
3. Through interactive TV

**ENDIF**

**ENDIF**

**IF (AIp = Yes) THEN**

**Priv7mon**  
 In the last 7 days, have you spent money on private betting (sweepstakes, bets between friends) or gambling (playing cards or games for money) with friends, family or colleagues?

1. Yes
2. No

**IF (Priv7mon = Yes) THEN**

**Priv7how**  
 How or where did you bet privately or gamble with friends, family or colleagues in the last 7 days?  
 Please select ALL that apply.

1. At someone's home (including yours)
2. At work
3. In a pub
4. Somewhere else

**ENDIF**

**ENDIF**

**IF (AIq = Yes) THEN**

**Oth7mon**  
 In the last 7 days, have you spent money on another form of gambling activity?

1. Yes
2. No

**IF (Oth7mon = Yes) THEN**

**Oth7how**  
 How did you spend money on the other gambling activity?  
 Please select ALL that apply.

1. In person
2. Online (including computer or mobile internet, or WAP)
3. Both

**ENDIF**

**ENDIF**

**Behaviour Change**

**(Ask all aged 16 and over)**

**Change**  
 Please think about ALL the different types of activities on showcard E, which we have just asked you about.

In the last 12 months, that is since (*date one year ago*) has your overall gambling involvement in these activities stayed the same, increased or decreased?

1. Increased a lot
2. Increased a little
3. Stayed much the same
4. Decreased a little
5. Decreased a lot

**IF (Change = Increased a lot OR increased a little) THEN**

**WhyInc**

What were the main reasons for the increase in your gambling involvement?

Please select all that apply

1. I have more money to spend now
2. I have more time now
3. I have more opportunities to gamble
4. Because of friends and family
5. I wanted to/felt like gambling more
6. My priorities have changed
7. There was a change in my health\*
8. I became old enough to gamble\*\*\*
9. Other\*\*

**IF (WhyInc = change in my health) THEN**

**HealthW**

Did your health get better or worse?

1. Health got better
2. Health got worse

**ENDIF**

**IF (WhyInc = other) THEN**

**WhyIncO**

Please write in your other reason for increase in your gambling involvement.

**ENDIF**

**IF (Change = Decreased a lot OR decreased a little) THEN**

**WhyDec**

What were the main reasons for the decrease in your gambling involvement since this time last year?

Please select all that apply

1. I have less money to spend now
2. I want to save money / spend money on other things
3. I have less time/ I'm too busy now
4. I have fewer opportunities to gamble
5. I have lost interest in the activities I used to do
6. My priorities have changed
7. There was a change in my health\*
8. Other\*\*

**IF (WhyDec = change in my health) THEN**

**HealthW**

Did your health get better or worse?

1. Health got better
2. Health got worse

**ENDIF**

**IF (WhyDec = other) THEN**

**WhyDecO**

Please write in your other reason for decrease in your gambling involvement.

**ENDIF**

42

**IF (Change = Same) AND (response reports not gambling in the past year) THEN**

**GameEv**

Thinking about all the activities mentioned on Showcard E, have you ever spent money on any of these things?

1. Yes
2. No

**ENDIF**

**Gambling Adverts**

**(Ask all aged 16 and over)**

**Adv**

Have you ever seen any advertisements promoting gambling activities, including any on TV, billboards, newspapers, email spam or internet pop ups?

1. Yes
2. No

**Problem Gambling Screens**

**IF (any yes in A1a to A1q) THEN**

**DSM1**

For the next set of questions about gambling, please indicate the extent to which each one has applied to you in the last 12 months.

When you gamble, how often do you go back another day to win back money you lost?

1. Every time I lost
2. Most of the time I lost
3. Some of the time (less than half of the time) I lost
4. Never

**DSM2**

In the last 12 months....

...how often have you found yourself thinking about gambling (that is reliving past gambling experiences, planning the next time you will play, or thinking of ways to get money to gamble)?

1. Very often
2. Fairly often
3. Occasionally
4. Never

**DSM3**

In the last 12 months....

...have you needed to gamble with more and more money to get the excitement you are looking for?

1. Very often
2. Fairly often
3. Occasionally
4. Never

43

**DSM4**

In the last 12 months...

...have you felt restless or irritable when trying to cut down gambling?

1. Very often
2. Fairly often
3. Occasionally
4. Never

**DSM5**

In the last 12 months...

...have you gambled to escape from problems or when you are feeling depressed, anxious or bad about yourself?

1. Very often
2. Fairly often
3. Occasionally
4. Never

**DSM6**

In the last 12 months...

...have you lied to family, or others, to hide the extent of your gambling?

1. Very often
2. Fairly often
3. Occasionally
4. Never

**DSM7**

In the last 12 months...

...have you made unsuccessful attempts to control, cut back or stop gambling?

1. Very often
2. Fairly often
3. Occasionally
4. Never

**DSM8**

In the last 12 months...

...have you committed a crime in order to finance gambling or to pay gambling debts?

1. Very often
2. Fairly often
3. Occasionally
4. Never

**DSM9**

In the last 12 months...

...have you risked or lost an important relationship, job, educational or work opportunity because of gambling?

1. Very often
2. Fairly often
3. Occasionally
4. Never

**DSM10**

In the last 12 months...

...have you asked others to provide money to help with a desperate financial situation caused by gambling?

1. Very often
2. Fairly often
3. Occasionally
4. Never

**PGSI1**

In the past 12 months, how often...

... have you bet more than you could really afford to lose?

1. Almost always
2. Most of the time
3. Some of the time
4. Never

**PGSI2**

In the past 12 months, how often...

...have you needed to gamble with larger amounts of money to get the same excitement?

1. Almost always
2. Most of the time
3. Some of the time
4. Never

**PGSI3**

In the past 12 months, how often...

...have you gone back to try to win back the money you'd lost?

1. Almost always
2. Most of the time
3. Some of the time
4. Never

**PGSI4**

In the past 12 months, how often...

...have you borrowed money or sold anything to get money to gamble?

1. Almost always
2. Most of the time
3. Some of the time
4. Never

**PGSI5**

In the past 12 months, how often...

...have you felt that you might have a problem with gambling?

1. Almost always
2. Most of the time
3. Some of the time
4. Never

<p><b>PGS16</b> In the past 12 months, how often...</p> <p>...have you felt that gambling has caused you any health problems, including stress or anxiety?</p> <ol style="list-style-type: none"> <li>1. Almost always</li> <li>2. Most of the time</li> <li>3. Some of the time</li> <li>4. Never</li> </ol> <p><b>PGS17</b> In the past 12 months, how often...</p> <p>...have people criticised your betting, or told you that you have a gambling problem, whether or not you thought it is true?</p> <ol style="list-style-type: none"> <li>1. Almost always</li> <li>2. Most of the time</li> <li>3. Some of the time</li> <li>4. Never</li> </ol> <p><b>PGS18</b> In the past 12 months, how often...</p> <p>...have you felt your gambling has caused financial problems for you or your household?</p> <ol style="list-style-type: none"> <li>1. Almost always</li> <li>2. Most of the time</li> <li>3. Some of the time</li> <li>4. Never</li> </ol> <p><b>PGS19</b> In the past 12 months, how often...</p> <p>...have you felt guilty about the way you gamble or what happens when you gamble?</p> <ol style="list-style-type: none"> <li>1. Almost always</li> <li>2. Most of the time</li> <li>3. Some of the time</li> <li>4. Never</li> </ol> <p><b>ENDIF</b></p> <p><b>Reasons for gambling</b></p> <p><b>IF (any yes in A1a to a1q) THEN</b></p> <p><b>Motiv</b> The questions that follow show reasons that some people have given about why they take part in some of the activities listed on showcard E. For each one, please state whether these are reasons why <b>you</b> take part in some of these activities.</p> <p>Please think of all the different types of activities you have just mentioned including (list of activities undertaken in the past year). Press 1 and enter to continue.</p>	<p><b>MBigmon</b> Taking part in (list of activities undertaken in the past year).</p> <p>I take part in these activities... ...for the chance of winning big money?</p> <ol style="list-style-type: none"> <li>1. Always</li> <li>2. Often</li> <li>3. Sometimes</li> <li>4. Never</li> </ol> <p><b>MFun</b> Taking part in (list of activities undertaken in the past year).</p> <p>I take part in these activities... ...because its fun?</p> <ol style="list-style-type: none"> <li>1. Always</li> <li>2. Often</li> <li>3. Sometimes</li> <li>4. Never</li> </ol> <p><b>MHobby</b> Taking part in (list of activities undertaken in the past year).</p> <p>I take part in these activities... ...as a hobby or a pastime?</p> <ol style="list-style-type: none"> <li>1. Always</li> <li>2. Often</li> <li>3. Sometimes</li> <li>4. Never</li> </ol> <p><b>MEscape</b> Taking part in (list of activities undertaken in the past year).</p> <p>I take part in these activities... ...to escape boredom or to fill my time?</p> <ol style="list-style-type: none"> <li>1. Always</li> <li>2. Often</li> <li>3. Sometimes</li> <li>4. Never</li> </ol> <p><b>MWorri</b> Taking part in (list of activities undertaken in the past year).</p> <p>I take part in these activities... ...because I'm worried about not winning if I don't play?</p> <ol style="list-style-type: none"> <li>1. Always</li> <li>2. Often</li> <li>3. Sometimes</li> <li>4. Never</li> </ol>
<p>46</p>	<p>47</p>

**MCompete**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...to compete with others (e.g. bookmaker, other gamblers)?

1. Always
2. Often
3. Sometimes
4. Never

**MExcite**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...because it's exciting?

1. Always
2. Often
3. Sometimes
4. Never

**MChallenge**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...for the mental challenge or to learn about the game or activity?

1. Always
2. Often
3. Sometimes
4. Never

**MAchiV**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...because of the sense of achievement when I win?

1. Always
2. Often
3. Sometimes
4. Never

**MImpres**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...to impress other people?

1. Always
2. Often
3. Sometimes
4. Never

**MSocial**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...to be sociable?

1. Always
2. Often
3. Sometimes
4. Never

**MTense**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...because it helps when I'm feeling tense?

1. Always
2. Often
3. Sometimes
4. Never

**MMoney**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...to make money?

1. Always
2. Often
3. Sometimes
4. Never

**MRelax**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...to relax?

1. Always
2. Often
3. Sometimes
4. Never

**MSocial**  
Taking part in (list of activities undertaken in the past year).

I take part in these activities ...  
...because it's something that I do with my friends or family?

1. Always
2. Often
3. Sometimes
4. Never

**ENDIF**

### Attitudes to Gambling

#### **Att1**

The next few questions are things that some people have said about gambling. Please indicate how much **you** agree or disagree with each one.

*(Half of respondents were randomly selected to have the following sentence shown: By 'gambling' we mean any of the activities listed on showcard E, including the national lottery, sports betting, bingo, casino games, fruit machines, and gambling via the internet or in any other way.)*

People should have the right to gamble whenever they want

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

#### **Att12**

There are too many opportunities for gambling nowadays

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

#### **Att13**

Gambling should be discouraged

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

#### **Att14**

Most people who gamble do so sensibly

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

#### **Att15**

Gambling is dangerous for family life

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

#### **Att6**

On balance, gambling is good for society.

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

#### **Att7**

Gambling livens up life

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

#### **Att8**

It would be better if gambling was banned altogether

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

### Early Experience of Gambling

#### **ParGam**

Thinking about your parents/step-parents/guardians, do or did any of them regularly gamble?

1. Yes
2. No

#### **IF (ParGam = Yes) THEN**

##### **PPrProb**

Do you feel that any of your parents/guardians/step-parents have, or had, a gambling problem?

1. Yes
2. No

##### **ENDIF**

#### **IF (respondent gambled in the past year or had ever gambled) THEN**

##### **FirstGam**

How old were you the first time you ever gambled?

Include: playing cards or games with money and playing on slot machines

Please type in age in years

##### **FirstGCert**

Are you certain of that age or is it an estimate?

1. Yes, I'm certain
2. No, it's an estimate

##### **ENDIF**



**Experience of Gambling Problems and Helpseeking****OwnP**

Do you feel you have ever had a gambling problem?

1. Yes
2. No

**IF (OwnP = Yes) THEN****StopGam**

Have you tried to stop, or cut down your gambling because of this?

1. Yes
2. No

**IF (StopGam = Yes) THEN****HelpP**

Have you ever sought help from any of the following people about a gambling problem?

Please select ALL that apply.

1. Family or Friend
2. GP/Nurse/Psychologist or other health care professional
3. Gambling help group / service / advisor or counsellor
4. Credit/Debt advisor
5. Faith / religious leader
6. Employer
7. Other counseling/psychologist/psychiatrist service
8. Someone else
9. Have not spoken to anyone

**ENDIF****ENDIF****RelProb**

In the last 12 months, has any close relative (including partner) had a gambling problem

1. Yes
2. No

**IF (RelProb = Yes) THEN****HelpRel**

In the last 12 months, have you sought help from any of the following people on behalf of a close relative or partner about a gambling problem?

Please select ALL that apply.

1. Family or Friend
2. GP/Nurse/Psychologist or other health care professional
3. Gambling help group / service / advisor or counsellor
4. Credit/Debt advisor
5. Faith / religious leader
6. Employer
7. Other counseling/psychologist/psychiatrist service
8. Someone else
9. Have not spoken to anyone

**ENDIF****SFQ**

In the last month, have you had any money problems?

1. No problems at all
2. Slight problems only
3. Definite problem
4. Very severe problems

**Wellbeing**

Taking all things together on a scale of 1 to 10, how happy would you say you are these days? Here 1 means very unhappy and 10 means very happy.

Please enter a number.

1..10

**Hide1**

That's the end of the questions that you complete for yourself.

If you select yes at this question your self-completion answers will be locked away and the interviewer will not be able to see them.

Please hand the computer back to the interviewer and they will introduce the next section.

Please hand the laptop back to the interviewer, thank you.

1 Yes

2 No

**IntNum**

Interviewer please type in your interviewer number to continue

**Health and lifestyle****GentHelp**

How is your health in general, would you say that it is:

1. Very good
2. Good
3. Fair
4. Bad
5. Very bad

**LongIll**

Do you have any long-standing illness, disability or infirmity?

By long-standing I mean anything that has troubled you over a period of time, or that is likely to affect you over a period of time?

1. Yes
2. No

**IF (LongIll = Yes) THEN****LimitIll**

Do any of these long-standing illnesses, disabilities or infirmities limit your activities in any way?

1. Yes
2. No

**ENDIF**

**SmokCig**  
Do you smoke cigarettes at all nowadays?  
1. Yes  
2. No

**Drink**  
Do you drink alcohol at all nowadays?  
1. Yes  
2. No

**IF (Drink = YES) THEN**  
Please look at showcard F to answer the following question:  
  
In the last 7 days, what is the most units of alcohol you have drunk in any one day?  
If no alcohol consumed, write "0".  
Please give your answer to the nearest number of whole units that you drank on that day. Enter number of units.  
**ENDIF**

---

**Demographics**

**Ethnic**  
SHOWCARD G  
What is your ethnic group?  
Please tell me the appropriate option to indicate your ethnic group.

- White**
1. Any White background
- Mixed**
2. White and Black Caribbean
  3. White and Black African
  4. White and Asian
  5. Any other Mixed Background
- Asian or Asian British**
6. Indian
  7. Pakistani
  8. Bangladeshi
  9. Any other Asian Background
- Black or Black British**
10. Caribbean
  11. African
  12. Any other Black / Black British background
- Chinese or other ethnic group**
13. Chinese
  14. Any other ethnic group (please describe)

**IF (Ethnic = Any other) THEN**  
**EthOth**  
Please describe.  
**ENDIF**

54

**HiQuals**  
SHOWCARD H  
Please look at showcard H and tell me which of these you have  
CODE ALL THAT APPLY  
1. Higher Degree (eg MA, PhD, PGCE, post-graduate certificate / diplomas)  
2. Degree level qualification or equivalent (include equivalent professional qualifications, such as chartered accountant)  
3. Professional Qualification below degree level (for example teaching or nursing qualification)  
4. NVQ or SVQ Levels 4-5, HNC, HND  
5. A levels or AS levels or equivalent  
6. SCE higher or equivalent  
7. NVQ or SVQ or GSVQ Level 3, Advanced GNVQ  
8. NVQ or SVQ or GSVQ Level 2, Intermediate GNVQ  
9. GCSE grades A-C or O Level pass or equivalent  
10. O levels/GCSEs (below grade C), CSE  
11. NVQ or SVQ or GSVQ Level 1, Foundation GNVQ  
12. Qualifications other than listed above  
13. No Qualifications

**IF (HiQual = qualifications other than listed above) THEN**  
**OthQuals**  
What other qualifications do you have?  
INTERVIEWER: CHECK THAT THIS QUALIFICATION CANNOT BE CODED AT  
HiQuals IF NOT PLEASE ENTER A SHORT DESCRIPTION OR TITLE.  
**ENDIF**

**Employ**  
SHOWCARD I  
Which of these descriptions applies to what you were doing last week.  
Please give me one answer.

1. Going to school or college full time (including on vacation)
2. In paid employment or self-employed (or temporarily away)
3. On a government scheme for employment training
4. Doing unpaid work for a business that you own or a relative owns
5. Waiting to take up paid work already obtained
6. Looking for paid work or a Government training scheme
7. Intending to look for work but prevented by temporary sickness or injury
8. Permanently unable to work because of long term sickness or disability
9. Retired from paid work
10. Looking after home or family
11. Doing something else (specify)

**IF (more than one person in household) THEN**  
**Pinc**  
SHOWCARD J  
Thinking about all possible sources of income (including earnings from employment, benefits, tax credits, pensions etc), which band does your personal, annual, income fall into before deductions for tax and national insurance? Please look at this card and tell me which number represents your total personal income.  
**ENDIF**

55

## About the National Centre for Social Research

The National Centre for Social Research (NatCen) is an independent institute specialising in social survey and qualitative research for the development of public policy. Research is in areas such as health, housing, employment, crime, education and political and social attitudes. Projects include ad hoc, continuous and longitudinal surveys, using face to face, telephone and postal methods; many use advanced applications of computer assisted interviewing.



Published by TSO (The Stationery Office) and available from:

### Online

[www.tsoshop.co.uk](http://www.tsoshop.co.uk)

### Mail, telephone, fax and email

TSO  
PO Box 29, Norwich NR3 1GN  
Telephone orders/general enquiries: 0870 600 5522  
Order through the Parliamentary Hotline Lo-Call 0845 7  
023474  
Fax orders: 0870 600 5533  
Email: [customer.services@tso.co.uk](mailto:customer.services@tso.co.uk)  
Textphone: 0870 240 3701

### The Parliamentary Bookshop

12 Bridge Street, Parliament Square,  
London SW1A 2JX  
Telephone orders/general enquiries: 020 7219 3890  
Fax orders: 020 7219 3866  
Email: [bookshop@parliament.uk](mailto:bookshop@parliament.uk)  
Internet: <http://www.bookshop.parliament.uk>

### TSO@Blackwell and other accredited agents

### Customers can also order publications from:

TSO Ireland  
16 Arthur Street, Belfast BT1 4GD  
Telephone orders/general enquiries: 028 9023 8451  
Fax orders: 028 9023 5401