

**GAMBLING BEHAVIOUR IN BRITAIN:
Results from the British Gambling
Prevalence Survey**

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Contents

SUMMARY OF FINDINGS	i
1 INTRODUCTION	1
1.1 BACKGROUND AND AIMS	1
1.2 AN OVERVIEW OF THE SURVEY DESIGN.....	1
1.3 NOTES ON THE CONVENTIONS USED IN THE REPORT TABLES AND FIGURES	1
2 PARTICIPATION IN GAMBLING ACTIVITIES	3
2.1 PARTICIPATION IN GAMBLING ACTIVITIES IN THE LAST 12 MONTHS...3	
2.1.1 Introduction.....	3
2.1.2 Definition of ‘gambling’ used in the survey	3
2.1.3 Participation in gambling activities in the past year	4
2.1.4 Comparison with participation in gambling activities in other countries.....	5
2.1.5 Number of gambling activities participated in within the past year	5
2.1.6 Relationship between different types of gambling activities	6
2.2 PARTICIPATION IN GAMBLING ACTIVITIES IN THE PAST WEEK.....	10
2.2.1 The questions asked	10
2.2.2 Participation in gambling activities in the past week.....	11
2.2.3 Number of gambling activities in the past week.....	12
2.2.4 Number of days gambled in past week for different types of activity	13
2.2.5 Where people gamble.....	14
3 WHO PARTICIPATES IN GAMBLING AND ATTITUDES TOWARDS GAMBLING	17
3.1 SOCIO-DEMOGRAPHIC FACTORS ASSOCIATED WITH GAMBLING.....	17
3.1.1 Sex and age	17
3.1.2 Marital status.....	21
3.1.3 Economic activity	22
3.1.4 Social class.....	23
3.1.5 Household income.....	25
3.1.6 Qualifications	26
3.1.7 Age and sex profiles for the gambling interest groups	27
3.2 COMPARISON OF PAST YEAR AND PAST WEEK GAMBLERS.....	29
3.3 ATTITUDES TOWARDS GAMBLING	30
4 EXPENDITURE ON GAMBLING ACTIVITIES	33
4.1 INTRODUCTION.....	33
4.2 STAKE ON GAMBLING ACTIVITIES	34
4.3 ‘NET EXPENDITURE’ ON GAMBLING ACTIVITIES	36
4.4 FACTORS ASSOCIATED WITH STAKE ON GAMBLING ACTIVITIES.....	39
4.5 LARGEST AMOUNT OF MONEY EVER LOST GAMBLING	40
5 PREVALENCE OF PROBLEM GAMBLING	41
5.1 INTRODUCTION.....	41
5.1.1 The South Oaks Gambling Screen (SOGS)	41
5.1.2 The DSM-IV	42
5.2 A NOTE ON TERMINOLOGY	42
5.3 ESTABLISHING A THRESHOLD FOR PROBLEM GAMBLING.....	42
5.3.1 SOGS threshold	43

5.3.2	DSM-IV threshold.....	43
5.4	CAVEATS.....	43
5.5	PROBLEM GAMBLING PREVALENCE.....	44
5.5.1	Problem gambling prevalence according to SOGS.....	45
5.5.2	Problem gambling prevalence according to the DSM-IV.....	48
5.5.3	The association between SOGS and DSM-IV.....	52
5.6	INTERNATIONAL COMPARISONS OF PREVALENCE RATES.....	53
5.7	SELF-REPORTED GAMBLING PROBLEMS AND PARENTAL GAMBLING PROBLEMS.....	54
6	THE PROFILE OF PROBLEM GAMBLERS.....	59
6.1	INTRODUCTION.....	59
6.2	GAMBLING ACTIVITY.....	59
6.2.1	Type of gambling activity.....	59
6.2.2	Number of gambling activities.....	63
6.3	EXPENDITURE ON GAMBLING ACTIVITIES.....	65
6.4	ATTITUDES TO GAMBLING.....	68
6.5	SOCIO-DEMOGRAPHIC CHARACTERISTICS.....	70
6.6	WHICH FACTORS ARE SIGNIFICANTLY ASSOCIATED WITH PROBLEM GAMBLING?.....	71
	APPENDIX 1: CHARACTERISTICS OF THE SAMPLE.....	77
A1.1	SEX AND AGE DISTRIBUTION.....	77
A1.2	MARITAL STATUS.....	77
A1.3	ECONOMIC ACTIVITY AND SOCIAL CLASS.....	78
A1.3.1	Respondent's economic activity and social class.....	78
A1.3.2	Social class of highest income householder.....	80
A1.4	SOURCES AND LEVEL OF HOUSEHOLD INCOME.....	82
A1.4.1	Sources of household income.....	82
A1.4.2	Level of household income.....	82
A1.5	QUALIFICATIONS.....	83
A1.6	ETHNIC GROUP.....	84
A1.7	TENURE AND TYPE OF ACCOMMODATION.....	84
A1.7.1	Tenure.....	84
A1.7.2	Type of accommodation.....	84
A1.8	COUNTRY.....	85
	APPENDIX 2: METHODOLOGY.....	87
A2.1	SAMPLING.....	87
A2.2	QUESTIONNAIRE PRE-TESTING.....	87
A2.3	FIELDWORK.....	87
A2.4	RESPONSE.....	88
A2.5	SCORING THE PROBLEM GAMBLING SCREENING INSTRUMENTS.....	88
A2.5.1	Scoring the SOGS.....	88
A2.5.2	Scoring the DSM-IV.....	89
A2.6	SCORING THE ATTITUDE TOWARDS GAMBLING SCALE.....	90
A2.7	CALCULATING THE MEAN STAKE.....	90
A2.8	WEIGHTING.....	91
A2.9	DATA PROCESSING AND ANALYSIS.....	91
A2.10	STATISTICAL SIGNIFICANCE.....	91
	APPENDIX 3: THE QUESTIONNAIRES.....	93

GAMBLING BEHAVIOUR IN BRITAIN: SUMMARY OF FINDINGS

INTRODUCTION

This report presents results from the *National Centre's* British Gambling Prevalence Survey. This is the first nationally representative survey of its kind in this country, and its overall aim is to provide baseline data on adult gambling behaviour in Britain. A random sample of 7,680 people (aged 16 and over) participated in the survey.

Over the past decade, the nature of gambling in Britain has been changing, due largely to the introduction of the National Lottery, but also to the increasing availability of other forms of gambling such as spread-betting and gambling on the Internet. While there is growing interest in the social impact of these new forms of gambling on the British population, up till now there has been little reliable information available about people's gambling behaviour. An important aim of the British Gambling Prevalence Survey was to provide statistically robust data on adults' participation in gambling, and to estimate the extent of 'problem gambling' within the country.

PARTICIPATION IN GAMBLING ACTIVITIES

- Almost three-quarters (72%) of the population – that is about 33 million adults – took part in some form of gambling activity within the past year.
- Over half (53%) of the population – or about 24 million adults – gambled in the week prior to the interview.
- By far the most popular gambling activity is the National Lottery Draw. Two-thirds (65%) of the population bought a National Lottery ticket during the past year, while nearly half (47%) the population played in the week before the interview.
- The next most popular gambling activity is the purchase of scratchcards, with one in five people (22%) purchasing scratchcards in the past year. The proportion buying scratchcards in the week prior to interview was 8%.
- Among the other forms of gambling available, the next most popular activities are: playing fruit machines (14% did so with the past year), betting on horse races (13%), and making a private bet with a friend or colleague (11%). The proportions participating in these activities in the past week were: 6% for fruit machines, 3% for horse races and 4% for private bets.
- Fewer than one in ten people participated in the other types of gambling activities available: 9% of the population played the football pools in the past year; 8% played a lottery (other than the National Lottery); 7% played bingo; 3% played cards, dice or roulette in a casino; and 3% placed bets with a bookmaker (on events other than horse or dog races). The equivalent figures for the week before the interview were: football pools (6%); a lottery other than the National Lottery (4%); bingo (4%); casino gambling (less than 1%); and bookmaker betting (1%).
- The other new types of gambling were very much a minority interest: within the past week, no more than 1% of the population had done 'spread-betting' or had gambled via the Internet.
- Compared with many other countries which have carried out similar studies of gambling behaviour, it appears that the British are less likely to gamble. For example, the 72% of British adults who gambled in the past year is lower than the nine in ten adults in Sweden and New Zealand who gamble, and the eight in ten Australian adults. However, at 63%, it seems that adults in the United States are less likely to gamble than the British.
- Among those who have gambled in the past year, over two in three participated in only one (42%) or two (27%) different activities. In fact, one-third (35%) of those who gambled in the past year only bought tickets for the National Lottery Draw.

- While people's interest and participation in gambling lies on a continuum, a cluster analysis identified four broad groups of people: the 28% of the population who were 'non-gamblers' in the past year; a third (33%) of the population whose participation in gambling is limited to the National Lottery Draw and/or scratchcards (referred to as 'minimal interest gamblers'); another third (32%) of the population who participate in one or two activities in addition to the National Lottery ('moderate interest gamblers'); and a small group (7%) of people who bet on a greater number and more diverse range of gambling activities ('multiple interest gamblers').

WHO GAMBLES?

- Men are more likely than women both to gamble (76% of men and 68% of women gambled in the past year) and to participate in a greater number of gambling activities (1.9 per year and 1.3 per year, respectively).
- The only gambling activity that women are more likely to participate in than men is bingo. Men are more likely than women to play the football pools and fruit machines, bet on horse and dog races, and to make private bets with friends.
- Gambling is most common among people in the three age groups: 25-34, 35-44 and 45-54 (around 3 in 4 people in this age range). Participation then declines to 66% at ages 65-74 (which is the same proportion as among 16-24 year-olds), and to 52% among people aged 75 or more. On average, people in the older age groups also gamble on fewer types of activities: for example, one-third (32%) of 25-34 year olds participated in 3 or more activities in the past year compared with 10% of people aged 65 or more.
- By far the most likely to have gambled in the past year were people in paid work, while the least likely were those in full-time education.
- While gambling is a popular activity among people from all social classes, the type of gambling activity people participate in varies by social class. For example, people in Social Class I were the least likely to buy National Lottery Draw tickets (56% did in the past year compared with 69% of people in Social Class IIIM). While people in Social Class I were more likely to go to casinos (5%) than to play bingo (3%), the opposite was found among people in Social Class V who were far more likely to play bingo (20% did in the past year) than to go to casinos (only 1%).
- People living in households with low incomes (under £10,400 per year) were the least likely to have gambled in the past year, although two in three people in these households still did so. However, in general, levels of participation in gambling activities tended to increase along with household income (at least until around the level of £36,000, after which participation levels steadied, and even declined slightly).

EXPENDITURE ON GAMBLING ACTIVITIES

Collecting accurate information on how much money people 'spend' on gambling is very difficult for a number of reasons. Firstly, 'spend' can be defined in a number of ways (eg, amount staked, amount lost, etc), and the interpretation is likely to vary for different people as well as for the diverse types of gambling activities. Secondly, it is known that people tend to overestimate their winnings and underestimate their losses at gambling. Thus, the survey results are able to provide only relatively crude estimates on gambling expenditure.

In order to collect expenditure information, a distinction was made within the questionnaire between two broad types of gambling activities. For four activities (National Lottery Draw, lotteries other than the National Lottery, the football pools and bingo tickets), information was collected on past week 'stake', that is the amount bet on an individual event (eg a pools coupon, a lottery ticket). For these four activities, results are presented for average stake as well as showing a distribution for the amounts bet in the past week. For all the other activities, information was collected on 'net expenditure', that is the amount gambled minus any winnings. However, in order to keep the questionnaire as simple as

possible, no information was collected on the *amount won* on these activities. Thus, for the majority of activities, it is not possible to calculate an average net expenditure, but only to show the distribution of losses for people who gambled on the activity in the past week. All the expenditure estimates are based only on people who had participated in the relevant activity in the week prior to interview.

- First, looking at the four activities where *stake* was collected, the average stake ranged from £2.80 per week for the National Lottery Draw to £7.20 per week for bingo. The percentage of people who spent £10 or more in the past week was also considerably higher among bingo players (21%) than for the other activities (eg, only 4% of weekly bets on the football pools).
- Average *stake* was higher among men than women for the National Lottery Draw (£3.10 and £2.50 respectively) and the football pools (£3.30 and £2.00), but was higher among women on bingo tickets (£7.90 women and £5.10 men).
- For each of the activities, the majority of people who gambled in the last week reported that they won, broke even or lost less than £5: this was true for 94% of people who bought scratchcards; 78% on fruit machines; 77% on horse races; 57% on dog races; and 92% on bets with a bookmaker (excluding horse or dog races).
- The percentage of people who lost £20 or more in the past week was: less than 1% buying scratchcards, 3% on fruit machines, 4% on horse races, 7% on dog races, 4% on bets with a bookmaker (excluding horse or dog races).

PROBLEM GAMBLING

‘Problem gambling’ is gambling to a degree that compromises, disrupts or damages family, personal or recreational pursuits (Lesieur and Rosenthal, 1991). Unique among large-scale gambling studies, the British Gambling Prevalence Survey included both of the most commonly used screening instruments to measure current ‘problem gambling’ prevalence in Britain: the South Oaks Gambling Screen (SOGS) and the DSM-IV (Diagnostic and statistical manual of mental disorders, 4th edition). In accordance with most previous research, the thresholds used to classify ‘problem gamblers’ were 5 and above for the SOGS, and 3 and above for the DSM-IV. The two screens provide slightly different estimates of the prevalence of problem gambling in Britain.

A number of caveats, outlined in Chapter 5, should be taken on board when considering these estimates (for example, the potential inaccuracy of the screening instruments, sampling bias and error, response bias, and the possibility of dishonest reporting). Thus, while by no means conclusive, the findings from the British Gambling Prevalence Survey should be seen as a ‘*best estimate*’ of the prevalence of adult problem gambling in Britain.

- Among the population aged 16 and over, the prevalence of problem gambling in Britain is 0.8% according to the SOGS and 0.6% according to the DSM-IV.
- The likely number of problem gamblers in Britain is thus 370,000 according to the SOGS, and 275,000 according to the DSM-IV.
- Looking only at people who have gambled in the past year, the prevalence of problem gambling among this group is 1.2% according to the SOGS and 0.8% according to the DSM-IV.
- Compared with other countries which have used similar measures, the prevalence of problem gambling in Britain appears to be relatively low (0.8%), at least in comparison with Australia (2.3%), the United States (1.1%), New Zealand (1.2%) and Spain (1.4%). On the other hand, at 0.6%, Sweden has a lower estimate of problem gambling than Britain.

PROFILE OF PROBLEM GAMBLERS

- The prevalence of ‘problem gambling’ varies depending on the type of activity people gamble on. The lowest levels of problem gambling were found among people who participated (in the past year) in the two most popular types of activities: the National Lottery Draw (SOGS 1.2%) and scratchcards (SOGS 1.7%).
- The highest prevalence of problem gamblers was found among people who, in the past year, had played table games in a casino (SOGS 8.7%) or who bet on sports or events (excluding horse or dog races) with a bookmaker (SOGS 8.1%).
- As might be expected, there was a higher prevalence of problem gamblers among the ‘multiple interest’ group, compared with ‘moderate’ or ‘minimal’ interest gamblers (SOGS 5.7%, 1.3% and 0.1% respectively).
- Multivariate analysis revealed that ‘problem gambling’ was statistically associated with the following socio-demographic factors: being male, reporting that a parent was or had been a problem gambler, and being in the lowest income category. An additional factor, being separated or divorced, was significantly associated with being a ‘problem gambler’ as measured by the SOGS (but not DSM-IV).

1 INTRODUCTION

1.1 BACKGROUND AND AIMS

In recent years the nature of gambling in Britain has fundamentally changed, due largely to the introduction of the National Lottery, but also to an expanse in the ‘format’ that gambling takes (for example, scratchcards, betting over the telephone and on the Internet). Alongside this there has been an increased level of interest in the social impact of gambling and its costs and benefits. Existing laws governing gambling are complex, and the Government recognises that a general review of gambling legislation is necessary.¹

The *National Centre for Social Research* was commissioned by GamCare to carry out a British Gambling Prevalence Survey. This is the first nationally representative survey of its kind, and its overall aim is to provide baseline data on gambling behaviour in Britain.

Specifically, the aims of the research were to:

- Measure the prevalence of participation in all forms of commercial and private gambling (including estimates of expenditure and information on venue).
- Estimate the prevalence of ‘problem gambling’ and look at which activities have the highest prevalence of ‘problem gamblers’.
- Investigate the socio-demographic factors associated with gambling and with ‘problem gambling’.
- Explore attitudes towards gambling.

This report provides a description of the main results of the survey. Chapters 2 and 3 describe participation in gambling activities, Chapter 4 looks at expenditure and Chapters 5 and 6 present the findings on ‘problem gambling’ prevalence.

1.2 AN OVERVIEW OF THE SURVEY DESIGN

7,680 individuals participated in the survey. First, a random sample of 7000 addresses in Britain was selected from the publicly available Postcode Address File (PAF). At each address, interviewers attempted to obtain a face to face interview with one adult, collecting socio-demographic information about their household. In addition, every person aged 16 and over in the household was asked to fill in a self-completion questionnaire, which collected information about their gambling behaviour. Interviews were achieved at 4619 households (a response rate of 73% after removing unoccupied and non-residential addresses) and self-completion questionnaires were returned by 7,680 out of 8584 eligible individuals (a response rate of 89%). This represents an overall response rate of 65%.

Data were weighted to reflect the age and sex profile of the British population according to estimates from the Office for National Statistics. For further information on survey methodology, and an explanation of the weighting strategy, see Appendix 2 (Methodology). The survey documents are included in Appendix 3.

1.3 NOTES ON THE CONVENTIONS USED IN THE REPORT TABLES AND FIGURES

- Unless otherwise stated, tables are based on the *responding sample* for each individual question (ie item non-response is excluded), therefore the bases may differ slightly between the tables.

- Some questions were filtered (ie asked of a sub-set of respondents). In some cases this results in small bases in some cells of the tables. Whenever an unweighted base is less than 50, the percentages in that column are marked by square brackets [], to show that results should be treated with caution. Sub-groups with an unweighted base of less than 20 are *excluded* from the tables.
- The population sub-group to whom each table refers is stated at the upper left corner of the table.
- Unless otherwise stated, weighted and unweighted bases are shown at the foot of the table.
- Due to rounding, column percentages do not always sum to 100%.
- Some questions were multi-coded (ie allowed respondents to give more than one answer). The column percentages in these tables sum to more than 100%.
- If a percentage is quoted in the text for a single category that aggregates two or more of the percentages shown in a table, the (more precise) percentage in the text has been recalculated and may differ from the sum of the percentages in the table.
- The following conventions have been used.
 - * signifies a positive value of less than 0.5%
 - signifies a zero value

Endnotes

¹ Home Office News Release, 8 December 1999.

2 PARTICIPATION IN GAMBLING ACTIVITIES

2.1 PARTICIPATION IN GAMBLING ACTIVITIES IN THE LAST 12 MONTHS

2.1.1 Introduction

There is a widespread feeling that the introduction of the National Lottery in 1994 has led to an increase in the levels of participation in gambling among the British population. However, as no reliable national baseline data on gambling rates exist from the period before the National Lottery was introduced, it has not been possible to accurately quantify its impact on gambling participation. Although the British Gambling Prevalence Survey cannot directly address this specific question, one of the important aims of the survey was to provide robust baseline data on *current* (1999) levels of participation in gambling – both overall as well as for individual gambling activities – and thereby enable future studies to look at change in participation rates over time.

2.1.2 Definition of ‘gambling’ used in the survey

Respondents were shown a list of eleven gambling activities and asked to indicate whether or not they had participated in each activity over the past 12 months. ‘Participation’ was defined as having *spent your own 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.

A distinction was also made in the list of gambling activities between participation in ‘commercial’ gambling activities and private betting with friends or colleagues. The former includes activities such as the National Lottery, playing table games in a casino, playing the football pools or fruit machines,¹ and betting at the race track, and so on. ‘Private betting’ includes informally arranged bets with friends, colleagues or acquaintances on, for example, the outcome of a sports event or election; it also includes playing games or sports for money, such as playing poker or other card games with friends, as well as betting on the outcome of a game or sport in which the respondent is one of the participants (such as playing a game of pool or golf for money).

The eleven 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 gambling activity was missed by the research team, or that respondents may have missed or mis-understood an activity included in the list, the option was provided for respondents to write in another form of gambling activity that was not listed. (The full list of gambling activities is found in Section A of the questionnaire, which is included as Appendix 3).

It should be noted that the questions asking about participation in the different gambling activities were designed to ascertain only whether the respondent had participated in each activity in the past year and in the past week, without delving further into the frequency of their betting behaviour.² Thus, for the purposes of the following analysis, a person who bet on one horse race in the past year is equivalent to someone who bets on horse races several times a week.

Although certainly limited, it is still possible for some idea of the extent of people’s involvement in gambling to be gleaned from the survey data in a number of ways: firstly, it might legitimately be assumed that people who bet in the past week (described in Section 2.2) are more involved in gambling than people who bet in the past year but not in the past week; secondly, the number of activities people bet on in the past year (or past week) may be taken as an indication of their involvement in gambling - ie, the more activities, the greater their interest or involvement (Sections 2.1.5, 2.1.6 and 2.2.3); thirdly, by looking at the amount of money people bet in the past week it may reasonably be assumed that people who spend more have a greater involvement in gambling than people betting small amounts (Chapter 4).

2.1.3 Participation in gambling activities in the past year

The percentages saying they had participated in each of these gambling activities over the past 12 months are shown in Figure 2A and in the left column of Table 2.1 for the adult population as a whole.³ Taking part in the National Lottery Draw was by far the most popular gambling activity among the population, with 65% saying they had purchased a National Lottery ticket within the past 12 months. Respondents were three times as likely to participate in the National Lottery Draw as in the next most popular activity, which was the purchase of scratchcards (including those sold by Camelot, the current organisers of the National Lottery) by 22% of the population.

There were three other activities which more than one in ten members of the general public participated in over the previous 12 months: playing a fruit machine (14%); betting on horse races (13%); and private betting (11%).

The percentages of the population participating in other gambling activities were: football pools (9%); a lottery other than the National Lottery (8%); bingo (7%); dog races (4%); playing table games in a casino (3%); and betting with a bookmaker on events like sports matches, but excluding horse or dog races (3%). (Only a very small number of respondents - less than 0.5% - said they took part in a gambling activity other than those shown on the list.)

Overall, seven in ten (72%) members of the public aged 16 and over (73% of those aged 18 and over) said they had done one or more of these activities in the past 12 months. This represents nearly 33 million adults in Britain who participated in at least one gambling activity within the past year. For the remainder of this report, the term 'past year gamblers' will be used for this group of the population.

Table 2.1 Gambling activities in past year

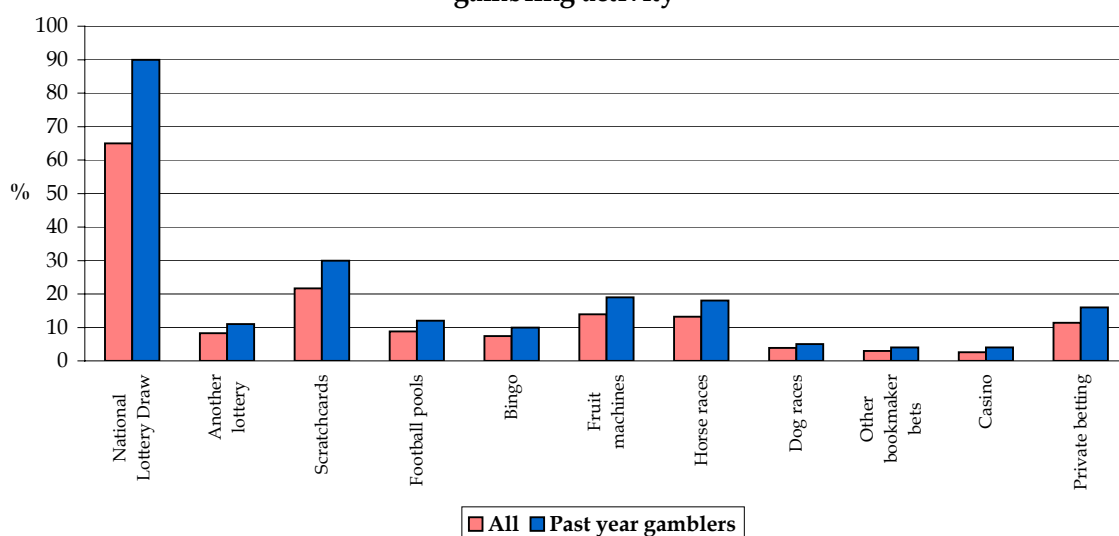
All and past year gamblers

Gambling activity	All	Past year gamblers
	%	%
National Lottery Draw	65	90
Another lottery	8	11
Scratchcards	22	30
Football pools	9	12
Bingo	7	10
Fruit machines	14	19
Horse races	13	18
Dog races	4	5
Betting with a bookmaker (other than on horse or dog races)	3	4
Table games in a casino	3	4
Private bets (eg, with friends or colleagues)	11	16
Another gambling activity	*	*
<i>Any gambling activity in past 12 months</i>	72	100
<i>Bases (weighted):</i>	<i>7700</i>	<i>5543</i>
<i>Bases (unweighted):</i>	<i>7680</i>	<i>5550</i>

The columns total more than 100% as more than one activity could be chosen.

Looking only at the group of past year gamblers, nine in ten (90%) reported buying National Lottery tickets. The next most popular gambling activities among this group were buying scratchcards (30%), playing fruit machines (19%), betting on horse races (18%), and private betting with friends or colleagues (16%). Similar proportions of past year gamblers bet on football pools (12%), other lotteries (11%) and bingo (10%). The proportions betting on dog races (5%), betting on other events with a bookmaker (4%), or going to a casino (4%) were also similar. These results are shown in the right column of Table 2.1 and in Figure 2A.

Figure 2A: Participation in gambling activities in past year, by type of gambling activity



2.1.4 Comparison with participation in gambling activities in other countries

Since the types of legalised gambling available varies from one country to another, no attempt is made in this report to compare participation rates between countries for specific types of gambling activities. It is more straightforward to broadly compare across countries the proportion of the adult population that has taken part in some form of gambling activity over a 12 month period, although even at this general level caution is required when making such comparisons.⁴

Looking at gambling rates overall, it appears that a lower proportion of the British population participates in gambling activities than in many of the other countries which have carried out similar studies. For example, a survey in Sweden in 1997 found that 89% of the population (aged 15 to 74) participated in at least one form of gambling activity in the 12 months prior to the survey.⁵ A New Zealand survey in 1995 found a similar proportion (90%) of the adult population participating in a gambling activity over the same period.⁶ A slightly lower participation rate of 82% was found in a 1999 study in Australia, although this is still 10% higher than the estimate for British adults.⁷ However, it appears that gambling rates in the United States may be lower: a recent study there estimated that 63% of adults had gambled in the past year.⁸

2.1.5 Number of gambling activities participated in within the past year

Over the past 12 months, while one in four (28%) of the general population did not participate in any gambling activity, nearly half of the population said that they did bet money on one (30%) or two (19%) types of activity. The proportion of the population reporting participation in more than two activities was: 11% for three types of gambling, 5% for four types, and 6% for five or more types of gambling activity. (Table 2.2 left column and Figure 2B)

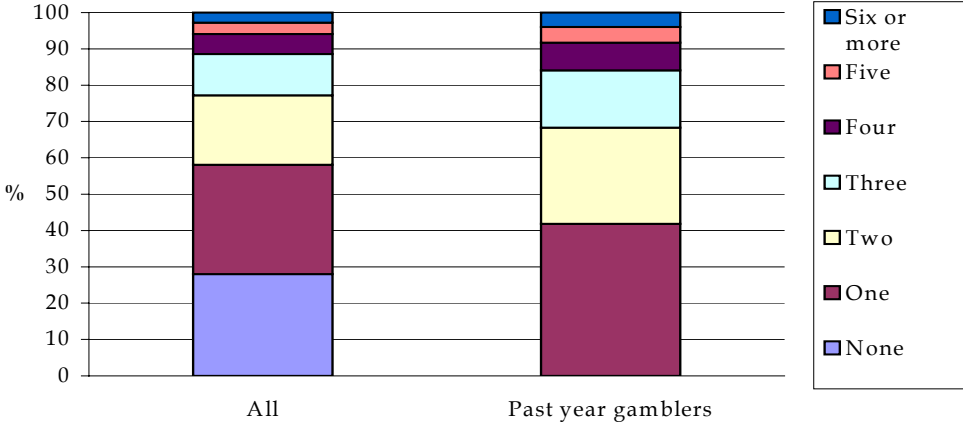
Table 2.2 Number of gambling activities participated in within past year

All and past year gamblers

Number of activities	All	Past year gamblers
	%	%
None	28	-
One	30	42
Two	19	27
Three	11	16
Four	5	8
Five	3	4
Six	1	2
Seven	1	1
Eight or more	1	1
<i>Bases (weighted):</i>	7700	5543
<i>Bases (unweighted):</i>	7680	5550

Looking only at past year gamblers (as defined in Section 2.1.3), the vast majority – over two thirds – appear to limit their betting behaviour to only one (42%) or two (27%) types of gambling activity. A further 23% of past year gamblers participated in three or four different activities, while 8% took part in five or more. (Table 2.2 right column and Figure 2B)

Figure 2B: Number of gambling activities in past year



2.1.6 Relationship between different types of gambling activities

Table 2.3 and Figure 2C show how participation varies in terms of the number of different activities people have gambled on over the past year. It should be noted that in Figure 2C the dependent variable is the activity type, while the independent variable is the number of activities people had participated in, and thus the chart is a graphical representation of the results shown in Table 2.3. For example, among people who participated in only one activity, only 1% said that activity was the football pools; among people who reported two activities, 13% said one of the activities was the pools; among those reporting three activities, 20% gave the football pools as one of their three; etc.

Moving from left to right in the table (that is, from fewest to most activities), as well as noting an obvious increase in participation rates for all eleven activities, it is also clear that the increase is not uniform for the different activities.

Table 2.3 Participation in gambling activities, by the number of activities people participated in within the past year

Past year gamblers

	Number of activities people participated in within past year					
	One	Two	Three	Four	Five	Six or more
Activity participated in:	%	%	%	%	%	%
National Lottery Draw	85	93	95	96	96	97
Another lottery	2	10	18	24	29	49
Scratchcards	2	37	53	68	69	79
Football pools	1	13	20	24	31	49
Bingo	2	10	16	26	26	34
Fruit machines	3	12	32	53	66	82
Horse races	3	12	29	42	66	88
Dog races	*	2	6	11	24	51
Betting with a bookmaker (other than on horse or dog races)	*	1	4	9	19	44
Table games in a casino	*	1	4	8	16	36
Private bets (eg. with friends or colleagues)	2	10	24	39	56	77
Another gambling activity	-	*	*	*	1	2
<i>Bases (weighted):</i>	2318	1470	875	421	239	220
<i>Bases (unweighted):</i>	2358	1481	870	413	227	201

The columns (other than the one headed 'One') add to more than 100% as more than one response was given.

Among people who had participated in only one type of gambling activity in the past year, over eight in ten (85%) reported that their single activity was purchasing a National Lottery ticket. Among those who reported two different activities, 93% purchased National Lottery tickets, while 37% bought scratchcards, by far the next most popular activity among this group.

These results confirm that there is quite a large proportion of the population whose participation in gambling is limited to the National Lottery. In fact, one in three (35%) of all past year gamblers - which equates to one in four (26%) of the entire adult population - reported that their *only* gambling activity in the past year was purchasing a ticket for the National Lottery Draw. As mentioned before (in Section 2.2.1), since there is no reliable baseline data available from the period before the National Lottery was introduced, it is not possible to directly assess its impact on gambling participation rates in the population. However, results from the British Gambling Prevalence Survey suggest that, while 72% of the population participate in gambling, this can be split into the 26% of the population who play only the National Lottery Draw and the 46% who participate in gambling activities other than, or as well as, the National Lottery. (Of course, if the National Lottery were not available, it is likely that a significant proportion of the 26% of lottery-only players would participate in another type of gambling activity.)

Figure 2C: Participation in gambling activities, by the number of activities people participated in within the past year

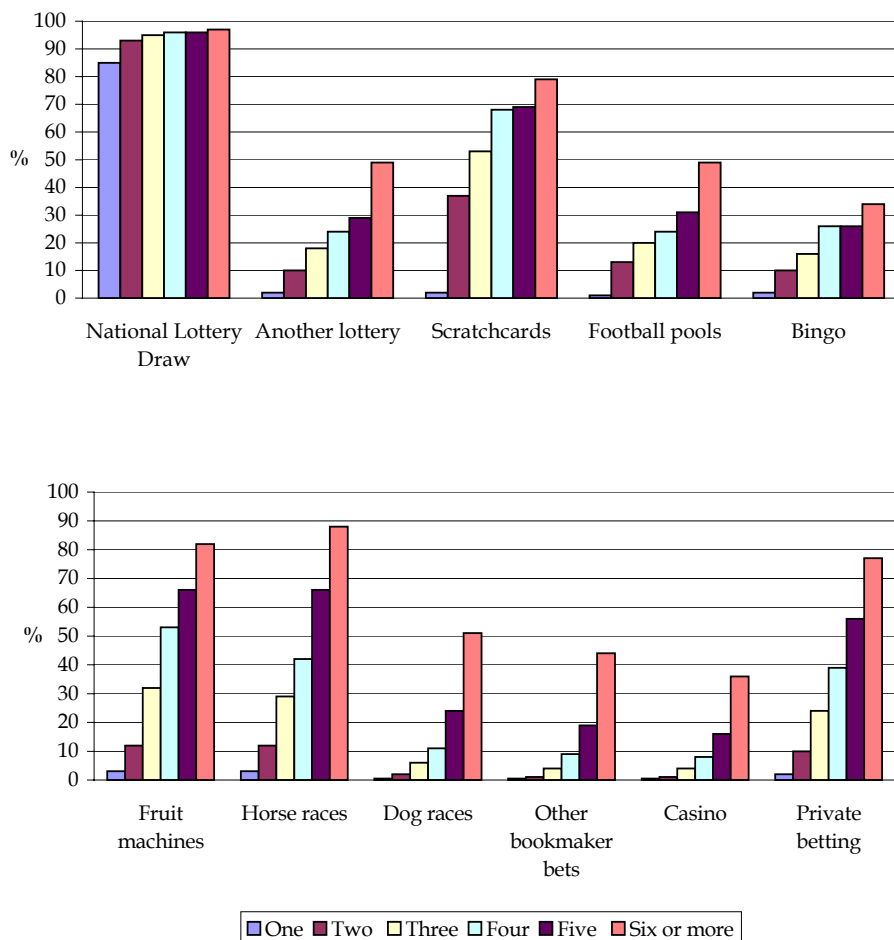


Table 2.4 shows, for the group of people participating in each of the eleven types of gambling activity, the proportion within that group that gambled in the past year in each of the other (ten) ways. The columns at the top of the table indicate the group who said they bet on that activity in the last 12 months; the column percentages then show the other activities (if any) that group of people participated in within the past year. For example, it can be seen that, in the column headed ‘bingo’ (ie, which includes all people who said they played bingo in the past 12 months), 88% of them also bought a National Lottery Draw ticket, 18% bought tickets for another lottery, 42% bought scratchcards, 16% played the football pools, and so on.

The table shows quite clearly that, for every type of gambling activity, over eight in ten of the people who did that activity will also have bought a National Lottery ticket in the past year. Also, for *most* types of gambling activity, the purchase of scratchcards was the next most popular activity.

The data in this table also support the view that quite a large segment of the British population has only a limited interest in gambling; furthermore, it appears that the proportion of the population which exhibits a more extensive involvement in gambling activity is relatively small. Such a conclusion may be supported by a number of observations. Firstly, because there is such a large group of people whose only gambling experience involves purchase of National Lottery Draw tickets, the column showing this group of people (which contains the vast majority of all past year gamblers) shows the lowest level of participation in other types of gambling – in fact, two in five (39%) people who purchased National Lottery tickets did not take part in any other gambling activity. Secondly, people in the six columns to the right of this group in Table 2.4, from ‘another lottery’ through ‘horse races’, were alike in naming the National Lottery and scratchcards as the two other activities they were most likely to participate in. Thirdly, the group of people which bets on dog races, or with bookmakers or in casinos

(columns 8, 9 and 10 in Table 2.4) is quite small, and they appear to share a number of characteristics which distinguish them from the other groups, such as having considerably higher levels of participation in (many of) the other activities and being more likely to mention an activity other than the purchase of scratchcards as their second most likely form of participation (after the National Lottery Draw).

Table 2.4 Participation in gambling activities, by the other activities people participated in within the past year

Past year gamblers

	People who participated in:										
	National Lottery Draw	Another lottery	Scratch-cards	Football pools	Bingo	Fruit machines	Horse races	Dog races	Book-maker	Casino	Private betting
Also participated in:	%	%	%	%	%	%	%	%	%	%	%
National Lottery Draw	-	86	93	92	88	86	87	88	86	84	83
Another lottery	11	-	17	18	18	15	16	18	30	23	18
Scratchcards	31	45	-	35	42	54	41	43	52	51	41
Football pools	13	19	14	-	16	14	24	28	33	23	19
Bingo	10	16	14	13	-	16	13	16	18	15	14
Fruit machines	18	25	35	22	30	-	35	47	48	58	44
Horse races	18	25	25	34	23	33	-	70	62	55	39
Dog races	5	9	8	13	9	13	21	-	29	27	15
Betting with a bookmaker (other than on horse or dog races)	4	11	7	11	8	10	14	22	-	24	13
Table games in a casino	*	7	6	7	5	11	11	18	21	-	13
Private bets (eg, with friends or colleagues)	15	25	22	24	22	36	34	44	48	56	-
No other activity	39	9	3	3	7	6	6	2	2	2	6
<i>Bases (weighted):</i>	<i>5005</i>	<i>637</i>	<i>1673</i>	<i>678</i>	<i>568</i>	<i>1072</i>	<i>1016</i>	<i>304</i>	<i>231</i>	<i>204</i>	<i>879</i>
<i>Bases (unweighted):</i>	<i>5034</i>	<i>628</i>	<i>1648</i>	<i>676</i>	<i>563</i>	<i>1007</i>	<i>991</i>	<i>285</i>	<i>214</i>	<i>193</i>	<i>836</i>

The columns add to more than 100% as more than one response could be given.

Taken together, Tables 2.3 and 2.4 suggest that, among ‘past year gamblers’, there are broadly three ‘types’ of gamblers who may be identified as potentially useful groups for analysis (although the edges of these groups are necessarily blurred). At one extreme are those whose participation is limited to buying National Lottery tickets and/or scratchcards. At the other extreme are people who appear to have a very keen interest in gambling; they not only participate in a greater number of activities, but they also bet on a much more diverse range of gambling activities, including those which require more ‘active’ involvement, such as going to a casino and betting with a bookmaker on events other than horse or dog races. This is a relatively small group within the population, and consists of people who gamble on five, six or more different activities.

Between these two extremes lies a middle group that participates in three or four different types of activity per year. This group ventures beyond the purchase of National Lottery tickets and scratchcards to participate in some of the more popular, established and widely available forms of gambling, such as bingo, football pools, fruit machines and horse races.

This broad distinction was supported by a hierarchical cluster analysis,⁹ which revealed ten ‘clusters’ or groups of respondent. These ten clusters, and the way in which they fit into the three way classification described above, are shown in the following chart. Note that there are a range of ‘clusters’ apparent among the ‘moderate’ interest group, depending on which activity they do in addition to the National Lottery Draw and/or scratchcards.

'Gambling interest group'	Groups identified by cluster analysis	
<i>'Non-gamblers'</i>	1	Non-gamblers
<i>'Minimal interest gamblers'</i>	2	National Lottery Draw only
	3	National Lottery Draw and/or scratchcards
<i>'Moderate interest gamblers'</i>	4	(National Lottery Draw or National Lottery Draw and scratchcards) and dog-racing
	5	(National Lottery Draw or National Lottery Draw and scratchcards) and bingo
	6	(National Lottery Draw or National Lottery Draw and scratchcards) and football pools
	7	(National Lottery Draw or National Lottery Draw and scratchcards) and another lottery
	8	(National Lottery Draw or National Lottery Draw and scratchcards) and fruit machines
	9	(National Lottery Draw or National Lottery Draw and scratchcards) and horse races
<i>'Multiple interest gamblers'</i>	10	(National Lottery Draw or National Lottery Draw and scratchcards) and several other gambling activities from: fruit machines, horse races, dog races, betting with a bookmaker on other events, table games in a casino, private betting

While people's interest and participation in gambling will lie on a continuum rather than fall into discrete groups, such a division into a number of groups can be useful for analysis purposes and is used in later chapters in this report. For ease of reference, the groups have been termed 'minimal', 'moderate' and 'multiple' interest gamblers. Respondents who had not gambled in the past year have been added as a fourth category of 'non-gamblers'. The estimated proportions within the population falling into each group are: non-gamblers (28%); minimal interest (33%); moderate interest (32%); and multiple interest (7%). (As already mentioned, it should be noted that, as no detailed information was collected on frequency of gambling, these terms are intended to reflect an apparent interest in gambling based on the number and type of activities participated in within the past year. It should also be noted that these groups vary in size.)

2.2 PARTICIPATION IN GAMBLING ACTIVITIES IN THE PAST WEEK

2.2.1 The questions asked

The list of gambling activities was repeated in a grid within the questionnaire (see Section B of the questionnaire in Appendix 3) and respondents were asked to report any activities they had participated in within the 7 days prior to the interview. The definition for 'participation' in a gambling activity within the past 7 days was exactly the same as for the past 12 months - ie, it specifically referred to 'spending your own money' on the activity. The various distinctions for the different types of activities were also the same as for the past year (see Section 2.1.2). For each activity respondents said they had participated in within the week prior to interview, they were asked three follow-up questions: firstly, to provide the number of days in the last 7 that they spent their own money on that activity; secondly, to estimate either how much they spent, or how much they lost on the activity in the last 7 days (with the question variant being dependent on the particular activity being asked about); and thirdly, where (or how) they participated in the activity. This chapter reports on participation rates for each activity in the last 7 days (Section 2.2.2), the number of activities participated in within the past week (Section 2.2.3), the number of days respondents participated in each activity (Section 2.2.4), and the venue (or method) of their gambling activity (Section 2.2.5). The results describing gambling expenditure in the past 7 days are presented in Chapter 4.

2.2.2 Participation in gambling activities in the past week

Just over half (53%) of the population reported betting their own money on at least one type of gambling activity in the 7 days before the interview.¹⁰ This suggests that in any one week about 24 million adults in Britain participate in one or more gambling activities. This group is referred to throughout the report as ‘past week gamblers’.

The vast majority of past week gamblers bought tickets for the National Lottery Draw: 89% of this group did so, which represents 47% of the population as a whole. The next most common gambling activities were scratchcards (16% of past week gamblers, or 8% of the general population), football pools (11% and 6% respectively) and fruit machines (also 11% and 6%). After these came private betting, bingo, other lotteries (all at 7% of past week gamblers, or 4% of the general population) and horse races (6% and 3%). The results are shown in Table 2.5 and Figure 2D.

In addition to the gambling activities asked about with respect to the 12 month time period, respondents were also asked whether they had done any ‘spread-betting’ or gambling over the Internet in the 7 days preceding the survey. Both of these constitute ‘ways’ of gambling rather than type of gambling activity, so, for example one could make a spread-bet on a football match, or bet over the Internet on a horse race. The proportion of people who had participated in spread-betting or Internet gambling was very small (1% and less than 0.5% respectively). The base for Internet gambling is too small to analyse separately, and so this activity is excluded from all subsequent analysis. (It should also be noted that nobody reported having participated in an activity, in the last 7 days, that was not covered on the list.)

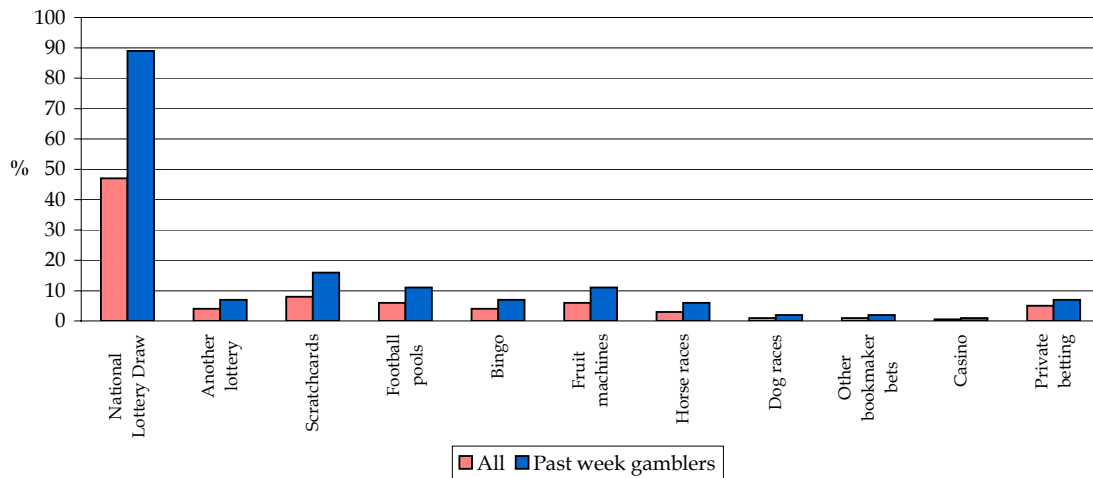
Table 2.5 Gambling activities participated in within past week

All and past week gamblers

Gambling activity	All	Past week gamblers
	%	%
National Lottery Draw	47	89
Another lottery	4	7
Scratchcards	8	16
Football pools	6	11
Bingo	4	7
Fruit machines	6	11
Horse races	3	6
Dog races	1	2
Betting with a bookmaker (other than on horse or dog races)	1	2
Table games in a casino	*	1
Private bets (eg, with friends or colleagues)	4	7
Spread-betting	1	2
Internet gambling	*	*
Another gambling activity	-	-
Any gambling activity in last 7 days	53	100
<i>Bases (weighted):</i>	<i>7700</i>	<i>4088</i>
<i>Bases (unweighted):</i>	<i>7680</i>	<i>4108</i>

The right column adds to more than 100% as more than one response could be given.

Figure 2D: Participation in gambling activities in past week, by type of activity



2.2.3 Number of gambling activities in the past week

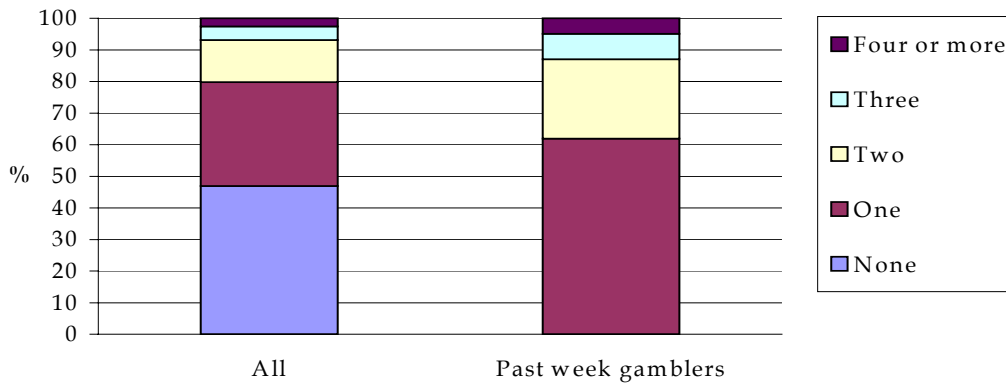
The majority of past week gamblers took part in only one gambling activity in the 7 days prior to the interview: that is, 62% of past week gamblers (which is 33% of the general population). Most of the rest participated in two activities (25% of past week gamblers), while 8% bet on three types of activities and 5% bet on four activities or more. (Table 2.6 and Figure 2E)

Table 2.6 Number of gambling activities participated in within past week

All and past week gamblers

Number of activities	All	Past week gamblers
	%	%
None	47	-
One	33	62
Two	13	25
Three	4	8
Four	1	3
Five	1	1
Six or more	*	1
<i>Bases (weighted):</i>	7700	4088
<i>Bases (unweighted):</i>	7680	4108

Figure 2E: Number of gambling activities in past week



2.2.4 Number of days gambled in past week for different types of activity

For all the gambling activities asked about, the majority of past week gamblers said they only participated in that activity on one day out of the past 7. (An exception was spread betting, but the results for that activity must be treated with caution because of the small base.) For each type of gambling activity, Table 2.7 shows the proportion of past week gamblers who participated on more than one day (in the left column), and the average (mean) number of days of participation (in the right column), in the past week. The activities which were most likely to attract participation on more than one day out of seven were fruit machines, horse races and the National Lottery Draw (41%, 41% and 38% respectively). (Table 2.7 and Figure 2F).

Figure 2F: Number of days participated in each gambling activity in the past week

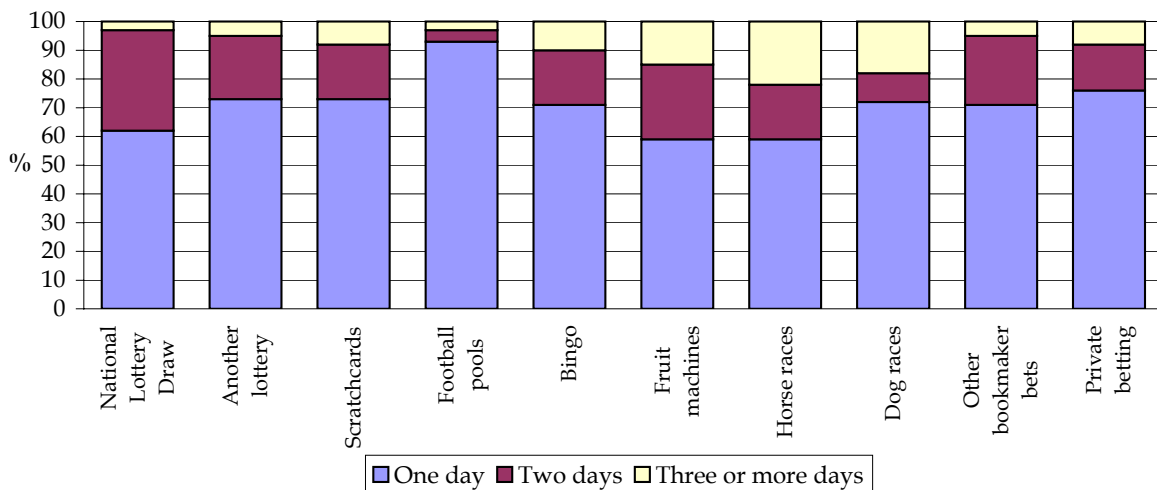


Table 2.7 Number of days participated in each gambling activity in the past week, by type of gambling activity

Past week gamblers for each activity

Gambling activity	Participated on more than 1 day in last 7 ¹	Mean number of days in last 7 ¹
	%	
National Lottery Draw	38	1.4
Another lottery	27	1.4
Scratchcards	27	1.5
Football pools	7	1.1
Bingo	29	1.4
Fruit machines	41	1.7
Horse races	41	1.9
Dog races	28	1.6
Betting with a bookmaker (other than on horse or dog races)	29	1.4
Table games in a casino	[42] ²	[1.5]
Private bets (eg, with friends or colleagues)	24	1.4
Spread-betting	52	2.1
<i>Bases (weighted):</i>		
<i>National Lottery Draw</i>	3596	3596
<i>Another lottery</i>	272	272
<i>Scratchcards</i>	641	641
<i>Football pools</i>	449	449
<i>Bingo</i>	272	272
<i>Fruit machines</i>	427	427
<i>Horse races</i>	221	221
<i>Dog races</i>	63	63
<i>Betting with a bookmaker (other than on horse or dog races)</i>	72	72
<i>Table games in a casino</i>	30	30
<i>Private bets (eg, with friends or colleagues)</i>	297	297
<i>Spread-betting</i>	63	63
<i>Bases (unweighted):</i>		
<i>National Lottery Draw</i>	3642	3642
<i>Another lottery</i>	269	269
<i>Scratchcards</i>	635	635
<i>Football pools</i>	450	450
<i>Bingo</i>	273	273
<i>Fruit machines</i>	387	387
<i>Horse races</i>	215	215
<i>Dog races</i>	59	59
<i>Betting with a bookmaker (other than on horse or dog races)</i>	70	70
<i>Table games in a casino</i>	29	29
<i>Private bets (eg, with friends or colleagues)</i>	285	285
<i>Spread-betting</i>	63	63

¹The percentages and means are based on the people who participated in that activity in the past week.

²Square brackets indicate that the unweighted base is less than 50.

2.2.5 Where people gamble

All past week gamblers were asked to indicate the venue (or method) of their participation for each type of activity from a list of possible venues (with the option to write in another answer not on the list). Table 2.8 shows the different venues (or methods) people used to participate in each of the types of gambling asked about. As would be expected, the locations varied considerably according to type of gambling activity.

Newsagents were the most common outlet for people to buy tickets for the National Lottery or other lotteries, as well as scratchcards, while large supermarkets were the next most common location.

People were most likely to purchase their football pools coupons through a pools collector (40%), by post (19%) or at a betting shop (15%). The latter was by far the most commonly used location for betting on horse races (88%), dog races (58%) and other bets placed with bookmakers (82%).

Participation in bingo was fairly evenly divided between playing in bingo halls (47%) or in social clubs (45%). Fruit machines were most likely to be played in pubs (64%), followed by social clubs (20%) and amusement arcades (14%).

The most diverse locations for any of the gambling activities was for private betting, which was fairly evenly divided between people making bets with friends or colleagues at a pub (25%), at work (25%), at a sports venue (19%), at their own home (17%) or at someone else's home (16%).

Table 2.8 Where participated in gambling, by type of gambling activity^a

Past week gamblers for each activity

Location or method of gambling	National Lottery Draw	Other lottery	Scratch-cards	Football pools	Bingo	Fruit machines	Private betting	Horse races	Dog races	Other book-maker betting
	%	%	%	%	%	%	%	%	%	%
At a newsagent	48	34	50	9	-	-	-	-	-	-
At a large supermarket	29	20	29	-	-	-	-	-	-	-
At a pub	-	2	-	-	2	64	25	-	-	-
At a betting shop	-	14	-	15	-	5	-	88	58	82
At a bingo hall	-	-	-	-	47	-	-	-	-	-
At a club or social club	-	-	-	-	45	20	-	-	-	-
At the race track	-	-	-	-	-	-	-	8	35	-
At or through place of work	9	7	-	9	-	3	25	-	-	-
At a local food shop	8	4	11	1	-	-	-	-	-	-
At an amusement arcade or centre	-	-	-	-	2	14	-	-	-	-
At a petrol station	5	3	8	-	-	-	-	-	-	-
At a post office	6	5	9	-	-	-	-	-	-	-
Through a pools collector	-	-	-	40	-	-	-	-	-	-
By post	-	-	-	19	-	-	-	-	-	-
At a sports ground or centre	-	-	-	-	-	1	19	-	-	10
At own home	-	-	-	-	-	-	17	-	-	-
At someone else's home	-	-	-	-	-	-	16	-	-	-
Over the telephone	-	-	-	-	-	-	-	5	6	3
At an off-licence	1	1	2	-	-	-	-	-	-	-
At a casino	-	-	-	-	-	3	-	-	-	-
At a fish and chip shop	-	-	-	-	-	3	-	-	-	-
At a fairground	-	-	-	-	-	2	-	-	-	-
Through a subscription	1	-	-	-	-	-	-	-	-	-
At a railway station or motorway service station	-	-	-	-	-	2	-	-	-	-
Through a newspaper	-	-	-	-	1	-	-	-	-	-
At a church	-	-	-	-	*	-	-	-	-	-
On the Internet	-	*	-	-	*	*	-	-	-	-
Through an unofficial bookmaker	-	-	-	-	-	-	-	2	-	-
Elsewhere	3	17	3	8	8	3	9	-	-	5
<i>Bases (weighted):</i>	3596	272	639	447	272	421	297	219	62	67
<i>Bases (unweighted):</i>	3640	269	633	447	273	381	283	213	58	64

The columns add to more than 100% as more than one response was permitted.

^aCasino gambling has been excluded from the table, as the definition of participation in the activity includes its location.

Endnotes

- ¹ In this report, 'fruit machines' is an inclusive term which covers all types of gaming machines, slot machines, etc.
- ² More detailed questions on gambling frequency were not included in the questionnaire for a number of reasons, including problems of recall and the difficulty of defining a gambling 'episode' (for instance, would it refer to a single bet or a single session involving multiple bets).
- ³ For each of the eleven types of gambling activity asked about, for analysis purposes respondents were counted as participants if they ticked the 'yes' box at question A1 (see the questionnaire in Appendix 3) *or* if they ticked the 'yes' box at question B2 or B3 for the relevant activity (and thereby said they participated in that activity within the last 7 days). Non-participation in each of the eleven activities applied to respondents who ticked the 'no' box at question A1 *or* left question A1 blank. This approach assumes there is no missing data for any of the activities, and participation rates for all eleven activities are thus based on the full sample (unless otherwise stated). Moreover, all the percentages are based on respondents aged 16 and over, even though the minimum legal age for participation in some of the gambling activities is 18.
- ⁴ Such international comparisons must be treated with caution for a number of reasons, including: possible differences in the definitions of both what is included as a 'gambling activity' (eg, whether or not private betting is included) and what counts as 'participation' in gambling (eg, spending own money); the types of gambling activity that may have been shown to respondents as a prompt for eliciting responses; and differences in survey methodology (eg, telephone interviewing is a frequently used method in other countries, whereas the British Gambling Prevalence Survey relied on a self-completion questionnaire).
- ⁵ Ronnberg, S. Volberg, RA. Abbott, MW. Moore, WL. Andren, A. Munck, I. Jonsson, J. Nilsson, T. Svensson, O. *Gambling and problem gambling in Sweden*. Report No. 2 of the National Institute of Public Health Series on Gambling. May 1999. The survey in Sweden included only 15-74 year olds.
- ⁶ Reid, K. Searle, W. *People's participation in and attitudes towards gambling: final results of the 1995 survey*. Research Series No. 22. Policy Research Unit. Department of Internal Affairs. March 1996: Wellington. The survey in New Zealand was carried out among people aged 15 and over.
- ⁷ Productivity Commission 1999. *Australia's gambling industries, Draft Report*. Canberra, July: 6.33-6.34.3
- ⁸ Volberg R, et al. *Report to the National Gambling Impact Study Commission*. (NGISC) 1999.
- ⁹ Cluster analysis attempts to identify relatively homogeneous groups of cases (or variables) based on selected characteristics, using an algorithm that starts with each case (or variable) in a separate cluster and then combines clusters until only one is left.
- ¹⁰ As for the past year, for the purposes of analysis, respondents were counted as participants in an activity if they ticked 'yes' at part 'a' of the activity questions *or* if they completed any of parts 'b', 'c' or 'd' for that activity (which implies that they did participate in the activity but missed the initial question asking whether they had participated). Non-participants included those who ticked 'no' at part 'a' or people who left all parts ('a' through 'd') blank for a particular activity. Thus the base for the estimates of participation rates within the past week are all respondents, as missing cases are counted as non-participants.

3 WHO PARTICIPATES IN GAMBLING AND ATTITUDES TOWARDS GAMBLING

3.1 SOCIO-DEMOGRAPHIC FACTORS ASSOCIATED WITH GAMBLING

The first part of this chapter looks at differences between sub-groups of the population in terms of the types and number of gambling activities they participated in over the past year. The definition of 'participation', and the distinctions made between the different types of gambling activities, are the same as described in Chapter 2. This section describes participation in gambling activities in greater detail, by examining which groups within the general population are most likely to gamble and which activities they are most likely to participate in. Section 3.2 briefly compares the socio-demographic characteristics of past year and past week gamblers, and Section 3.3 describes responses to a series of questions exploring attitudes towards gambling.

3.1.1 Sex and age

Table 3.1 shows, separately for men and women, the proportion who participated in each type of gambling activity in the past 12 months, the proportion who took part in *any* gambling activity, the number of activities they participated in within the past year, and the average (mean) number of activities.

It can be seen that, in general, men were more likely than women to gamble within the past year: 76% of men reported participation in at least one activity compared with 68% of women.

Looking at each of the activities separately, it can be seen that men were more likely than women to participate in eight of the eleven activities, the sexes were (more or less) equally likely to participate in two of the activities (other lotteries and scratchcards), and for only one activity were women more likely to play than men (which was bingo, played by 10% of women and 5% of men). The biggest differences between the sexes were found for fruit machines (20% men, 8% women), private betting (17% men, 6% women), horse races (18% men, 9% women) and the football pools (13% men, 5% women).

On average, men also participated in more activities in the past year than did women (with the mean number for men of 1.9, and for women of 1.3), and were over twice as likely to gamble on four activities or more: 16% of men did so, compared with 7% of women.

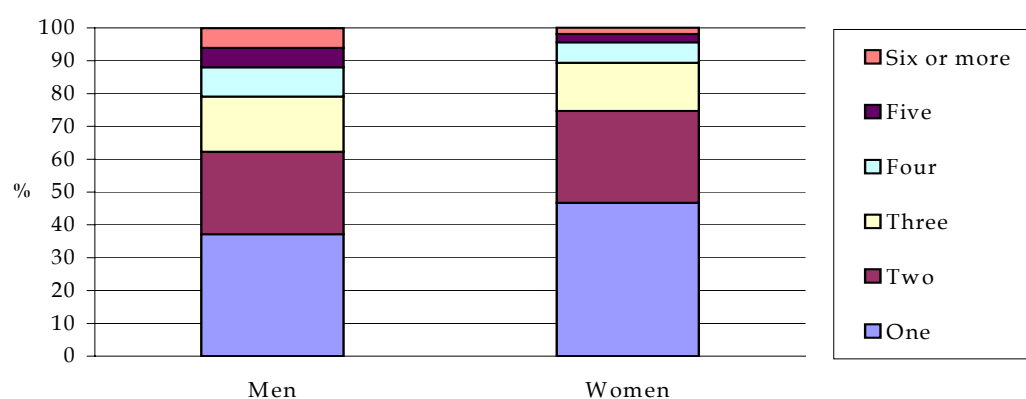
Looking only at past year gamblers (that is, excluding people who said they did not participate in *any* gambling activities within the past 12 months), the differences between men and women become even more marked, with nearly one in two (47%) of women participating in only one activity, compared with about one in three (37%) men. On the other hand, men were more likely than women to report gambling on four or more activities (21% and 11% respectively). (Figure 3A)

Table 3.1 Participation in gambling activities within past year, by sex

All

Type and number of gambling activities participated in within past year	Sex		Total
	Men	Women	
Type of gambling activity:	%	%	%
National Lottery Draw	68	62	65
Another lottery	9	8	8
Scratchcards	22	22	22
Football pools	13	5	9
Bingo	5	10	7
Fruit machines	20	8	14
Horse races	18	9	13
Dog races	6	2	4
Betting with a bookmaker (other than on horse or dog races)	5	1	3
Table games in a casino	4	1	3
Private bets (eg, with friends or colleagues)	17	6	11
<i>Any gambling activity in past year</i>	76	68	72
Number of gambling activities:			
None	24	32	28
One	28	32	30
Two	19	19	19
Three	13	10	11
Four	7	4	5
Five	5	2	3
Six or more	5	1	3
Mean number of gambling activities	1.9	1.3	1.6
<i>Bases (weighted):</i>	3745	3955	7700
<i>Bases (unweighted):</i>	3610	4070	7680

Figure 3A: Number of gambling activities in past year, by sex



Base: Past year gamblers

As Table 3.2 shows, participation in gambling was also related to age. Most notably, participation rates and the average number of gambling activities were lowest in the two oldest age categories (65-74 and 75+). For the younger age groups, the pattern was a bit more complex. Respondents aged 25-34 appear to have the highest levels of past year gambling: at 78%, they were the most likely (along with ages 35-54) to report gambling on any activity; they reported the highest average number of activities over the past year (2.1); and (along with ages 16-24) they were the most likely to participate in four or more activities (19%). Turning to the youngest age group (16-24), despite their having quite a high rate of non-participants (34%), those who did gamble tended to participate in a large number of activities: 19% of ages 16-24 participated in four or more activities and they reported the second highest average number of activities in the past year (1.9). In fact, looking only at past year gamblers, respondents aged 16-24 were the most likely to report participation in four or more activities (29%). (Figure 3B)

There was also some variation in the type of gambling activity people of different ages were attracted to. The lowest levels of participation in the National Lottery Draw were found among the oldest (75+) and youngest (16-24) respondents (45% and 52% respectively). The youngest age group was the most likely to purchase scratchcards (36%), play fruit machines (32%) and, along with the 25-34 age group, make private bets (21% and 18% respectively). In general, the oldest respondents (65-74 and 75+) were the least likely to participate in most types of gambling, except for bingo where they were the most likely to.

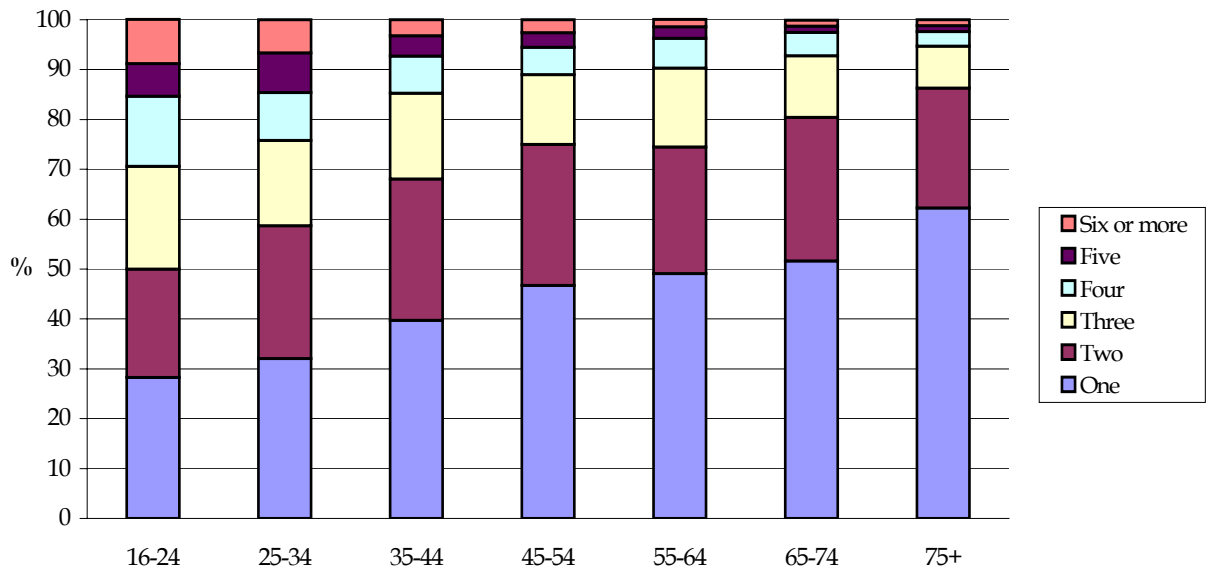
Table 3.2 Participation in gambling activities within past year, by age

All

Type and number of gambling activities participated in within past year	Age							Total ^a
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
Type of gambling activity:	%	%	%	%	%	%	%	%
National Lottery Draw	52	71	72	72	69	61	45	65
Another lottery	8	9	8	9	9	8	6	8
Scratchcards	36	32	23	17	16	11	6	22
Football pools	4	9	8	11	13	10	6	9
Bingo	7	7	7	6	7	9	10	7
Fruit machines	32	22	15	8	6	3	1	14
Horse races	12	19	15	14	11	9	5	13
Dog races	6	7	4	4	2	1	1	4
Betting with a bookmaker (other than on horse or dog races)	5	5	3	2	2	1	*	3
Table games in a casino	4	5	3	2	1	*	*	3
Private bets (eg, with friends or colleagues)	21	18	11	10	6	5	3	11
<i>Any gambling activity in past year</i>	66	78	77	78	74	66	52	72
Number of gambling activities:								
None	34	22	23	22	26	34	48	28
One	19	25	31	36	36	34	32	30
Two	14	21	22	22	19	19	12	19
Three	14	13	13	11	12	8	4	11
Four	9	8	6	4	4	3	1	5
Five	4	6	3	2	2	1	1	3
Six or more	6	5	2	2	1	1	1	3
Mean number of gambling activities	1.9	2.1	1.7	1.5	1.4	1.2	0.8	1.6
<i>Bases (weighted):</i>	1045	1503	1386	1267	960	812	709	7700
<i>Bases (unweighted):</i>	931	1374	1494	1384	1030	848	601	7680

^aThe total column includes those for whom age could not be determined.

Figure 3B: Number of gambling activities in past year, by age



Base: Past year gamblers

3.1.2 Marital status

Table 3.3 shows that participation in gambling activities was also related to marital status, although this is almost certainly a reflection of the age relationship described in the previous section. Widowed respondents (who were the oldest) were the least likely to have gambled over the past year. The pattern for single respondents was similar to that for 16-24 year olds: a relatively high proportion had not gambled at all, but among those who had, they were more likely than average to participate in four or more activities.

Table 3.3 Participation in gambling activities within past year, by marital status

All

Type and number of gambling activities participated in within past year	Marital status					Total
	Married	Living as married	Widowed	Separated/divorced	Single	
Type of gambling activity:	%	%	%	%	%	%
National Lottery Draw	68	74	54	73	55	65
Another lottery	7	10	8	13	9	8
Scratchcards	19	29	10	21	30	22
Football pools	10	7	7	8	7	9
Bingo	6	8	12	8	8	7
Fruit machines	10	23	2	10	25	14
Horse races	13	17	6	16	15	13
Dog races	3	7	1	4	6	4
Betting with a bookmaker (other than on horse or dog races)	2	4	1	5	5	3
Table games in a casino	2	4	*	2	5	3
Private bets (eg, with friends or colleagues)	10	15	3	11	18	11
<i>Any gambling activity in past year</i>	74	82	60	78	67	72
Number of gambling activities:						
None	26	18	40	22	33	28
One	33	29	33	34	21	30
Two	21	21	16	20	15	19
Three	11	15	7	12	13	11
Four	5	8	2	5	8	5
Five	3	4	1	4	5	3
Six or more	2	5	1	3	5	3
Mean number of gambling activities	1.5	2.0	1.0	1.7	1.8	1.6
<i>Bases (weighted):</i>	4193	590	643	527	1611	7700
<i>Bases (unweighted):</i>	4343	572	594	547	1492	7680

*The total column includes those for whom marital status could not be determined.

3.1.3 Economic activity

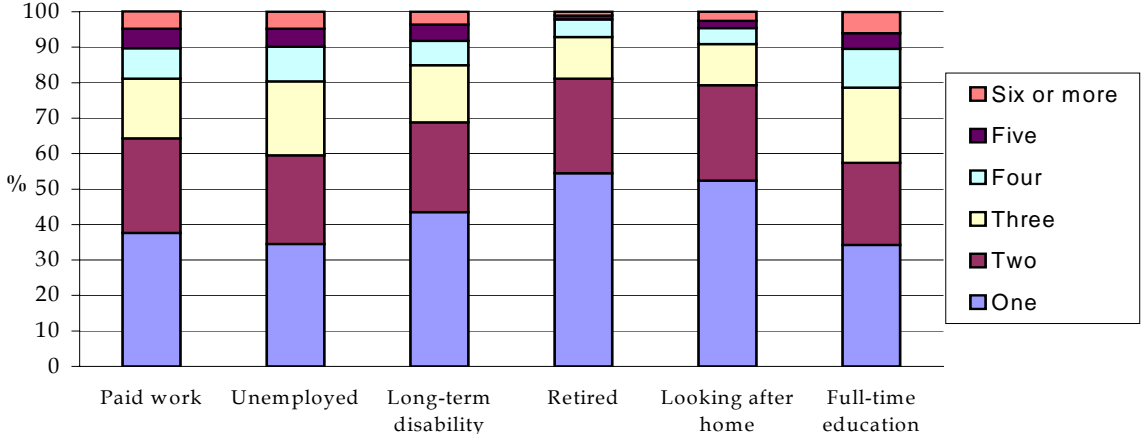
Also related to people’s participation in gambling over the past 12 months was their economic activity at the time of interview. As this is also related to age, it could be that much of the association between economic activity and gambling is a by-product of the age relationship. But as Table 3.4 shows, the lowest participation rates in gambling activities in the past year were reported by people in full-time education (52%) and retired respondents (62%). People in paid work were by far the most likely to have gambled in the past year (80%).

As described earlier, women were less likely to have gambled than men, and this is reflected in the relatively low participation rates (64%) among respondents who were looking after the family or home (nearly all women).

Looking only at past year gamblers, people in paid work were more likely than average to participate in four or more gambling activities (19% compared with the 16% average), while people who were retired or looking after the home were less likely to participate in this number of activities (7% and 9% respectively). (Figure 3C)

Participation in the different gambling activities also varied according to people’s economic activity. Some of the significant differences, compared with the average, include: People in full-time education were much less likely to play the National Lottery Draw (only 37%), but were much more likely to play fruit machines (22%) and to make private bets (17%). Retired people were less likely to purchase scratchcards (only 10%), play fruit machines (3%) or make private bets (4%), but were more likely to play bingo (9%). Respondents who could not work because of a long-term illness or disability were more likely than average to report playing bingo (12%), but were less likely to make private bets (5%). People in paid work were more likely to report participation in four of the activities: the National Lottery Draw (73%); scratchcards (27%); horse races (17%); and casino gambling (4%).

Figure 3C: Number of gambling activities in past year, by economic activity



Base: Past year gamblers

Table 3.4 Participation in gambling activities within past year, by economic activity of respondent

All

Type and number of gambling activities participated in within past year	Economic activity						Total ^a
	Paid work	Unemployed	Long-term disability	Looking after family/home	Retired	Full-time education	
	%	%	%	%	%	%	%
Type of gambling activity:							
National Lottery Draw	73	57	63	59	56	37	65
Another lottery	9	11	12	7	8	4	8
Scratchcards	27	25	17	19	10	26	22
Football pools	10	6	12	4	9	3	9
Bingo	7	9	12	8	9	5	7
Fruit machines	18	17	11	8	3	22	14
Horse races	17	15	11	8	8	8	13
Dog races	5	6	2	2	1	4	4
Betting with a bookmaker (other than on horse or dog races)	4	2	5	1	1	3	3
Table games in a casino	4	1	1	1	*	3	3
Private bets (eg, with friends or colleagues)	15	12	5	4	4	17	11
<i>Any gambling activity in past year</i>	80	66	70	64	62	52	72
Number of gambling activities:							
None	20	34	30	36	38	48	28
One	30	23	31	34	34	18	30
Two	21	17	18	17	16	12	19
Three	13	14	11	7	7	11	11
Four	7	6	5	3	3	6	5
Five	4	3	3	1	1	2	3
Six or more	4	3	3	2	1	3	3
Mean number of gambling activities	1.9	1.6	1.5	1.2	1.1	1.3	1.6
<i>Bases (weighted):</i>	4259	323	280	654	1662	375	7700
<i>Bases (unweighted):</i>	4278	313	294	673	1639	335	7680

^aThe total column includes those for whom economic activity could not be determined.

3.1.4 Social class

It can be seen in Table 3.5 that people in the manual social classes (IIIM, IV and V) were somewhat more likely to have gambled in the past year, and to have participated in more activities, than were those in non-manual social classes (I, II, IIINM); in particular, respondents in Social Class I were much less likely than average to have gambled. However, as Figure 3D shows, when looking only at past year gamblers the differences between social classes in terms of the number of activities they participate in largely disappear.

There were also a number of differences in the types of gambling activities favoured by the different social classes, although on the whole these were quite small. The most notable was the increase in the popularity of bingo from 3% in Social Class I to 20% in Social Class V. It can also be seen that respondents in Social Class I were the least likely to participate in the National Lottery Draw and other lotteries.

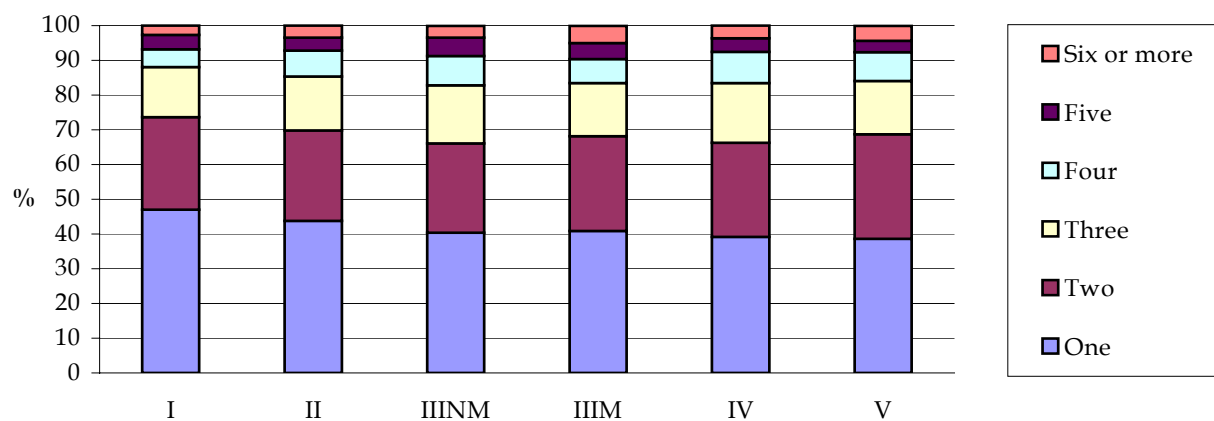
Table 3.5 Participation in gambling activities within past year, by social class of highest income householder

All

Type and number of gambling activities participated in within past year	Social class of highest income householder						Total ^a
	I	II	IIINM	IIIM	IV	V	
	%	%	%	%	%	%	%
Type of gambling activity:							
National Lottery Draw	56	64	66	69	68	64	65
Another lottery	4	7	9	10	10	8	8
Scratchcards	17	20	24	24	24	19	22
Football pools	6	8	9	11	8	7	9
Bingo	3	4	8	8	11	20	7
Fruit machines	12	14	14	14	15	12	14
Horse races	14	14	12	13	12	13	13
Dog races	5	3	5	4	4	3	4
Betting with a bookmaker (other than on horse or dog races)	2	3	3	3	3	4	3
Table games in a casino	5	3	3	2	2	1	3
Private bets (eg, with friends or colleagues)	12	13	11	11	11	8	11
Any gambling activity in past year	66	71	72	75	75	71	72
Number of gambling activities:							
None	34	29	28	25	25	29	28
One	31	31	29	31	30	27	30
Two	18	19	19	20	20	21	19
Three	9	11	12	12	13	11	11
Four	3	5	6	5	7	6	5
Five	3	3	4	3	3	2	3
Six or more	2	2	2	4	3	3	3
Mean number of gambling activities	1.4	1.5	1.6	1.7	1.7	1.6	1.6
<i>Bases (weighted):</i>	539	2397	1106	2025	1076	300	7700
<i>Bases (unweighted):</i>	543	2410	1106	2021	1067	297	7680

^aThe total column includes those for whom social class could not be determined.

Figure 3D: Number of gambling activities in past year, by social class of highest income householder



Base: Past year gamblers

3.1.5 Household income

There were also some trends in participation rates for households at different income levels. Overall, the rate of participation in any gambling activity in the past year increased along with household income, until the category of £31,200-£36,399 after which rates began to decline, if only slightly.

Two activities were more popular among lower than higher income households, ie, bingo and other lotteries. On the other hand, participation tended to increase along with income for horse races, private betting, and casino gambling (Table 3.6).

For past year gamblers, the likelihood of participating in more activities increased along with household income. (Figure 3E)

Figure 3E: Number of gambling activities in past year, by household income

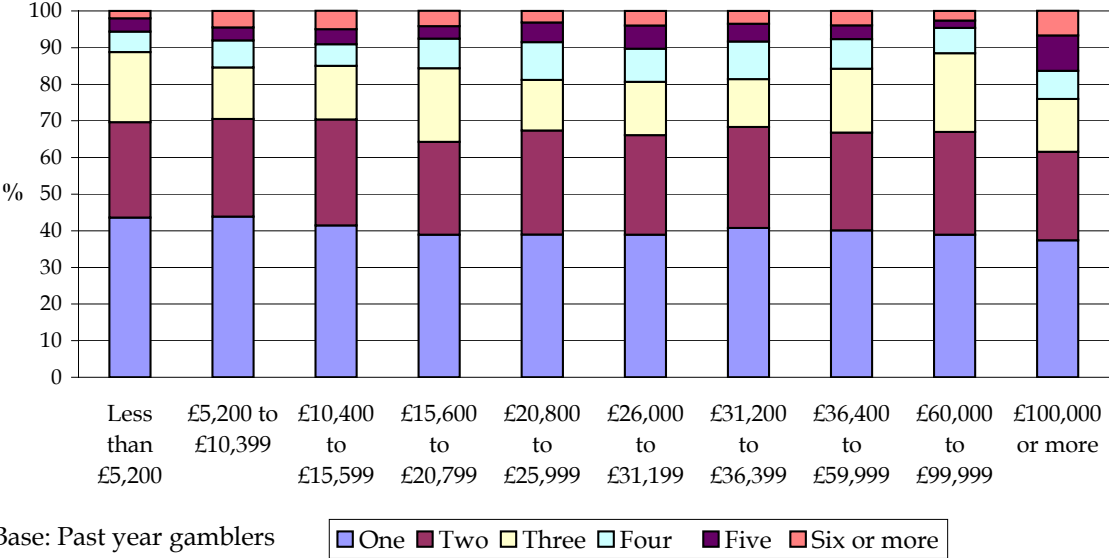


Table 3.6 Participation in gambling activities within past year, by household income*All*

Type and number of gambling activities participated in within past year	Household income										Total ^a
	Less than £5,200	£5,200 to £10,399	£10,400 to £15,599	£15,600 to £20,799	£20,800 to £25,999	£26,000 to £31,199	£31,200 to £36,399	£36,400 to £59,999	£60,000 to £99,999	£100,000 or more	
Type of gambling activity:	%	%	%	%	%	%	%	%	%	%	%
National Lottery Draw	58	61	64	67	70	69	73	67	62	66	65
Another lottery	10	10	9	9	8	9	8	6	4	11	8
Scratchcards	20	18	21	24	27	26	25	22	22	25	22
Football pools	6	10	10	10	9	10	8	8	5	8	9
Bingo	12	12	9	5	7	5	5	5	2	5	7
Fruit machines	8	10	13	16	16	20	15	17	19	15	14
Horse races	10	11	12	14	14	14	14	16	16	20	13
Dog races	3	3	3	5	4	5	5	6	3	5	4
Betting with a bookmaker (other than on horse or dog races)	2	4	4	2	3	3	4	4	2	4	3
Table games in a casino	1	2	2	2	3	4	4	3	7	7	3
Private bets (eg. with friends or colleagues)	6	8	8	13	11	15	15	17	13	20	11
<i>Any gambling activity in past year</i>	66	68	70	74	74	78	78	76	72	73	72
Number of gambling activities:											
None	34	32	30	26	24	22	22	24	28	27	28
One	29	30	29	29	30	30	32	30	28	27	30
Two	17	18	20	19	21	21	22	20	20	18	19
Three	13	10	10	15	10	11	10	13	16	11	11
Four	4	5	4	6	8	7	8	6	5	6	5
Five	2	2	3	2	4	5	4	3	1	7	3
Six or more	1	3	4	3	2	3	3	3	2	5	3
Mean number of gambling activities	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.7	1.6	1.9	1.6
<i>Bases (weighted):</i>	641	1029	933	804	798	562	406	924	289	146	7700
<i>Bases (unweighted):</i>	609	1022	919	803	807	550	413	937	295	148	7680

^aThe total column includes those for whom household income could not be determined.

3.1.6 Qualifications

Finally, looking at participation rates by qualification level shows that people with the highest (ie, degree) level of qualification were the least likely to gamble within the past year (67%) and participated in a lower than average number of activities (1.4).

Table 3.7 suggests that people with different levels of qualification also tend to participate in different types of gambling activity, although the pattern is not an easy one to summarise. What is evident is that certain forms of gambling are more likely to be played by people with lower levels of qualification (such as bingo and the football pools); also it appears that people with degree level qualifications were considerably less likely than average to participate in the National Lottery Draw, scratchcards, other lotteries, football pools and bingo.

Table 3.7 Participation in gambling activities within past year, by highest educational qualification

All

Type and number of gambling activities participated in within past year	Highest educational qualification						Total ^a
	Degree or higher	Professional below degree	A levels	GCSE/O levels	Other qualification	None	
	%	%	%	%	%	%	%
Type of gambling activity:							
National Lottery Draw	57	68	63	69	68	66	65
Another lottery	6	8	8	9	10	8	8
Scratchcards	17	21	29	29	19	18	22
Football pools	6	8	7	8	10	11	9
Bingo	3	5	6	8	7	11	7
Fruit machines	12	14	22	22	11	8	14
Horse races	14	13	18	14	13	11	13
Dog races	4	4	7	4	3	3	4
Betting with a bookmaker (other than on horse or dog races)	3	2	6	3	3	2	3
Table games in a casino	5	3	5	2	4	1	3
Private bets (eg, with friends or colleagues)	15	11	17	15	9	6	11
<i>Any gambling activity in past year</i>	67	73	72	76	74	71	72
Number of gambling activities:							
None	33	27	28	24	26	29	28
One	30	32	25	27	33	33	30
Two	18	20	17	21	20	19	19
Three	10	10	14	13	12	11	11
Four	5	7	7	7	4	4	5
Five	2	2	4	5	2	2	3
Six or more	2	3	6	3	3	2	3
Mean number of gambling activities	1.4	1.6	1.9	1.8	1.6	1.4	1.6
<i>Bases (weighted):</i>	1224	870	703	1883	447	2200	7700
<i>Bases (unweighted):</i>	1212	882	683	1875	447	2207	7680

^aThe total column includes those for whom highest qualification class could not be determined.

3.1.7 Age and sex profiles for the gambling interest groups

Table 3.8 shows how the four group classification based on gambling interest (defined in Section 2.1.6) varies by sex and age. It is clear that women are much more likely than men to be non-gamblers and minimal interest gamblers (32% and 36% respectively for women compared with 24% and 29% for men), and much less likely than men to be moderate or multiple interest gamblers (28% and 4% for women compared with 36% and 10% for men).

Interest in gambling also shows some decline with age (aside from the very youngest age category of 16-24 where there was a higher than average proportion of non-gamblers). For example, the likelihood of being a multiple interest gambler shows a consistent decline with age, from 12% for ages 16-34 to only 1% among people aged 65 and over. Moreover, a gradual shift is perceptible, from the relatively high proportions in the multiple/moderate interest groups for ages 16-24 and 25-34 giving way to increasing proportions in the moderate/minimal interest groups for ages 35-44, 45-54 and 55-64, and eventually culminating in the very high proportions in the minimal/no interest groups for the two oldest age categories of 65-74 and 75 and over.

Table 3.8 Gambling interest groups, by sex and by age

All

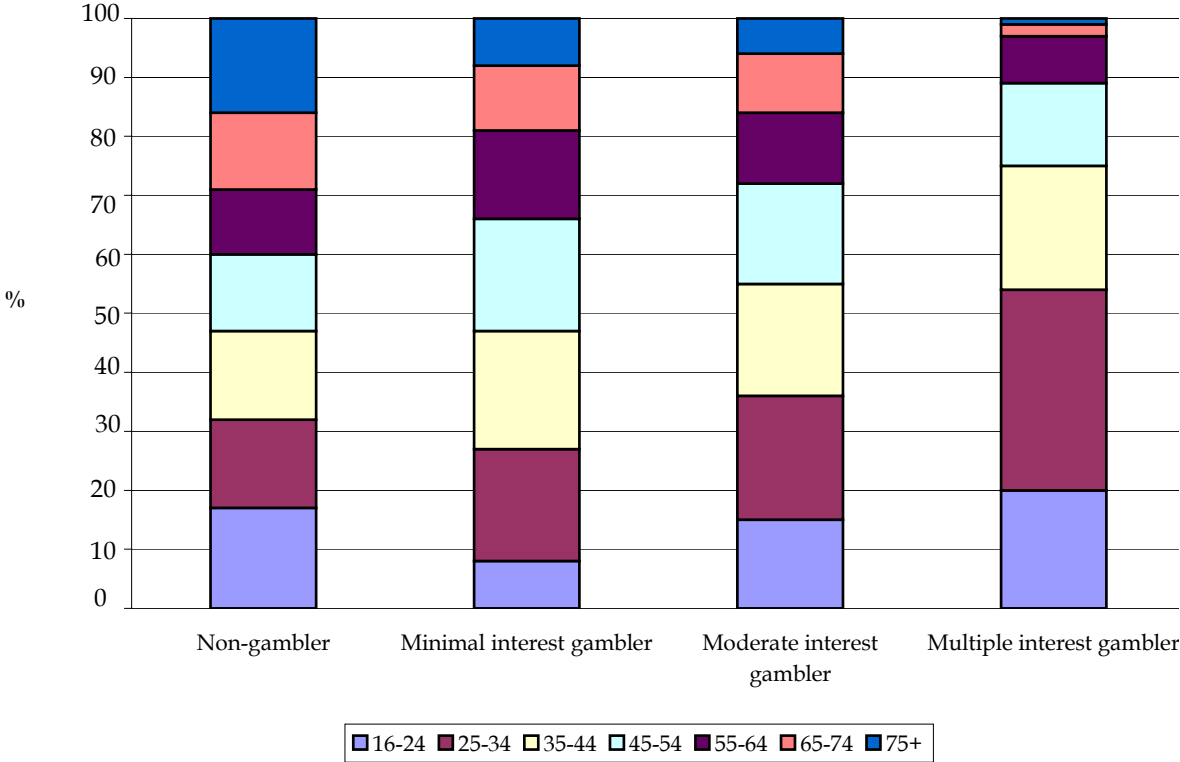
Gambling interest group	Sex		Age							Total ^a
	Men	Women	16-24	25-34	35-44	45-54	55-64	65-74	75+	
Non-gamblers	24	32	34	22	23	22	26	34	48	28
Minimal interest gamblers	29	36	19	31	35	39	38	35	30	33
Moderate interest gamblers	36	28	36	35	34	33	32	30	21	32
Multiple interest gamblers	10	4	11	12	8	6	4	2	1	7
<i>Bases (weighted):</i>	3745	3955	1045	1503	1386	1267	960	812	709	7700
<i>Bases (unweighted):</i>	3610	4070	931	1374	1494	1384	1030	848	601	7680

^aThe total column includes those for whom age could not be determined.

Figure 3F confirms this picture by looking at the data from another angle, that of the age profile of these four gambling interest groups. The figure shows that non-gamblers have the oldest age profile, with 29% of this group aged 65 and over; the equivalent figures for the other groups were 20% for minimal interest, 16% for moderate interest and only 4% for multiple interest gamblers. By contrast, three in four (75%) of the multiple interest group is aged 16-44, compared with only 47% of non-gamblers falling in this age range.

As well as being young, the multiple interest group is also predominantly male: 72%, compared with 55% of moderate interest gamblers, 44% of minimal interest gamblers and 42% of non-gamblers.

Figure 3F: Age profile of gambling interest groups



3.2 COMPARISON OF PAST YEAR AND PAST WEEK GAMBLERS

Table 3.9 presents a comparison of the proportion of people who reported gambling in the past year with the proportion gambling in the past week for a number of socio-demographic variables. In general, the correspondence between these two groups is very close, although a few differences are apparent. While the sex profile was similar for these two groups, it appears that past week gamblers are slightly older than past year gamblers. Also, compared with past year gamblers, past week gamblers are slightly more likely to be from the manual social classes, to have no educational qualifications, and to be in the lower income groups, and they are less likely to be in full-time education.

Table 3.9 A comparison of past year and past week gamblers for a number of socio-demographic characteristics

All

Proportion within each category who gambled within the past year/past week	Any gambling activity in past year	Any gambling activity in past week
	%	%
<i>General population</i>	72	53
<i>Sex</i>		
Men	76	58
Women	68	48
<i>Age</i>		
16-24	66	42
25-34	78	52
35-44	77	57
45-54	78	59
55-64	74	61
65-74	66	53
75 and over	52	41
<i>Social class of highest income householder</i>		
I	66	41
II	71	48
IIINM	72	52
IIIM	75	61
IV	75	59
V	71	59
<i>Economic activity</i>		
Paid work	80	59
Unemployed	66	47
Long-term disability	70	55
Looking after family/home	64	43
Retired	62	50
Full-time education	52	26
<i>Household income</i>		
Less than £5,200	66	50
£5,200, to £10,399	68	54
£10,400, to £15,599	70	55
£15,600, to £20,799	74	53
£20,800, to £25,999	74	57
£26,000, to £31,199	78	58
£31,200, to £36,399	78	56
£36,400, to £59,999	76	50
£60,000, to £99,999	72	41
£100,000 or more	73	45
<i>Highest educational qualification</i>		
Degree or higher	67	38
Professional below degree	73	53
A levels	72	50
GCSE/O levels	76	56
Other qualification	74	58
No qualification	71	60

The weighted and unweighted bases are as in Tables 3.1, 3.2, 3.4, 3.5, 3.6 and 3.7.

3.3 ATTITUDES TOWARDS GAMBLING

All respondents who reported participation in at least one gambling activity in the past year were asked to answer eight questions exploring their attitudes to gambling. Respondents were shown eight statements and asked to tick one of six categories in order to summarise how the statement applied to them in relation to all forms of gambling they had done in the last 12 months. The categories were: always, often, sometimes, rarely, never, or not applicable. The eight statements were:¹

In the last 12 months...

Winning at gambling has helped me financially.

Gambling has given me pleasure and fun.

After losing at gambling I have felt extremely depressed.

I think gambling involves skill.

I have lost more than I have won at gambling.

When I gambled I felt excited.

Gambling has helped me to relax.

I have made good friends through gambling.

The highest level of 'agreement' was expressed for the statement 'lost more than won', with half of respondents saying this happened always (24%) or sometimes (26%). The statement with the next highest level of agreement was 'given fun and pleasure', with 6% saying always and 11% sometimes. The highest levels of 'disagreement' had to do with four statements, one of which was negative: 'felt extremely depressed after losing', with 62% saying never and 12% rarely. The other three were positive: 'made good friends' (63% never and 5% rarely), 'helped relax' (55% never and 12% rarely), and 'winning has helped financially' (51% never and 21% rarely). (Table 3.10)

Table 3.10 Attitudes to gambling in past year, by sex*Past year gamblers*

Attitude statements		Always	Often	Sometimes	Rarely	Never	Not applicable
Men							
Winning at gambling has helped financially	%	*	1	13	23	50	13
Gambling has given fun and pleasure	%	7	14	40	18	13	9
Felt extremely depressed after losing at gambling	%	1	2	7	14	62	15
Gambling involves skill	%	3	8	34	14	29	12
Lost more than won at gambling	%	23	29	21	8	8	10
Felt excited when gambled	%	5	10	31	19	25	10
Gambling has helped to relax	%	2	4	15	14	52	13
Made good friends through gambling	%	1	2	6	8	64	20
Women							
Winning at gambling has helped financially	%	*	*	8	20	53	19
Gambling has given fun and pleasure	%	5	8	38	18	17	15
Felt extremely depressed after losing at gambling	%	1	2	4	9	62	23
Gambling involves skill	%	1	3	25	13	37	21
Lost more than won at gambling	%	24	23	17	7	11	18
Felt excited when gambled	%	3	7	25	17	30	18
Gambling has helped to relax	%	1	3	8	10	57	21
Made good friends through gambling	%	2	2	3	3	61	29
All							
Winning at gambling has helped financially	%	*	1	10	21	51	16
Gambling has given fun and pleasure	%	6	11	39	18	15	12
Felt extremely depressed after losing at gambling	%	1	2	5	12	62	19
Gambling involves skill	%	2	6	30	14	33	16
Lost more than won at gambling	%	24	26	19	8	10	14
Felt excited when gambled	%	4	9	28	18	28	14
Gambling has helped to relax	%	2	4	11	12	55	17
Made good friends through gambling	%	1	2	5	5	63	24

Note that, for this table, the rows add to 100% horizontally.

The bases vary slightly for each statement because of the exclusion of missing cases. For the first statement, the weighted bases are: 2738 for men, 2561 for women, and 5299 for all; the unweighted bases are: 2631 for men, 2670 for women, and 5301 for all.

A Cronbach's alpha statistic² showed a high level of internal consistency (.8155) between the eight attitude statements and therefore an additional summary score was calculated. The summary score adds together responses for each of the individual questions, and has a maximum 'score' of 40. (The scoring method is described in Appendix 2.) The computed scale indicates 'overall (positive) attitude towards gambling', with a high score reflecting a positive attitude.

The mean summary score of 'overall (positive) attitude towards gambling' was 15.5 (with a standard deviation of 7.1) out of a total possible score of 40. Men were slightly more positive about gambling than women (16.7 compared with 14.2) and 'positivity' decreased with age from 17.5 in the youngest, to 14.4 in the oldest, age group. (Table 3.11). This is in line with the finding that men and younger people were more likely to participate in gambling activities (Section 3.1.1).

Table 3.11 Mean overall score on (positive) attitude to gambling, by sex and age

Past year gamblers

Age	Men		Women		Total	
	Mean	SD	Mean	SD	Mean	SD
16-24	18.9	5.85	15.8	6.85	17.5	6.5
25-34	17.5	6.6	15.0	6.4	16.3	6.6
35-44	16.7	6.5	14.1	6.8	15.4	6.7
45-54	16.5	6.7	13.4	7.1	15.0	7.1
55-64	15.5	7.3	13.2	7.6	14.4	7.5
65+	14.9	7.6	14.0	8.0	14.4	7.8
All	16.7	6.9	14.2	7.1	15.5	7.1
<i>Bases (weighted):</i>						
16-24		367		313		679
25-34		609		542		1150
35-44		537		501		1038
45-54		490		463		953
55-64		354		325		678
65+		406		449		856
All		2766		2597		5364
<i>Bases (unweighted):</i>						
16-24		302		297		599
25-34		504		539		1043
35-44		541		577		1118
45-54		517		524		1041
55-64		366		360		726
65+		426		407		833
		2660		2709		5369

SD = Standard Deviation

Endnotes

- ¹ The attitude questions were taken from a 47-item questionnaire used in an Australian survey: Dickerson M, Hbaron E, Hong S & Cottrell D. Estimating the extent and degree of gambling related problems in the Australian populations: a national survey. *Journal of Gambling Studies*. 1996. **12** (2).
- ² Reliability analysis studies the properties of measurement scales and the items that make them up. A Cronbach's Alpha is a model of internal consistency, based on the average inter-item correlation.

4 EXPENDITURE ON GAMBLING ACTIVITIES

4.1 INTRODUCTION

This chapter presents the results on expenditure for each gambling activity. It should be noted from the outset that collecting information on gambling expenditure is not straightforward. Previous studies have tended simply to ask the question ‘how much do you spend gambling’, presuming this to be an unambiguous concept, that will be interpreted consistently by respondents. During pre-testing of the questionnaire for the British Gambling Prevalence Survey,¹ it emerged that at least four different interpretations of ‘spend’ were being employed by respondents:

- Amount ‘staked’, that is, the amount bet on an *individual event* (eg a horse race, a lottery ticket).
- ‘Outlay’, that is, the *sum* of multiple bets risked during a gambling session/episode.
- ‘Turnover’, that is, the total amount gambled, *including* any re-invested winnings.
- ‘Net expenditure’, that is, the amount gambled *minus* any winnings.

Moreover, the interpretation varied for different gambling activities, even by the same respondent. For further discussion of the problems around interpreting ‘spend’ in gambling terms, see Haig (1985)² and Blaszczyński (1997).³

To minimise ambiguity in the questionnaire for the current survey, the gambling activities were separated into two groups, with explicit instructions on how calculations should be made. The two groups were based on the results of the questionnaire pre-testing; namely that, for the majority of people, some activities were naturally calculated in terms of ‘stake’ (for example, lottery tickets, football pools, and bingo tickets); while others tended to be thought of more in terms of ‘net expenditure’ (for example, fruit machines, betting on horse races and table games). (See Appendix 3 Section B of the questionnaire). In order to keep the questionnaire as simple as possible, no information was collected on the *amount won*. Therefore, while it is possible to calculate average *stake*, it is not possible to calculate average net expenditure. Consequently, for the majority of activities, it is only possible to show the distribution of losses for people who had gambled in the past week.

The questions specified that respondents should only count ‘your own money’ as the stake or net expenditure. The time period in question for the expenditure questions was restricted to the 7 days preceding the survey. This is because any period longer than 7 days, for such detailed information, is likely to be significantly affected by recall error.⁴ In order to obtain a broad assessment of whether or not the data collected were normative, respondents were asked whether the previous 7 days had represented a ‘typical week’ in terms of the amount of money they had spent on gambling. The majority of respondents (71%) said that the 7 days in question *did* represent a ‘typical week’, 9% said that they usually spend *more* and 11% that they usually spend *less* in a ‘typical week’.

4.2 STAKE ON GAMBLING ACTIVITIES

The four activities in which ‘stake’ was collected were: the National Lottery Draw, lotteries other than the National Lottery, the football pools and bingo tickets. The questionnaire provided pre-coded response bands, and respondents were asked to indicate their ‘stake’ in the last 7 days by ticking the appropriate box (see Appendix 3, Section B of the questionnaire). Using the mid-point of each band, a mean was calculated for each activity. It is important to note that, since these means are calculated from banded, rather than numeric data, they should not be viewed as ‘exact’ figures; rather, they provide an indication of differences in expenditure between different activities, and between different population sub-groups. (See Appendix 2 ‘Methodology’ for more details on how these means were calculated). Means were calculated **only** for those who had participated in each activity in the 7 days before the survey, and so represent mean expenditure for ‘past week gamblers’ rather than for the population. The means are shown in bold in Table 4.1 for each of the four activities, and in Figure 4A.

Mean stake for bingo in the past week (£7.20), was over twice as high as the average stake for the other three activities. Also, the percentage of people who spent at least £10, in the past week, on bingo tickets (21%) was considerably higher than the equivalent for the other activities (eg 4% on the football pools). In fact, one in four women who had played bingo in the last 7 days had spent at least £10 on tickets.

The mean ‘past week’ stake for the other activities was: £2.80 for the National Lottery Draw and £3.00 for both lotteries other than the National Lottery Draw, and football pools. The mean ‘past week’ stake among men was higher than that for women in all activities, except for bingo, where the average stake by women was £7.90 compared with £5.10 among men.

Figure 4A: Mean stake in the last 7 days on gambling activities, by sex

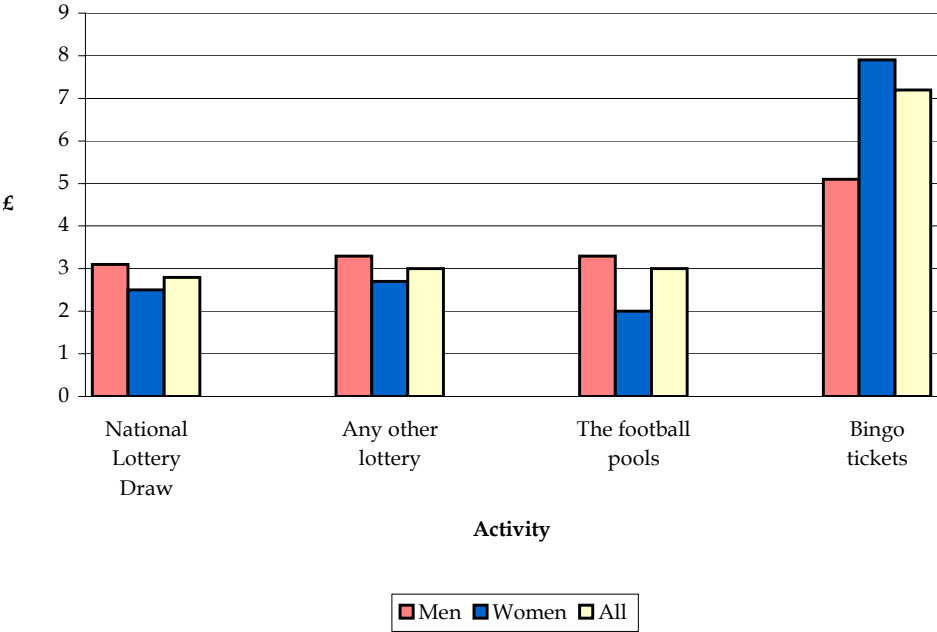


Table 4.1 ‘Stake’ on gambling activities in the last 7 days, by type of activity and sex

Past week gamblers

Amount staked	Sex		Total
	Men	Women	
	%	%	%
<u>National Lottery Draw</u>			
Less than £1	4	5	5
£1	24	33	28
£1.01-£5	58	54	56
£5.01-£10	11	7	9
£10.01-£20	2	1	2
£20.01-£50	1	*	*
More than £50	*	-	*
Mean stake per player	£3.10	£2.50	£2.80
<u>Any other lottery</u>			
Less than £1	13	19	16
£1-£5	77	70	73
£5.01-£10	7	11	9
£10.01-£20	2	-	1
£20.01-£50	1	-	1
More than £50	-	-	-
Mean stake per player	£3.30	£2.70	£3.00
<u>The football pools/fixed odds coupons</u>			
Less than £1	19	35	23
£1-£5	70	62	68
£5.01-£10	7	2	5
£10.01-£20	4	1	3
£20.01-£50	*	-	*
More than £50	1	-	*
Mean stake per player	£3.30	£2.00	£3.00
<u>Bingo tickets</u>			
Less than £1	6	12	11
£1-£5	58	36	42
£5.01-£10	26	27	27
£10.01-£20	7	20	16
£20.01-£50	2	5	4
More than £50	-	1	*
Mean stake per player	£5.10	£7.90	£7.20
<i>Bases (weighted):</i>			
<i>National Lottery Draw</i>	<i>1876</i>	<i>1729</i>	<i>3605</i>
<i>Other lottery</i>	<i>145</i>	<i>128</i>	<i>273</i>
<i>Football pools</i>	<i>330</i>	<i>119</i>	<i>449</i>
<i>Bingo</i>	<i>72</i>	<i>200</i>	<i>272</i>
<i>Bases (unweighted):</i>			
<i>National Lottery Draw</i>	<i>1832</i>	<i>1817</i>	<i>3649</i>
<i>Other lottery</i>	<i>138</i>	<i>133</i>	<i>271</i>
<i>Football pools</i>	<i>321</i>	<i>128</i>	<i>449</i>
<i>Bingo</i>	<i>72</i>	<i>201</i>	<i>273</i>

4.3 'NET EXPENDITURE' ON GAMBLING ACTIVITIES

Blaszczynski³ suggests that 'the most relevant estimate of gambling expenditure is net expenditure. This reflects the actual amount of money the gambler had gambled and represents the true cost of gambling to the individual.' Net expenditure was collected for the following activities: scratchcards, fruit machines, private betting, betting on horse races, betting on dog races, betting on other events with a bookmaker, table games in a casino and spread-betting. The questions asked respondents to 'indicate the amount you lost...that is, the amount you started with less the amount you finished with' and provided an example calculation.

Again the response codes presented *bands* of expenditure, and respondents were asked to tick the box to indicate their own expenditure in the 7 days preceding the survey. Unlike the 'stake' question, the net expenditure response codes allowed an option for 'broke even or won'. In order to simplify the questionnaire as much as possible, the actual amount of winnings was not collected and so mean net expenditure cannot be calculated.

Table 4.2 shows net past week expenditure separately for men and women. Figures are shown just for those who had participated in each activity in the past week. It should be noted that the base of respondents who had participated in a number of the activities in the previous 7 days was too small for reliable estimates. As always, these estimates are shown in square brackets.

Interestingly, a large proportion of past week gamblers in each activity claimed to have won or broke even in the previous 7 days. This percentage ranged from 23% of those betting with a bookmaker on events (excluding horse or dog races) through to 49% of spread-bettors. On the whole, men were more likely than women to report having won or broke even.

The percentage of people who lost £5.00 or more in the past week ranged from 6% of scratchcard buyers, 23% of fruit machine players and horse race bettors, through to 42% of people betting on dog races. The percentage of people who lost £20 or more in the past week was: less than 1% buying scratchcards, 3% on fruit machines, 4% on horse races, 6% on dog races, 4% on bets with a bookmaker (excluding horse or dog races) and 37% of those playing table games in a casino (but the latter figure should be treated with caution due to the small base).

Table 4.2 'Net expenditure' on gambling activities in the last 7 days, by type of activity and sex

Past week gamblers

Net expenditure				Total
		Men	Women	
		%	%	%
<u>Scratchcards</u>				
	Broke even or won	27	29	28
	Lost less than £1	12	16	14
	£1-£5	54	50	52
	£5.01-£10	5	5	5
	£10.01-£20	2	-	1
	£20.01-£50	-	-	-
	More than £50	*	-	*
<u>Fruit machines</u>				
	Broke even or won	28	24	27
	Lost less than £1	8	16	10
	£1-£5	42	36	41
	£5.01-£10	12	15	12
	£10.01-£20	8	5	7
	£20.01-£50	1	4	2
	More than £50	1	1	1
<u>Betting on horse races</u>				
	Broke even or won	32	[24]	31
	Lost less than £1	5	[10]	6
	£1-£5	40	[41]	40
	£5.01-£10	12	[17]	13
	£10.01-£20	6	[7]	6
	£20.01-£50	4	[-]	4
	More than £50	-	[-]	-
<u>Betting on dog races</u>				
	Broke even or won	24	a)	25
	Lost less than £1	7	a)	6
	£1-£5	27	a)	27
	£5.01-£10	24	a)	25
	£10.01-£20	11	a)	11
	£20.01-£50	7	a)	6
	More than £50	-	a)	-
<u>Betting with a bookmaker on other events</u>				
	Broke even or won	26	a)	23
	Lost less than £1	13	a)	17
	£1-£5	55	a)	52
	£5.01-£10	4	a)	4
	£10.01-£20	2	a)	3
	£20.01-£50	2	a)	1
	More than £50	-	a)	-
<u>Table games in a casino</u>				
	Broke even or won	[35]	a)	[35]
	Lost less than £10	[17]	a)	[21]
	£10.01-£20	[9]	a)	[7]
	£20.01-£50	[13]	a)	[17]
	£50.01-£100	[4]	a)	[3]
	£100.01-£200	[9]	a)	[7]
	More than £200	[13]	a)	[10]

(continued overleaf)

Table 4.2 (continued)

<i>Past week gamblers</i>				Total
	Men	Women		
<u>Private bets (eg with friends or colleagues)</u>				
Broke even or won	47	28		43
Lost less than £1	14	27		16
£1-£5	23	37		26
£5.01-£10	5	5		5
£10.01-£20	3	-		3
£20.01-£50	1	-		1
More than £50	1	-		1
Still awaiting result	5	3		4
<u>Spread-betting</u>				
Broke even or won	[46]	[54]		49
Lost less than £10	[37]	[37]		37
£10.01-£20	[5]	[9]		6
£20.01-£50	[2]	[-]		2
£50.01-£100	[-]	[-]		-
£100.01-£200	[3]	[-]		2
More than £200	[7]	[-]		5
<i>Bases (weighted):</i>				
<i>Scratchcards</i>	317	333		648
<i>Fruit machines</i>	337	90		427
<i>Horse races</i>	190	29		219
<i>Dog races</i>	56	a)		64
<i>Betting with a bookmaker (other than on horse or dog races)</i>	57	a)		71
<i>Table games in a casino</i>	24	a)		29
<i>Private bets (eg with friends or colleagues)</i>	237	63		300
<i>Spread-betting</i>	44	20		63
<i>Bases (unweighted):</i>				
<i>Scratchcards</i>	300	342		642
<i>Fruit machines</i>	296	91		387
<i>Horse races</i>	182	31		213
<i>Dog races</i>	51	a)		60
<i>Betting with a bookmaker (other than on horse or dog races)</i>	53	a)		69
<i>Table games in a casino</i>	22	a)		28
<i>Private bets (eg with friends or colleagues)</i>	221	65		286
<i>Spread-betting</i>	42	21		63

a) Figures are not shown where the unweighted base is less than 20.
 Square brackets indicate that the unweighted base is less than 50.

4.4 FACTORS ASSOCIATED WITH STAKE ON GAMBLING ACTIVITIES

Table 4.3 shows the mean stake in the past week on each of the four activities, by economic activity status, the social class of the highest income householder and household income. In order to allow such separate sub-group analysis, the independent (socio-demographic) variables have been collapsed in terms of their number of categories. So, for example, the six social class groups become simply ‘manual’ versus ‘non-manual’.

Retired people tended to stake less on these gambling activities than those in the other two groups. People in paid work who bought National Lottery and other lottery tickets tended to spend more on them than those in the other groups.

Expenditure for the National Lottery Draw and the football pools increased with household income (from £2.60 to £3.00, and £2.60 to £3.40 respectively). With bingo, mean expenditure was highest in the middle income group (£9.70).

Since it was not possible to calculate means for ‘net expenditure’, no analysis was carried out for these activities.

Table 4.3 Mean ‘stake’ in the last 7 days, by type of gambling activity, economic activity, social class of highest income householder, and household income

Past week gamblers

Gambling activity	All	Economic activity			Social class of HIH		Household income		
		In paid work	Retired	Other	Non-manual	Manual	<£15,600	£15,600-£31,200	£31,200 and over
National Lottery Draw	£2.80	£3.10	£2.40	£2.50	£2.90	£2.80	£2.60	£3.00	£3.00
Another lottery	£3.00	£3.40	£2.70	£2.60	£3.00	£3.00	£2.70	£3.70	[£2.90]
The football pools	£3.00	£3.20	£2.40	£3.10	£2.80	£3.10	£2.60	£3.10	£3.40
Bingo tickets	£7.20	£8.60	£4.60	£9.00	£7.20	£6.90	£5.60	£9.70	[£7.90]
<i>Bases (weighted):</i>									
National Lottery Draw	3605	2234	744	571	1711	1811	1231	1076	750
Another lottery	273	146	55	61	100	170	117	81	36
The Football Pools	449	278	114	53	201	238	171	130	75
Bingo tickets	272	117	100	52	83	180	149	63	18
<i>Bases (unweighted):</i>									
National Lottery Draw	3649	2264	748	579	1736	1833	1236	1090	767
Another lottery	271	140	55	64	100	168	120	80	31
The Football Pools	449	276	118	51	200	240	168	133	78
Bingo tickets	273	121	95	54	83	181	148	67	18

4.5 LARGEST AMOUNT OF MONEY EVER LOST GAMBLING

A question was included in the survey which asked respondents to indicate their biggest ever financial loss, in a single day, on gambling (see Question D3 of the questionnaire – Appendix 3). Clearly, the results should be interpreted with caution since they are subject to recall error and also since there is no indication of *when* this loss occurred.

For the vast majority of the population (84%), the largest amount of money ‘ever’ lost, *in a single day*, through gambling was less than £10. Just over one in ten people (12%) reported having lost between £10 and £49, while a small percentage (4%) had lost £50 or more. The distribution of answers was skewed towards the higher categories for men compared with women (only 1% of women reported having lost £50 or more). (Table 4.4)

Table 4.4 Largest amount of money ever lost in one day, by sex

All Amount lost	Sex		Total
	Men	Women	
	%	%	%
Never lost money	17	26	22
Lost less than £10	58	65	62
£10-£49	17	7	12
£50-£99	4	1	2
£100-£499	3	-	1
£500 or more	1	-	1
<i>Bases (weighted):</i>	3522	3655	7257
<i>Bases (unweighted):</i>	3390	3750	7140

Endnotes

- ¹ See Appendix 2 ‘Methodology’ for a detailed description of the methods used to pre-test the questionnaire.
- ² Haig, B. Expenditure on legal gambling. In G, Caldwell & B Haig eds. *Gambling in Australia*. 1985. Sydney: Southwood Press.
- ³ Blaszczynski, A & Lange, M. ‘How much do you spend gambling?’ Ambiguities in Survey Questionnaire Items. *Journal of Gambling Studies*, **13(3)**, Fall 1997.
- ⁴ Please note that the questionnaire did not take into account the length of time spent on the gambling activity.

5 PREVALENCE OF PROBLEM GAMBLING

5.1 INTRODUCTION

'Problem gambling' is gambling to a degree that compromises, disrupts or damages family, personal or recreational pursuits.¹ One of the main aims of the survey was to provide an estimate of the current prevalence of problem gambling in Britain. This chapter presents the survey findings in the context of existing research in this field.

Since this is the first survey of its kind in Britain, and in order to enable comparisons with problem gambling prevalence in other countries, the research team on the British Gambling Prevalence Survey reviewed the international literature on gambling research. Two main screening instruments emerged, which attempt to assess whether an individual might be a problem gambler: the South Oaks Gambling Screen (SOGS)² and the DSM-IV.³ Both screens, designed for use in the general population, are based on instruments used for diagnostic purposes in clinical settings. Each screen can be used to measure both *lifetime* and *current* problem gambling behaviour.

It is widely acknowledged that both of these instruments are imperfect, for reasons outlined below, and that a new, validated tool for measuring problem gambling in the general population is required.⁴ However, it was beyond the remit of this research to develop and validate a new screening instrument. Therefore, in order to maximise the potential of obtaining the best estimate of problem gambling prevalence in Britain, and to allow the widest possible international comparisons, it was decided to include *both* screens in the survey. This also allows the results of the two measures to be compared. The questionnaire, as advocated by Shaffer et al.,⁵ included the screens for *current* (rather than lifetime) problem gambling, as this was considered to be of most interest for this first British prevalence survey.

5.1.1 The South Oaks Gambling Screen (SOGS)

The SOGS, the most widely used internationally, was designed by Lesieur and Blume in 1987.² The SOGS is based on DSM-III criteria for 'pathological gambling'. It was developed using 1616 subjects: 867 patients with diagnoses of substance abuse and pathological gambling, 213 members of Gamblers Anonymous, 384 university students and 152 hospital employees. Independent validation was achieved from family members and counsellors, and internal consistency and test-retest reliability were established.

The SOGS consists of 20 questions on gambling behaviour, such as 'chasing losses', lying to family or friends about the extent of gambling, and feeling guilty about gambling. The SOGS is comprised of questions C9 to C28 of the individual self-completion questionnaire – Appendix 3. Most of the items require a 'yes'/'no' answer; all items are reduced to dichotomies from which a total score (ranging from 0 to 20) of positive responses is calculated. The original thresholds for classification on the SOGS are 3 to 4 to indicate a 'problem gambler' and 5 or more to indicate a 'probable pathological gambler'.

The SOGS has been criticised on two counts: firstly, that it is based on DSM III criteria, rather than the more recent DSM-IV^{6 7} and secondly that it over-estimates problem gambling in general population surveys^{8 9}. These criticisms of the SOGS encouraged the inclusion of both screens in the prevalence survey, and were an important point for consideration when establishing the SOGS threshold for problem gambling (see Section 5.3).

5.1.2 The DSM-IV

The DSM-IV screening instrument is taken from the fourth edition of the manual used by the American Psychiatric Association.¹⁰ It has been used much less commonly than the SOGS and, unlike the SOGS, does not exist in a validated questionnaire format. The DSM-IV consists of 10 diagnostic criteria, and a person who answers ‘yes’ to 3 or more criteria is classified as a ‘problem gambler’, with a score of 5 or more indicating a ‘probable pathological gambler’.³

Fisher¹¹ developed a screening version of the DSM criteria using four response options for each item. The DSM criteria have also formed the basis for instruments such as the National Opinion Research Centre (NORC) DSM Screen for Gambling Problems (NODS), used in a recent national American study,⁶ and the Massachusetts Gambling Screen (MAGS).¹²

Since there is no single validated *questionnaire version* of the DSM criteria, the research team developed and pre-tested a DSM-IV based screen, which comprises questions C9 and C29 to C37 of the self-completion questionnaire – Appendix 3.

5.2 A NOTE ON TERMINOLOGY

There is no agreement in the literature as to how problem gambling is defined, or even what term should be used. A number of different terms have been used to classify people who score above the threshold on the screens. The DSM term ‘pathological gambler’ has been incorporated in a number of studies, as well as a variety of other terms, including Level 1, Level 2, Level 3 and Level 4 gambler,¹³ ‘severe problem gambler’¹¹ and ‘at risk problem gambler’.⁵ Recently there seems to have been a preference in the literature for the term ‘problem gambling’^{14 15} and in the current report this term is used in an *inclusive* sense to refer to anyone scoring above the designated thresholds on the screening instruments.

5.3 ESTABLISHING A THRESHOLD FOR PROBLEM GAMBLING

The classification of people into ‘problem’ and ‘non-problem’ gambling categories is based on the implicit assumption that problem gambling exists as a phenomenon in the population and can be measured. In the same way that different studies have used different terms for problem gambling, they have also used different thresholds for identifying this sub-group. This situation has been described by Shaffer et al as ‘conceptual and methodological chaos’.¹³ Moreover, the distribution of scores on gambling screens suggests that problem gambling is a continuous rather than dichotomous variable, and, therefore, that the ascription of a ‘problem gambling threshold’ is an arbitrary distinction. Nevertheless, the distinction is a useful and necessary one which relies on a *best estimate* of where this threshold lies.

A best estimate of any population sub-group endeavours to minimise both ‘false positives’ and ‘false negatives’. In the case of problem gambling a false positive is where a person without a gambling problem is classified as a problem gambler, while a false negative is where a person with a gambling problem is classified as someone without a problem. Clearly, the number of false positives and false negatives is directly related to the position of the threshold level used to classify a problem gambler.

It was important, in the British Gambling Prevalence Survey, to establish the thresholds to be used *before* the data were analysed, to preclude any criticism of data manipulation. The research team reviewed the existing literature in order to ascertain the most suitable threshold levels for the two screens.

5.3.1 SOGS threshold

While the original thresholds for classification on the SOGS are 3 to 4 to indicate a ‘problem gambler’ and 5 or more to indicate a ‘probable pathological gambler’, there has been recent consensus that these cut-offs are too low (see the Australian Productivity Commission (APC) report for a useful discussion of this issue).¹⁶ These arguments have fuelled criticism that the SOGS overestimates the prevalence of problem gambling by including too many false positives in its classification.¹⁷ Nevertheless, some studies continue to use a threshold of 3 or more to identify ‘problem gamblers’.¹⁸

In contrast, a number of Australian studies (eg Dickerson et al 1996)¹⁹ use 10 or more as the threshold for SOGS. This had its genesis in the first major Australian survey, which raised the SOGS threshold to 10 or more, after data analysis, apparently because the estimate of problem gambling prevalence according to the threshold of 5 or more was considered too high. The recent APC report¹⁶ questions this rationale and concludes that 5 or more is the most appropriate cut-off. Moreover, the manipulation of the threshold level after the data have been analysed is methodologically questionable.

The threshold used for the SOGS in the British Gambling Prevalence Survey follows that advocated by the APC report, with those who scored 5 or more being classified as ‘problem gamblers’. This also has the advantage of allowing direct international comparisons, since it is the most commonly used cut-off in existing studies.

5.3.2 DSM-IV Threshold

The threshold for problem gambling as measured by the DSM-IV has been much less contentious. The cut-off used for the DSM-IV screen in the current survey is the same as that advocated by the American Psychiatric Association¹⁰ and Lesieur and Rosenthal:³ that is 3 or more represents a ‘problem gambler’. However, the classification used here does not incorporate the additional threshold of 5 or more, used in some surveys to identify ‘probable pathological gamblers’,^{3 20} or ‘severe problem gamblers’.¹¹ This decision was made for the sake of clarity and simplicity, and because the additional distinction was not seen as necessary for the purposes of this study. Furthermore, as Allcock (1994)²¹ states, the term ‘problem gambler’ avoids many of the negative judgements and conceptual issues associated with the notion of pathological gambling.

5.4 CAVEATS

As the above discussion highlights, there are a number of caveats which should be borne in mind when interpreting the results of this, or any, gambling prevalence survey:

- The most widely used problem gambling screening instruments are not perfect. Criticisms of the SOGS, for example, suggest that it *over-estimates* the prevalence of problem gambling; while the DSM-IV screen has not been validated in terms of its prevalence estimates in the general population.
- A survey of people living in private households, by definition, excludes a number of sub-groups of the population, such as homeless people, those living in institutions, and prisoners. There is some evidence that such sub-groups are likely to include a disproportionate number of problem gamblers.^{22 23} Moreover, it could be argued that frequent gamblers are less likely to be at home and available for interview than other sub-groups of the population, and are therefore less likely to be included in a survey. Such sampling and response biases suggest that a general population survey is likely to *underestimate* the prevalence of problem gambling.^{15 16}
- People may be motivated to give ‘socially acceptable’, albeit dishonest, answers to a questionnaire and therefore underestimate the extent of their gambling behaviour.
- Finally, a survey estimate is subject to sampling error, and should therefore be considered with reference to confidence intervals (which are presented in this chapter along with the prevalence results).

The survey methodology attempted to overcome these potential criticisms (see Appendix 2) in a number of ways, for example by using a self-completion questionnaire to encourage honest reporting²⁴, by maximising response rates in order to minimise response bias, and by establishing, *a priori*, carefully considered problem gambling thresholds (based on previous research). In short, it should be noted that the survey findings presented here represent a '*best estimate*' of problem gambling prevalence in Britain.

The remainder of this chapter presents the problem gambling prevalence results, separately according to the SOGS and the DSM-IV. Results from each screening instrument are analysed by sex and age and a comparison between the prevalence estimates obtained from the two screening scores is reported. Next, comparisons are made with results from problem gambling prevalence studies in other countries. Finally, results are presented on whether respondents perceived themselves, or their parents, to have ever had a gambling problem.

5.5 PROBLEM GAMBLING PREVALENCE

As well as determining the problem gambling thresholds to be used, another issue which needs to be considered is the base upon which the prevalence estimate for problem gambling should be made. There are a number of methods of calculating the prevalence rate of problem gambling (see also the APC report¹⁶ for a discussion of this issue):

- Among the population.
- Among those who have gambled in the last 12 months ('past year gamblers').
- By each type of gambling activity.

This chapter presents prevalence rates among the population, and among past year gamblers. Problem gambling by type of gambling activity is discussed in Chapter 6.

As described in Chapter 2, the majority (72%) of the sample had spent their own money on a gambling activity in the last 12 months. Only these people were asked to complete the SOGS and DSM-IV screening questions (since the questions would clearly be irrelevant to people who had not gambled at all in the last year).²⁵

5.5.1 Problem gambling prevalence according to the SOGS

Table 5.1 presents the range of scores on the SOGS, from 0 through to a maximum of 20, separately for men and women. The table shows responses for the entire population (with those respondents who were not asked the SOGS questions included with a score of zero).

The majority of people (90.6%) scored zero on the SOGS. Just under one in ten people (8.6%) scored positively on the SOGS, but below the established problem gambling threshold of 5 or more.

Table 5.1 SOGS scores, by sex*All*

SOGS score	Sex		Total
	Men	Women	
	%	%	%
0	86.8	94.1	90.6
1	7.8	4.0	5.8
2	2.2	0.8	1.5
3	1.3	0.4	0.9
4	0.6	0.2	0.4
5	0.3	0.1	0.2
6	0.3	*	0.2
7	0.2	*	0.1
8	0.3	*	0.2
9	*	0.1	0.1
10	*	*	*
11	-	-	-
12	*	*	*
13	-	*	*
14	*	-	*
15	-	-	-
16	-	-	-
17	-	*	*
18	-	*	*
19	-	-	-
20	-	-	-
<i>Bases (weighted):</i>	3595	3793	7388
<i>Bases (unweighted):</i>	3464	3902	7366

Table 5.2 and Figure 5A show the SOGS prevalence of problem gambling in Britain, analysed by sex and age. Overall, 0.8% of the population were classified as problem gamblers, 1.3% of men and 0.5% of women. This estimate translates into a figure of about 370,000²⁶ people in the general population. Calculating the 95% confidence interval around this estimate reveals that the true value lies somewhere between 0.6% and 1% (that is between 275,000 and 460,000).

The prevalence of problem gambling overall decreased with age, from 1.7% among people aged between 16 and 24, down to 0.1% among the oldest age group. The prevalence was highest among men and women aged between 16 and 24 (2.3% and 1.1% respectively).

Table 5.2 SOGS problem gambling prevalence among the population, by sex and age

All

Age	Sex		Total
	Men	Women	
	%	%	%
16-24	2.3	1.1	1.7
25-34	2.1	0.4	1.2
35-44	1.2	0.5	0.8
45-54	1.1	0.4	0.7
55-64	0.4	0.6	0.5
65+	0.3	-	0.1
<i>TOTAL</i>	1.3	0.5	0.8
<i>Bases (weighted):</i>			
16-24	519	496	1015
25-34	739	710	1449
35-44	675	665	1340
45-54	601	598	1199
55-64	453	459	912
65+	601	857	1458
All	3589	3783	7372
<i>Bases (unweighted):</i>			
16-24	437	468	905
25-34	614	710	1324
35-44	681	763	1444
45-54	631	681	1312
55-64	469	509	978
65+	626	761	1387
All	3458	3892	7350

Figure 5A: SOGS problem gambling prevalence, by sex and age (all)

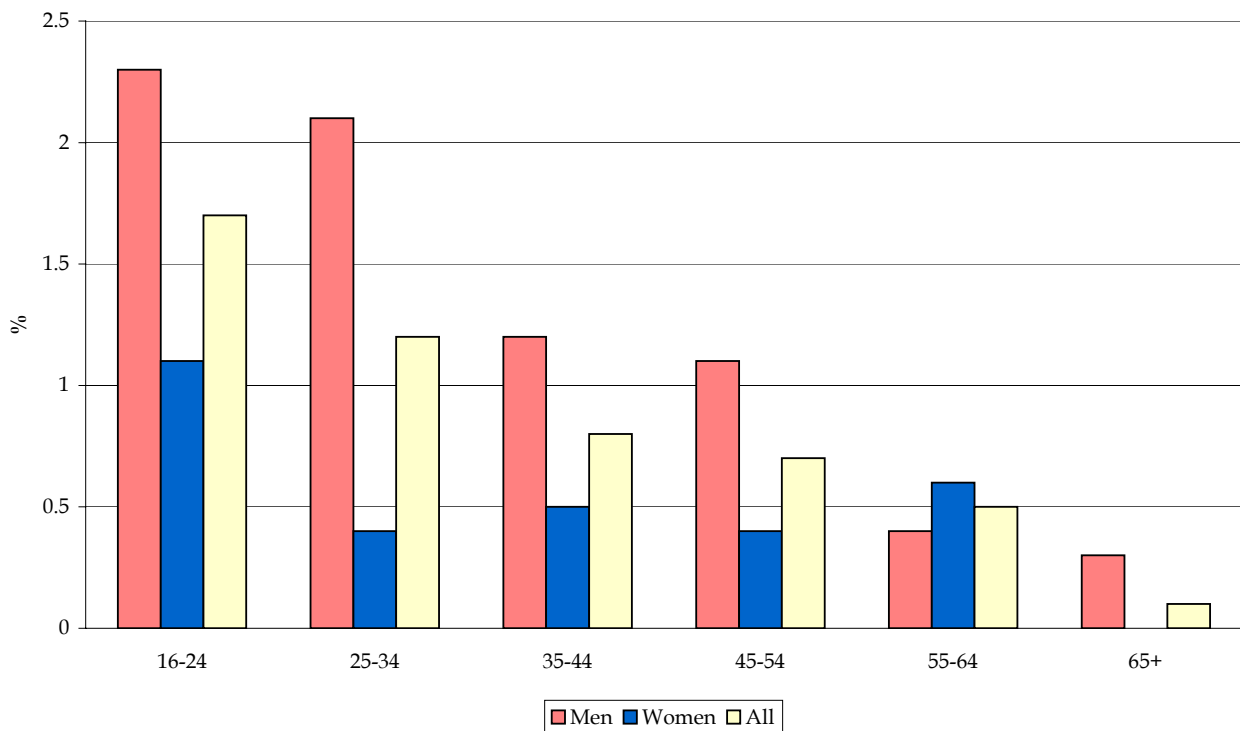


Table 5.3 shows the prevalence of problem gambling among *past year gamblers* according to the SOGS. The prevalence estimate based on this sub-group is 1.2%. Calculating the 95% confidence interval around this estimate reveals that the true value lies between 0.9% and 1.5%.

The prevalence of problem gambling among past year gamblers is higher for men than women (1.7% compared with 0.7%) and decreases with age, from 2.6% among people aged between 16 and 24 years, down to 0.2% of people aged 65 and over. The prevalence is highest among men and women aged between 16 and 24 (3.4% and 1.7% respectively).

Table 5.3 SOGS problem gambling prevalence among those who had gambled in the last 12 months, by sex and age

Past year gamblers

Age	Sex		Total
	Men	Women	
	%	%	%
16-24	3.4	1.7	2.6
25-34	2.6	0.6	1.6
35-44	1.5	0.7	1.1
45-54	1.4	0.6	1.0
55-64	0.6	0.9	0.7
65+	0.5	-	0.2
TOTAL	1.7	0.7	1.2
<i>Bases (weighted):</i>			
16-24	356	306	663
25-34	597	533	1130
35-44	525	501	1026
45-54	475	445	920
55-64	349	316	666
65+	401	446	847
All	2703	2549	5252
<i>Bases (unweighted):</i>			
16-24	295	291	586
25-34	494	530	1024
35-44	529	577	1106
45-54	499	507	1006
55-64	361	351	712
65+	420	403	823
All	2598	2659	5257

The responses to each of the individual items which comprise the SOGS are shown in Table 5.4. The percentage of people answering 'yes' ranges from 0.1% (receiving loans from loan sharks, cashing in stocks and shares and selling personal property) through to 3.2% (gambling more than intended and people criticised gambling). One of the constituent SOGS items asked respondents whether they feel that they have a problem with gambling. The percentage answering 'yes' to this question was 2.0% (3.0% of men and 1.1% of women).

Table 5.4 Responses to individual SOGS items, by sex*All*

SOGS item	Sex		Total
	Men	Women	
In the last 12 months...	%	%	%
Chasing losses	2.6	1.1	1.8
Claimed to be winning when lost	3.0	1.1	2.0
Gambled more than intended	4.7	1.7	3.2
People criticised gambling	5.0	1.6	3.2
Felt guilty about what happens when gambling	2.9	1.2	2.0
Like to stop but can't	1.5	0.8	1.1
Hidden signs of gambling	1.4	0.4	0.9
Money arguments over gambling	0.9	0.2	0.6
Missed time from work or study	0.3	0.1	0.2
Borrowed without paying back	0.5	0.2	0.3
Borrowed from household money	0.8	0.6	0.7
Borrowed from spouse/partner	1.1	0.8	1.0
Borrowed from relatives	0.6	0.4	0.5
Borrowed from banks	0.2	0.1	0.2
Made cash withdrawals on credit card	1.1	0.3	0.7
Received loans from loan sharks	-	0.1	0.1
Cashed in stocks or shares	0.1	0.1	0.1
Sold personal property	0.1	0.1	0.1
Written cheques that bounced	0.2	0.2	0.2
Problem with gambling	3.0	1.1	2.0
<i>Bases (weighted):</i>	3595	3793	7388
<i>Bases (unweighted):</i>	3464	3902	7366

The bases vary for each item because missing cases have been excluded from the base. For the first item, the weighted bases are: 3595 for men, 3793 for women; the unweighted bases are: 3464 for men, 3902 for women.

5.5.2 Problem gambling prevalence according to the DSM-IV

Table 5.5 presents the range of scores on the DSM-IV, from 0 through to a maximum of 10, separately for men and women. The table shows data for the population, with those who were not asked the DSM-IV IV included with a score of zero.

The majority of people (96.5%) scored zero on the DSM-IV screen. A small percentage (2.9%) scored positively on the DSM-IV, but below the established problem gambling threshold of 3 or more.

Table 5.5 DSM-IV scores, by sex*All*

DSM-IV score	Sex		Total
	Men	Women	
	%	%	%
0	94.8	98.1	96.5
1	3.4	1.4	2.4
2	0.9	0.2	0.5
3	0.3	0.1	0.2
4	0.3	*	0.2
5	*	*	*
6	0.3	*	0.2
7	*	*	*
8	-	*	*
9	-	*	*
10	*	-	*
<i>Bases (weighted):</i>	3663	3840	7503
<i>Bases (unweighted):</i>	3529	3951	7480

The prevalence of problem gambling according to the DSM-IV was lower than that measured by the SOGS: 0.6% (a figure of 275,000 people in the British population). The confidence interval around this estimate is 0.4% to 0.8%, (that is between 185,000 and 370,000 people).

Table 5.6 DSM-IV problem gambling prevalence among the population, by sex and age*All*

Age	Sex		Total
	Men	Women	
	%	%	%
16-24	2.8	0.6	1.7
25-34	1.1	0.3	0.7
35-44	0.6	0.5	0.6
45-54	0.5	0.3	0.4
55-64	0.2	0.2	0.2
65+	0.3	-	0.1
TOTAL	0.9	0.3	0.6
<i>Bases (weighted):</i>			
16-24	528	499	1027
25-34	751	716	1467
35-44	687	671	1358
45-54	618	617	1235
55-64	460	467	927
65+	611	860	1471
All	3663	3840	7486
<i>Bases (unweighted):</i>			
16-24	443	471	914
25-34	624	716	1340
35-44	693	771	1464
45-54	649	700	1349
55-64	476	518	994
65+	637	765	1402
All	3529	3951	7463

The pattern of prevalence as measured by the DSM-IV is very similar to that revealed by the SOGS, being higher among men (0.9%) than women (0.3%) and tending to decrease overall as age increases. Among both men and women, the highest prevalence can be found in the youngest age group (2.8% and 0.6% respectively). It is interesting to note that the DSM-IV prevalence is lower overall, and for every sub-group, *except*, among men aged 16 to 24 (2.3% according to SOGS compared with 2.8% according to DSM-IV). (Table 5.6 & Figure 5B).

Figure 5B: DSM-IV problem gambling prevalence, by sex and age (All)

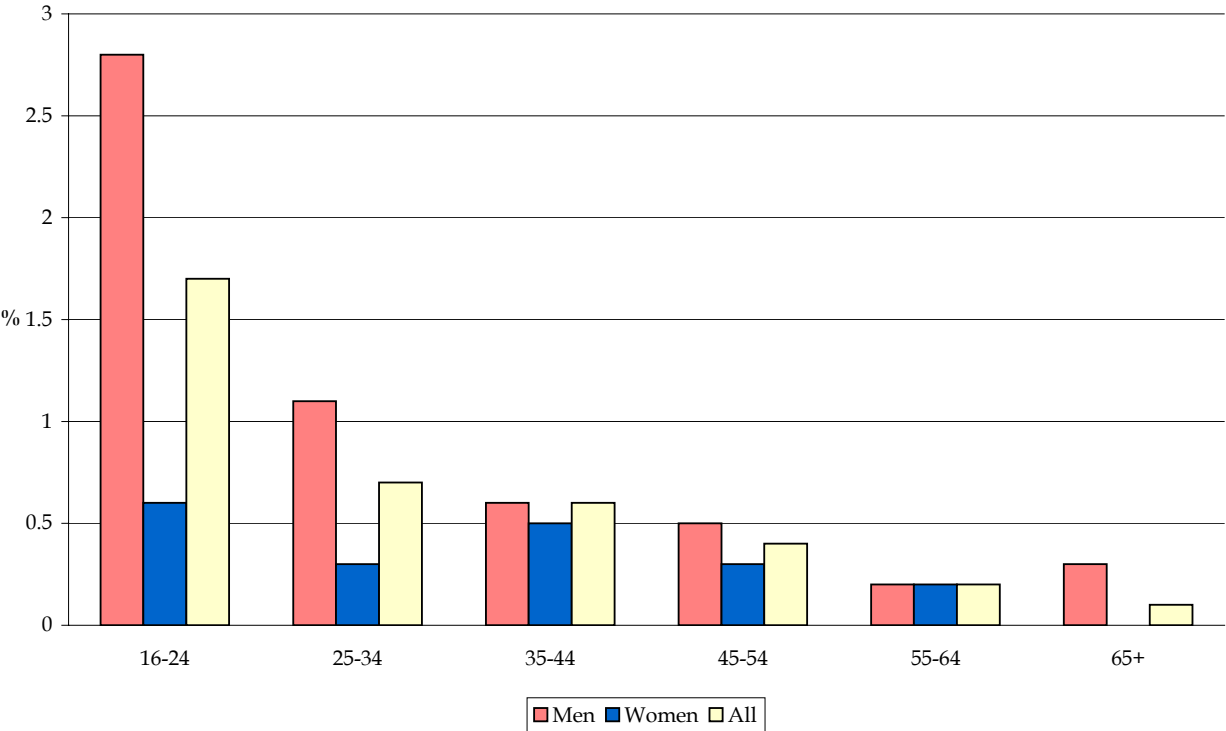


Table 5.7 shows the DSM-IV prevalence of problem gambling in Britain among past year gamblers, analysed by sex and age. The prevalence of problem gambling among this group is 0.8% according to the DSM-IV (1.2% of men and 0.4% of women). Calculating the confidence interval around this estimate reveals that one can be 95% confident that the true value lies between 0.6% and 1.0%.

Table 5.7 DSM-IV problem gambling prevalence among those who had gambled in the last 12 months, by sex and age

Past year gamblers

Age	Sex		Total
	Men	Women	
	%	%	%
16-24	4.0	1.0	2.6
25-34	1.4	0.4	0.9
35-44	0.7	0.7	0.7
45-54	0.6	0.4	0.5
55-64	0.3	0.3	0.3
65+	0.5	-	0.2
TOTAL	1.2	0.4	0.8
<i>Bases (weighted):</i>			
16-24	366	309	675
25-34	609	539	1148
35-44	537	508	1045
45-54	492	465	956
55-64	356	325	680
65+	411	450	861
All	2770	2596	5366
<i>Bases (unweighted):</i>			
16-24	301	294	595
25-34	504	536	1040
35-44	541	585	1126
45-54	517	526	1043
55-64	368	360	728
65+	431	407	838
All	2662	2708	5370

Responses to the individual DSM-IV items are shown in Table 5.8. The percentage of people answering ‘yes’ to each item ranged from 0.2% (having committed a crime to finance gambling) through to 1.8% (chasing losses).

Table 5.8 Responses to individual DSM-IV items, by sex

All

DSM-IV item	Sex		Total
	Men	Women	
In the last 12 months...	%	%	%
A preoccupation with gambling.	2.3	0.7	1.4
A need to gamble with increasing amounts of money.	0.7	0.2	0.5
Being restless or irritable when trying to stop gambling.	0.4	0.3	0.3
Gambling as escapism.	0.9	0.3	0.6
Having tried but fail to cut back or stop gambling.	0.8	0.2	0.5
Chasing losses	2.6	1.1	1.8
Lying to people to conceal the extent of gambling.	0.5	0.2	0.3
Having committed a crime to finance gambling.	0.3	0.1	0.2
Having risked or lost a relationship/job/educational opportunity because of gambling.	0.4	0.2	0.3
Reliance on others to help a financial crisis caused by gambling.	0.7	0.2	0.4
<i>Bases (weighted):</i>	3663	3841	7504
<i>Bases (unweighted):</i>	3594	3794	7388

The bases vary for each item because missing cases have been excluded from the base. For the first item, the weighted bases are: 3663 for men and 3841 for women; the unweighted bases are: 3594 for men, 3794 for women.

5.5.3 The association between SOGS and DSM-IV

The tables presented so far show that the prevalence of problem gambling as measured by the SOGS is higher than that measured by the DSM-IV. The distribution of problem gamblers in terms of sex and age show a similar pattern with both screens, suggesting that they are both measuring the same phenomenon (albeit with different sensitivity). This section examines the extent to which this is the case.

A cross-tabulation of the two measures is presented in Table 5.9. The vast majority of people (99%) were classified as ‘non-problem gamblers’ on *both* screening instruments. These people have been excluded from the current analysis. Table 5.9 presents results only for the sub-group of respondents who were classified as problem gamblers according to *either* of the screens. The table shows both row and column percentages (column percentages are presented, in bold, below the row percentages).

So, almost two thirds (64%) of people who were classified as problem gamblers by the DSM-IV, were also problem gamblers according to the SOGS. Since the SOGS indicates a higher prevalence of problem gambling than the DSM-IV, it is perhaps not surprising that over half (56%) of people classified by the SOGS as problem gamblers were *not* identified as problem gamblers according to the DSM-IV. Conversely, over a third (36%) of people who were classified as problem gamblers according to the *DSM-IV*, were *not* classified as problem gamblers by the SOGS. This suggests that it is not simply the case that the SOGS has a lower sensitivity for measuring problem gambling than the DSM-IV.

Table 5.9 A cross-tabulation of the SOGS and the DSM-IV

Respondents identified as problem gamblers by either SOGS or DSM-IV	DSM-IV non-problem	DSM-IV problem
	SOGS non-problem	NA
		36%
SOGS problem	56%	44%
	100%	64%
<i>Bases (weighted):</i>	35	44
<i>Bases (unweighted):</i>	31	41

The table shows both row and column percentages. Column percentages are shown, in bold, below the row percentages.

NA = Not applicable

There will never be 100% correspondence between any two measures; even with ‘objective’ variables such as weight there is likely to be measurement error between a value measured on two separate occasions, or even on the same occasion using two sets of scales. Therefore, it is to be expected that there will be a certain amount of discrepancy between two measures of a less tangible phenomenon, such as problem gambling. A weighted kappa statistic showed that the agreement between the two problem gambling screens is moderate (0.520).²⁷ (No agreement would be expressed as a value of 0 and perfect agreement as a value of 1.)

A number of conclusions can be drawn from the comparison of the two screening instruments:

1. Estimates of the prevalence of problem gambling will vary according to the screening instrument used.

2. The two most commonly used screens contain both false positives and false negatives. In particular, the fact that some non-problem gamblers on the SOGS, which is assumed by some to overestimate the prevalence of problem gambling, are classified as *problem gamblers* according to the DSM-IV, suggests that the SOGS may well be missing some problem gamblers.
3. Until a comprehensive validation exercise is carried out on both screens (using clinicians, and involving follow-up of a large number of people scoring both high and low on each scale) it is not possible to conclude which of the screening instruments provides more reliable results among a general population sample.
4. 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 185,000 and 370,000 according to the DSM-IV, and 270,000 and 460,000 according to the SOGS.

5.6 INTERNATIONAL COMPARISONS OF PROBLEM GAMBLING PREVALENCE RATES

This section highlights a number of prevalence estimates from recent world-wide research studies in order to place the British results in some context. The review does not pretend to be exhaustive. Since the SOGS is the most frequently used measure internationally, it is problem gambling prevalence according to the SOGS which is used for the purposes of comparison with other countries. All prevalence estimates are based on the population (that is including people who have not gambled in the last year) and use the threshold of 5 and above. Such international comparisons should be treated with caution for a number of reasons, for example: possible differences in the definitions of 'gambling' and 'participation', and differences in survey methodology (telephone interviewing is the method used most frequently in other countries).

The prevalence of problem gambling in Britain is higher than in Sweden and lower than in Australia and America. The British estimate is also lower than New Zealand and Spain, although without confidence intervals for these countries the comparison is somewhat limited.

The APC report presents a meta-analysis of a number of North American studies carried out between 1977-97. The mean prevalence estimate of problem gambling overall was 1.1%, with a confidence interval of 0.9% to 1.4%. A recent New Zealand study^{28 29} found an equivalent prevalence of 1.2%, while a Spanish study found 1.4%³⁰. The highest reported prevalence rates are in Australia – the APC report found that 2.3% of Australians were classified as problem gamblers. The authors state that this relatively high prevalence is not surprising given the acceptability and accessibility of gambling activities in Australia¹⁶, indeed the link between gambling availability and problem gambling is well cited in the literature¹⁵. The lowest reported prevalence is in Sweden according to a recent survey¹⁸ which found that 0.6% of the population scored 5 or more on the SOGS (with a confidence interval of 0.4% to 0.8%).

Table 5.10 Summary table of international problem gambling prevalence estimates (according to SOGS threshold of 5 or more)

	%	Confidence Interval
Sweden 1999	0.6	0.4-0.8
Britain 2000	0.8	0.6-1.0
America (mean of meta-analysis of surveys between 1977-1997)	1.1	0.9-1.4
New Zealand 1992	1.2	a)
Spain 1996	1.4	a)
Australia 1999	2.3	1.9-2.7

a) not known

5.7 SELF-REPORTED GAMBLING PROBLEMS AND PARENTAL GAMBLING PROBLEMS

The self-completion questionnaire asked respondents whether they felt that they had *ever* had ‘a problem with betting money or gambling’ (Question D4 – Appendix 3). Only 2% of the sample answered ‘yes’ to this question, 3% of men and 1% of women. This figure was highest among the group aged 25 to 34 (3%), and lowest among people aged 45 and over (1%). (Table 5.11). Interestingly, the percentage reporting that they had *ever* had a problem was the same as the percentage who reported a current gambling problem at item 20 on the SOGS.

Table 5.11 Whether ever had a gambling problem, by sex and age

All

Age	Sex		Total
	Men	Women	
	%	%	%
16-24	3	1	2
25-34	5	1	3
35-44	3	1	2
45-54	1	1	1
55-64	1	*	1
65+	2	*	1
<i>TOTAL</i>	3	1	2
<i>Bases (weighted):</i>			
16-24	517	493	1010
25-34	757	707	1464
35-44	687	674	1361
45-54	619	619	1239
55-64	454	467	921
65+	601	848	1449
<i>All</i>	3636	3808	7444
<i>Bases (unweighted):</i>			
16-24	433	465	898
25-34	629	709	1338
35-44	693	774	1467
45-54	650	703	1353
55-64	470	518	988
65+	627	754	1381
<i>All</i>	3502	3923	7425

As might be expected, the proportion of people who considered themselves ‘ever to have had a gambling problem’ was higher among people who were classified by the screening instruments as problem gamblers. On the other hand, at least half of the people who were classified as problem gamblers did not consider themselves ever to have had a gambling problem.

Table 5.12 Whether respondent considers themselves to have had a gambling problem, by whether a problem gambler

All

Whether considers self to have had a gambling problem	Whether a problem gambler			
	SOGS problem gamblers	SOGS non-problem gamblers	DSM-IV problem gamblers	DSM-IV non-problem gamblers
		%		%
Yes	44	1	50	1
No	56	99	50	99
<i>Bases (weighted):</i>	62	7176	42	7310
<i>Bases (unweighted):</i>	56	7162	41	7439

Respondents were also asked whether either of their parents gamble(d) regularly. Twenty three per cent of people answered ‘yes’ to this question. These people were then asked whether they thought that either of their parents have/had a gambling problem. Over one in ten people (11%) answered ‘yes’ to this question (3% of the population). The association of this variable with problem gambling is discussed in Chapter 6.

Endnotes

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- 16 Productivity Commission 1999, *Australia's Gambling Industries*, Draft Report, Canberra, July: 6.33-6.34.3
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- 22 Lesieur, HR. *Epidemiological surveys of pathological gambling: Critique and suggestions for modification*. *Journal of Gambling Studies* 1994 **10**(4): 385-398.
- 23 Volberg, R.A. and Boles, J. (1995). *Gambling and problem gambling in Georgia*. Report to the Georgia Department of Human Resources. Roaring Spring, PA: Gemini Research.
- 24 Tourangeau R & Smith TW. *Asking sensitive questions: the impact of data collection mode, question format and question context*. *Public Opinion Quarterly* Volume **60**: 275-304. The American Association for Public Opinion Research.
- 25 A small number of respondents failed to answer all of the screening questions. For each screen, respondents who answered less than half the questions (that is less than 10 on the SOGS and less than 5 on the DSM-IV) were excluded from the subsequent analysis.
- 26 This figure is rounded to the nearest 500.

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- ²⁷ A kappa statistic measures the level of agreement between two scores. Cohen's kappa shows the difference between the observed proportion of cases in which the scores agree and that expected by chance (divided by the maximum difference possible for the marginal totals).
- ²⁸ Abbot MW & Volberg R. *Gambling and problem gambling in New Zealand: A report on phase one of the national survey*, 1991. Dept of Internal Affairs (New Zealand), Wellington.
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6 THE PROFILE OF PROBLEM GAMBLERS

6.1 INTRODUCTION

In addition to estimating the prevalence of problem gambling in Britain (Chapter 5), another aim of the survey was to examine the profile of problem gamblers. Who are they and which gambling activities do they participate in? This chapter examines the prevalence of problem gambling by type of gambling activity, number of activities, expenditure, attitudes towards gambling and a number of socio-demographic characteristics. The results of multivariate analysis, showing which factors are significantly associated with being classified as a problem gambler, are also presented. Once again, results are presented separately for SOGS and DSM-IV.

6.2 GAMBLING ACTIVITY

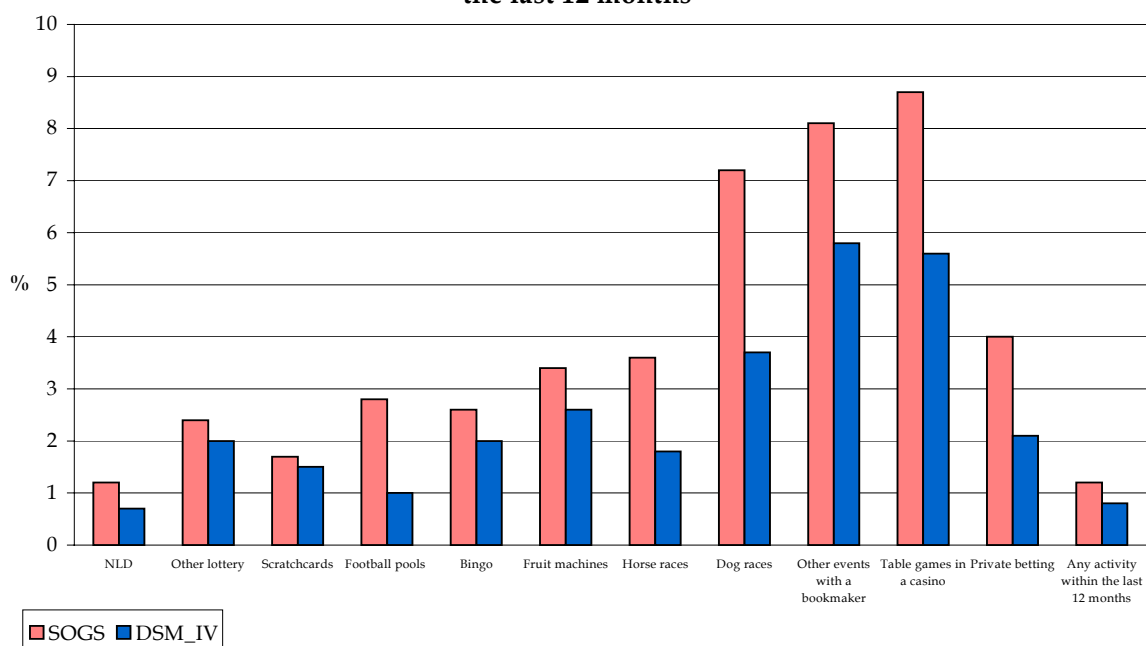
6.2.1 Type of gambling activity

This section presents the prevalence of problem gambling, firstly for each individual gambling activity, and then for each of the three gambling interest groups described in Chapter 2 (*'minimal interest'*, *'moderate interest'* and *'multiple interest'* gamblers).

The questionnaire asked respondents which activities they had gambled on within the *past year* and the *past week*. Table 6.1 presents the percentage of problem gamblers among those people who had gambled on each individual activity, within both time periods.

Overall, the prevalence of problem gambling among past year gamblers, according to the SOGS, was 1.2%. There was quite a large range in the percentage of problem gamblers, from a low of 1.2% for the National Lottery Draw through to 8.7% for table games in a casino. The next highest prevalence was among bettors on events with a bookmaker (other than horse or dog races) and bettors on dog races (8.1% and 7.2% respectively). After the National Lottery Draw, the next *lowest* was the prevalence for scratchcards (1.7%). This pattern of prevalence by activity was similar for the DSM-IV, although the prevalences were lower (0.8% overall). (Table 6.1a & Figure 6A).

Figure 6A: Problem gambling prevalence, by type of gambling activity in the last 12 months



Problem gambling prevalence, as measured by the SOGS, among *past week* gamblers was higher overall than among past year gamblers (1.4%), but showed a similar pattern of association with particular gambling activities. The prevalence among *past week* gamblers, ranged from 1.2% for the National Lottery Draw, through to 34.5% for table games in a casino (although results for that activity should be treated with caution because of the small base). The next highest prevalence was for dog races (18.3%) and betting with a bookmaker on events other than horse/dog races (14.1%). The next *lowest* prevalences were for football pools (2.3%), bingo (2.6%) and scratchcards (2.7%).

It is interesting to note that, although the SOGS prevalence of problem gamblers among past week gamblers was higher overall than among past year gamblers (markedly so for some activities), there was little or no difference between the two time periods for some activities (that is the National Lottery Draw, football pools and bingo). The pattern of results, among past week gamblers, according to the DSM-IV was similar to the SOGS, but again the overall prevalences were lower (1.0% overall). (Table 6.1b & Figure 6B).

While it is not possible to look at the impact of the National Lottery on problem gambling, since no data exists before its introduction, it is possible to look at the prevalence of problem gambling among people who have **only** played the National Lottery (and have done no other gambling activities in the past year). The problem gambling prevalence among people who have only played the National Lottery is 0.1% according to both SOGS and DSM-IV (table not shown).

Figure 6B: Problem gambling prevalence, by type of gambling activity in the past week

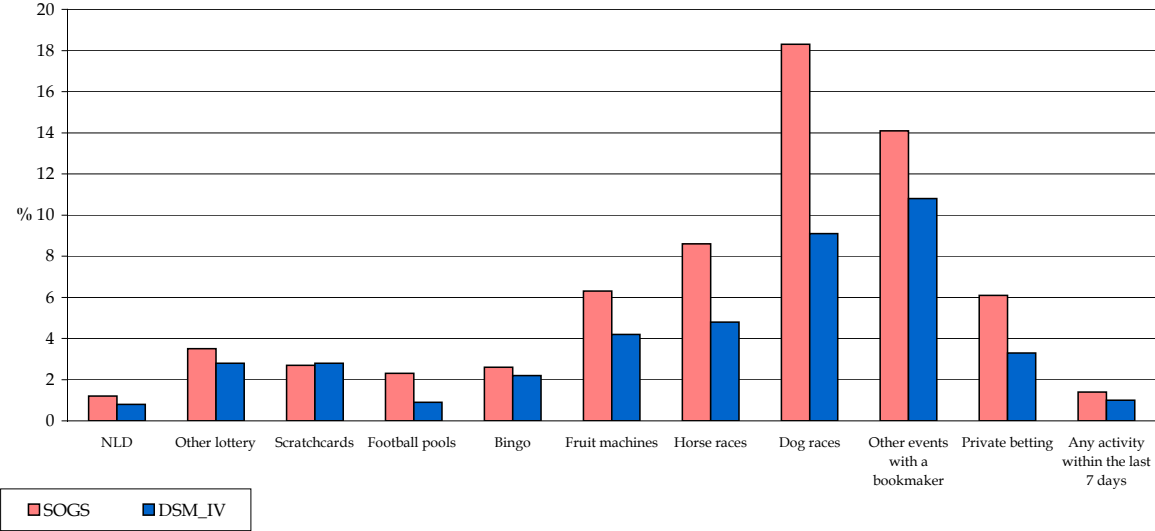


Table 6.1a Problem gambling prevalence by gambling activity

Past year gamblers

Gambling activity	SOGS problem gamblers	DSM-IV problem gamblers
	%	%
<u>Past year</u>		
National Lottery Draw	1.2	0.7
Any other lottery	2.4	2.0
Scratchcards	1.7	1.5
Football pools or 'fixed odds' coupons	2.8	1.0
Bingo	2.6	2.0
Fruit machines	3.4	2.6
Horse races	3.6	1.8
Dog races	7.2	3.7
Other events with a bookmaker	8.1	5.8
Table games in a casino	8.7	5.6
Private betting	4.0	2.1
<i>Any activity within the last 12 months</i>	1.2	0.8
<i>Past year gamblers</i>		
<i>Bases (weighted)</i>		
National Lottery Draw	4755	4860
Any other lottery	597	606
Scratchcards	1614	1646
Football pools or 'fixed odds' coupons	653	671
Bingo	546	557
Fruit machines	1032	1057
Horse races	978	1005
Dog races	290	301
Other events with a bookmaker	221	226
Table games in a casino	196	198
Private betting	849	870
<i>Bases (unweighted)</i>		
National Lottery Draw	4777	4886
Any other lottery	587	598
Scratchcards	1589	1621
Football pools or 'fixed odds' coupons	650	669
Bingo	541	552
Fruit machines	971	993
Horse races	956	980
Dog races	271	282
Other events with a bookmaker	205	210
Table games in a casino	185	188
Private betting	807	827

Table 6.1b Problem gambling prevalence by gambling activity

Past week gamblers

Gambling activity	SOGS problem gamblers	DSM-IV problem gamblers
	%	%
Past week		
National Lottery Draw	1.2	0.8
Any other lottery	3.5	2.8
Scratchcards	2.7	2.8
Football pools or 'fixed odds' coupons	2.3	0.9
Bingo	2.6	2.2
Fruit machines	6.3	4.2
Horse races	8.6	4.8
Dog races	18.3	9.1
Other events with a bookmaker	14.1	10.8
Table games in a casino	[34.5]	[25.8]
Private betting	6.1	3.3
Spread-betting	5.5	5.5
<i>Any activity within the last 7 days</i>	1.4	1.0
Past week gamblers		
<i>Bases (weighted)</i>		
National Lottery Draw	3476	3556
Any other lottery	259	266
Scratchcards	638	647
Football pools or 'fixed odds' coupons	441	454
Bingo	272	274
Fruit machines	414	427
Horse races	221	229
Dog races	60	66
Other events with a bookmaker	71	74
Table games in a casino	29	31
Private betting	294	305
Spread-betting	73	70
<i>Bases (unweighted)</i>		
National Lottery Draw	3515	3598
Any other lottery	255	263
Scratchcards	632	641
Football pools or 'fixed odds' coupons	441	455
Bingo	272	275
Fruit machines	378	387
Horse races	215	224
Dog races	56	61
Other events with a bookmaker	68	71
Table games in a casino	28	30
Private betting	280	291
Spread-betting	69	70

Square brackets indicate that the unweighted base is less than 50

6.2.2 Number of gambling activities

Table 6.2 presents problem gambling prevalence by the number of gambling activities undertaken in the past year and the past week (see also Figures 6C & 6D). As might be expected, the prevalence of problem gambling, according to both screens, tended to increase with the number of activities gambled on.

It is interesting to note, that among the group of past week gamblers, the prevalence of problem gamblers, according to both screens, increases as the number of activities done increases. Among past year gamblers, this association is the same as measured by the SOGS. However, the DSM-IV screen does not appear to distinguish between people who had done five or less activities; the problem gambling prevalence only exceeds around 1% among people who had done six or more activities.

Figure 6C: Problem gambling prevalence, by number of gambling activities in the past year

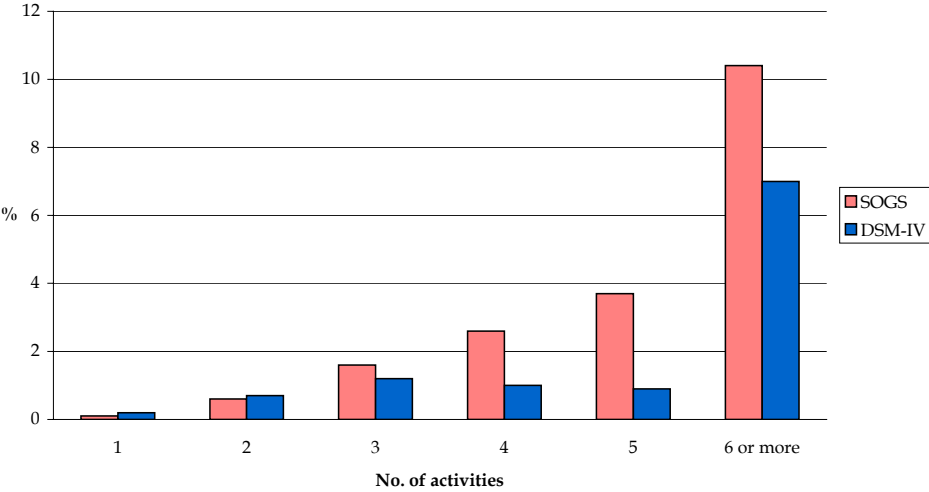


Figure 6D: Problem gambling prevalence, by number of gambling activities in the past week

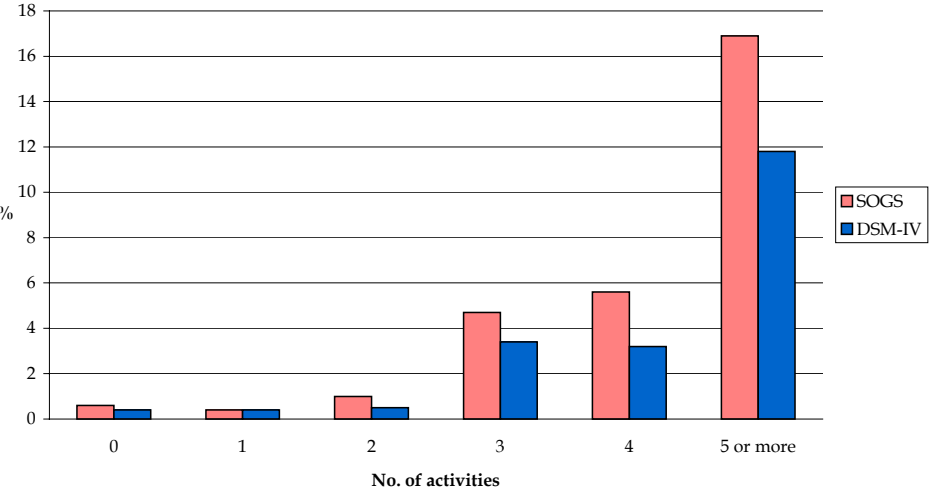


Table 6.2 Problem gambling prevalence by number of gambling activities

All and past week gamblers

	SOGS problem gamblers	DSM-IV problem gamblers
	%	%
Past year		
0	-	-
1	0.1	0.2
2	0.6	0.7
3	1.6	1.2
4	2.6	1.0
5	3.7	0.9
6 or more	10.4	7.0
Past week		
0	0.6	0.4
1	0.4	0.4
2	1.0	0.5
3	4.7	3.4
4	5.6	3.2
5 or more	16.9	11.8
<i>Past year</i>		
Bases (weighted)		
0	2135	2135
1	2239	2287
2	1397	1431
3	818	835
4	388	392
5	217	221
6 or more	193	200
Bases (unweighted)		
0	2108	2108
1	2281	2326
2	1407	1443
3	810	827
4	378	383
6 or more	207	182
<i>Past week</i>		
Bases (weighted)		
0	1375	1406
1	2324	2375
2	944	961
3	319	325
4	89	93
5 or more	71	76
Bases (unweighted)		
0	1362	1391
1	2358	2409
2	943	960
3	314	320
4	84	88
5 or more	65	69

The results presented in Tables 6.1 and 6.2 are consistent with those reported in Chapter 2, that there are, broadly speaking, three gambling interest groups. Analysing problem gambling prevalence for each of the gambling interest groups reinforces this typology.

Firstly, there is the large proportion of the population who limit their gambling to activities such as the National Lottery Draw and scratchcards ('minimal interest'), and among whom the prevalence of problem gambling is very low (SOGS 0.1%). At the other extreme are people who participate not only in more activities, but also in a much more diverse range and which are likely to include activities that require more 'active' involvement, such as going to a casino and betting with a bookmaker ('multiple

interest'). The prevalence of problem gamblers among this group is comparatively high (SOGS 5.7%). Between these two extremes lies a middle group that participates in three or four different types of activity. This group ventures beyond the purchase of lottery tickets and scratchcards to participate in some of the more popular, established and widely available forms of gambling, such as bingo, football pools, fruit machines and horse races ('moderate interest'). The prevalence of problem gamblers among this group falls between the two extremes (SOGS 1.3%). Interestingly, the association of problem gambling with 'level' of gambling interest is more marked as measured by the SOGS, compared with the DSM-IV. (Table 6.3)

Table 6.3 Problem gambling prevalence by gambling interest group

Past year gamblers

Gambling activity clusters	SOGS problem gamblers	DSM-IV problem gamblers
	%	%
Minimal interest	0.1	0.2
Moderate interest	1.3	1.0
Multiple interest	5.7	2.6
<i>Bases (weighted)</i>		
<i>Minimal interest</i>	2368	2412
<i>Moderate interest</i>	2370	2427
<i>Multiple interest</i>	522	534
<i>Bases (unweighted)</i>		
<i>Minimal interest</i>	2422	2469
<i>Moderate interest</i>	2352	2405
<i>Multiple interest</i>	491	505

6.3 EXPENDITURE ON GAMBLING ACTIVITIES

This section presents problem gambling prevalence by expenditure on gambling activities in the 7 days preceding the survey. The problems detailed in Chapter 4 regarding the collection of information about expenditure on gambling activities should be borne in mind when interpreting the results. As in Chapter 4, separate tables are presented for those activities where information was collected on 'stake' and those activities where information was collected on 'net expenditure' (Tables 6.4 & 6.5 respectively). Results are presented separately for SOGS and DSM-IV, and within each activity.

Overall, except for the football pools, the prevalence of problem gambling tended to increase in association with level of stake. The findings for net expenditure were not so straightforward, due to the inclusion of the category indicating no net loss. In all cases the proportion of problem gamblers among those who claimed that they had 'broke even or won' was higher than among those in the lowest expenditure category. On the other hand, for the majority of activities, the group of gamblers in the *highest* expenditure category, as might be expected, contained the highest prevalence of problem gamblers. It should be noted that the small bases mean that the confidence intervals around most of these estimates are quite wide.

Table 6.4 Problem gambling prevalence, by ‘stake’ on gambling activities in the last 7 days

Past week gamblers

Stake	SOGS problem gamblers	DSM-IV problem gamblers
	%	%
<u>National Lottery Draw</u>		
£1 or less	0.5	0.3
£1.01-£5	1.0	0.7
£5.01-£10	2.5	1.8
More than £10	7.9	3.9
<u>Any other lottery</u>		
£5 or less	1.8	3.8
More than £5	[10.3]	[3.4]
<u>The Football Pools/‘fixed odds’ coupons</u>		
Less than £1	-	1.0
£1 or more	3.0	0.9
<u>Bingo tickets</u>		
£5 or less	0.7	2.9
£5.01-£10	5.7	2.8
More than £10	3.6	3.5
<i>Bases (weighted):</i>		
<i>National Lottery Draw</i>		
£1 or less	1109	1142
£1.01-£5	1943	1980
£5.01-£10	319	327
More than £10	76	78
<i>Any other lottery</i>		
£5 or less	225	232
More than £5	29	29
<i>Football pools/fixed odds coupons</i>		
Less than £1	103	103
£1 or more	332	344
<i>Bingo tickets</i>		
£5 or less	139	139
£5.01-£10	70	71
More than £10	56	57
<i>Bases (unweighted):</i>		
<i>National Lottery Draw</i>		
£1 or less	1122	1156
£1.01-£5	1965	2004
£5.01-£10	321	329
More than £10	77	79
<i>Any other lottery</i>		
£5 or less	224	232
More than £5	27	27
<i>Football pools/fixed odds coupons</i>		
Less than £1	105	105
£1 or more	329	342
<i>Bingo tickets</i>		
£5 or less	135	135
£5.01-£10	71	72
More than £10	59	60

The ‘stake’ categories vary between activities. This is because, due to small bases, the bands offered in the questionnaire were collapsed for analysis purposes. The distribution of expenditure varied between activities, and so the way in which they were collapsed also varied.

Square brackets indicate that the unweighted base is less than 50.

Table 6.5 Problem gambling prevalence, by ‘net expenditure’ on gambling activities in the last 7 days

Past week gamblers

Net expenditure		SOGS problem gamblers	DSM-IV problem gamblers
		%	%
<u>Scratchcards</u>	Broke even or won	2.8	3.4
	Lost less than £1	1.1	-
	Lost £1 or more	3.0	3.2
<u>Fruit machines</u>	Broke even or won	7.1	5.3
	Lost £5 or less	1.5	0.9
	Lost more than £5	15.2	9.4
<u>Private betting</u>	Broke even or won	5.0	5.4
	Lost less than £1	4.1	2.0
	Lost £1 or more	8.7	2.8
<u>Horse races</u>	Broke even or won	12.5	8.8
	Lost £5 or less	3.2	2.0
	Lost more than £5	16.0	6.3
<u>Spread-betting</u>	Broke even or won	[6.9]	[10.0]
	Lost money	[3.2]	[3.1]
<i>Bases (weighted)</i>			
<i>Scratchcards:</i>	<i>Broke even or won</i>	<i>171</i>	<i>178</i>
	<i>Lost less than £1</i>	<i>89</i>	<i>90</i>
	<i>Lost £1 or more</i>	<i>367</i>	<i>373</i>
<i>Fruit machines:</i>	<i>Broke even or won</i>	<i>102</i>	<i>114</i>
	<i>Lost less than £5</i>	<i>191</i>	<i>213</i>
	<i>Lost £5 or more</i>	<i>83</i>	<i>95</i>
<i>Private betting:</i>	<i>Broke even or won</i>	<i>111</i>	<i>129</i>
	<i>Lost less than £1</i>	<i>50</i>	<i>49</i>
	<i>Lost £1 or more</i>	<i>102</i>	<i>107</i>
<i>Horse races:</i>	<i>Broke even or won</i>	<i>58</i>	<i>69</i>
	<i>Lost £5 or less</i>	<i>95</i>	<i>98</i>
	<i>Lost more than £5</i>	<i>50</i>	<i>49</i>
<i>Spread betting:</i>	<i>Broke even or won</i>	<i>29</i>	<i>30</i>
	<i>Lost money</i>	<i>33</i>	<i>32</i>
<i>Bases (unweighted)</i>			
<i>Scratchcards:</i>	<i>Broke even or won</i>	<i>171</i>	<i>173</i>
	<i>Lost less than £1</i>	<i>89</i>	<i>91</i>
	<i>Lost £1 or more</i>	<i>367</i>	<i>372</i>
<i>Fruit machines:</i>	<i>Broke even or won</i>	<i>102</i>	<i>104</i>
	<i>Lost less than £5</i>	<i>191</i>	<i>194</i>
	<i>Lost £5 or more</i>	<i>83</i>	<i>86</i>
<i>Private betting:</i>	<i>Broke even or won</i>	<i>111</i>	<i>119</i>
	<i>Lost less than £1</i>	<i>50</i>	<i>50</i>
	<i>Lost £1 or more</i>	<i>102</i>	<i>105</i>
<i>Horse races:</i>	<i>Broke even or won</i>	<i>64</i>	<i>62</i>
	<i>Lost £5 or less</i>	<i>94</i>	<i>100</i>
	<i>Lost more than £5</i>	<i>50</i>	<i>49</i>
<i>Spread betting:</i>	<i>Broke even or won</i>	<i>29</i>	<i>29</i>
	<i>Lost money</i>	<i>33</i>	<i>33</i>

The expenditure categories vary between activities. This is because, due to small bases, the bands offered in the questionnaire were collapsed for analysis purposes. The distribution of expenditure varied between activities, and so the way in which they were collapsed also varied.

The bases for dog races, events with a bookmaker (other than horse or dog races) and table games in a casino were too small to analyse separately.

Square brackets indicate that the unweighted base is less than 50.

6.4 ATTITUDES TO GAMBLING

Respondents were asked about their attitudes to gambling. The responses to these questions are presented in Chapter 3. This section analyses the prevalence of problem gambling by these attitude statements. On the whole, problem gamblers were more likely to agree with the positive gambling statements, for example 'gambling has given me pleasure and fun', and 'when I gambled I felt excited'. On the other hand, responses to the statement "After losing at gambling I have felt extremely depressed" revealed that there was a high prevalence of problem gamblers among those who answered 'always/often'. Interestingly, SOGS problem gamblers were comparatively likely to agree that "I have lost more than I have won at gambling", while DSM-IV problem gamblers were comparatively *unlikely* to agree with this statement. Perhaps not surprisingly, the lowest prevalence of problem gamblers was among those who answered 'not applicable' to the various statements. (Table 6.6)

Looking at the *summary* score, it was clear that problem gamblers were more positive in their overall attitudes to gambling. The mean score among those classified as problem gamblers according to the SOGS and the DSM-IV was 21.5 and 21.2 respectively (Standard deviations = 5.5 and 6.6). The mean score among the rest of the respondents was 15.5.

Table 6.6 Problem gambling prevalence, by attitudes towards gambling*Past year gamblers*

Attitude statements	SOGS problem gamblers	DSM-IV problem gamblers
<i>Winning at gambling has helped me financially</i>	%	%
Always/often	8.5	8.5
Sometimes	4.5	2.9
Rarely	1.5	1.0
Never	0.6	0.4
Not applicable	0.1	0.1
<i>Gambling has given me pleasure and fun</i>		
Always	5.3	3.6
Often	1.6	1.1
Sometimes	1.2	0.9
Rarely	0.9	0.6
Never	0.4	0.1
Not applicable	-	-
<i>After losing at gambling I have felt extremely depressed</i>		
Always	17.0	15.8
Often	12.5	11.1
Sometimes	8.2	5.2
Rarely	1.5	0.3
Never	0.3	0.2
Not applicable	0.1	0.3
<i>I think gambling involves skill</i>		
Always	6.4	6.3
Often	6.0	2.1
Sometimes	0.8	0.8
Rarely	1.4	1.0
Never	0.8	0.5
Not applicable	0.2	0.4
<i>I have lost more than I won at gambling</i>		
Always	1.7	0.6
Often	1.8	0.9
Sometimes	1.0	1.5
Rarely	1.3	1.0
Never	0.6	1.2
Not applicable	-	-
<i>When I gambled I felt excited</i>		
Always	8.7	7.0
Often	2.9	1.8
Sometimes	1.5	0.7
Rarely	0.1	0.3
Never	0.6	0.4
Not applicable	0.1	0.4
<i>Gambling has helped me to relax</i>		
Always	5.1	4.0
Often	5.5	4.5
Sometimes	2.9	1.5
Rarely	1.7	1.0
Never	0.7	0.4
Not applicable	0.1	0.3
<i>I have made good friends through gambling</i>		
Always	9.1	7.6
Often	5.2	2.0
Sometimes	7.1	2.1
Rarely	3.6	2.8
Never	0.6	0.5
Not applicable	0.3	0.5
<i>Bases (weighted)</i>	5275	5390
<i>Bases (unweighted)</i>	5281	5395

The bases vary for each statement because missing cases have been excluded from the base. For the first statement, the weighted bases are: 5275 for SOGS, 5390 for DSM-IV; the unweighted bases are: 5281 for SOGS, 5395 for DSM-IV.

6.5 SOCIO-DEMOGRAPHIC CHARACTERISTICS

This section examines the prevalence of problem gambling according to a number of socio-demographic characteristics. As shown in Chapter 5, men were more likely to be problem gamblers than women, and the prevalence of problem gambling decreased with age. This is in line with the rates of gambling participation by these sub-groups, described in Chapter 3.

However, while Chapter 3 showed that *single people* were comparatively unlikely to gamble compared with the other groups, analysis of problem gambling prevalence revealed that they were more likely to be problem gamblers than those who were married/living as married and widowed. This is likely to be, at least in part, a result of the association between problem gambling and age.

Comparison of the marital status findings revealed an interesting difference between the results from the two screening instruments. According to the SOGS, the prevalence of problem gamblers was highest among people who were divorced or separated (2.4%). This was not the case as measured by the DSM-IV, which found the highest prevalence among single people (1.6%).

There was a difference in the prevalence of problem gambling associated with social class according to the SOGS but not the DSM-IV. As measured by the SOGS, there was a higher prevalence of problem gambling among people from manual backgrounds (1.1% compared with 0.5%). Problem gambling prevalence tended to decrease along with household income as measured by both screens.

Respondents who said that either of their parents had a gambling problem were more likely, than those whose did not, to be problem gamblers. And, as might be expected, the prevalence of problem gamblers among those who said that they had 'ever had a gambling problem' was considerably higher than among those who said no to this question. (Table 6.7)

Table 6.7 Problem gambling prevalence, by socio-demographic characteristics*All*

Socio-demographic characteristics		SOGS problem gamblers	DSM-IV problem gamblers
		%	%
<u>Sex</u>			
	Male	1.3	0.9
	Female	0.5	0.3
<u>Age group</u>			
	16-24	1.7	1.7
	25-34	1.2	0.7
	35-44	0.8	0.6
	45-54	0.7	0.4
	55-64	0.5	0.2
	65+	0.1	0.1
<u>Marital status</u>			
	Married/living as married	0.5	0.3
	Separated/divorced	2.4	0.6
	Widowed	0.3	-
	Single	1.8	1.6
<u>Economic activity status</u>			
	In paid work	1.0	0.6
	Retired	0.3	0.1
	Other	1.3	1.0
<u>Social class of highest income householder</u>			
	Manual	1.1	0.7
	Non-manual	0.5	0.4
<u>Household income level</u>			
	Less than £15,600	1.5	1.0
	£15,600 to £31,199	1.0	0.5
	£32,000 and over	0.2	0.3
<u>Qualification level</u>			
	Professional qualification or above	0.4	0.5
	O'/A' levels	1.2	0.8
	Other or no qualifications	0.9	0.5
<u>Either parent had a gambling problem</u>			
	Yes	5.6	5.6
	No	0.8	0.5
<u>Consider themselves to have had a gambling problem</u>			
	Yes	22.5	17.4
	No	0.5	0.3

Bases are presented at the end of the chapter

6.6 WHICH FACTORS ARE SIGNIFICANTLY ASSOCIATED WITH PROBLEM GAMBLING?

Section 6.5 presented the results of cross-tabulations of problem gambling prevalence with a number of background characteristics. The simple association of a particular variable with problem gambling behaviour does not mean that it is necessarily significantly correlated with that behaviour. For example, the previous table shows that problem gamblers are more likely to be single than married, but this could be due to the fact that problem gamblers tend to be in the younger age groups and younger people tend to be single. In other words, the association between being single and being a problem gambler may be an *indirect* one, due to the correlation of marital status with age.

Multivariate analysis untangles the separate effect of different variables, by calculating the association of one variable with another while *holding constant* the association of all other variables in the equation.

Logistic regression analyses were carried out, with whether the respondent was classified as a problem gambler as the *dependent* variable, and a number of socio-demographic factors as *independent* variables. Two separate logistic regressions were carried out, one for problem gambling according to the SOGS, and the other for the DSM-IV.

Logistic regression shows, for each sub-group, the association with the dependent variable **compared with the average**. So, for example, it examines the association of being aged between 16 and 24 with problem gambling compared with the average age.

Table 6.8 shows the results of the SOGS logistic regression, expressed in terms of odds ratios. Only variables which were significant in the equation are presented in the table. These were: sex, whether either of the respondent's parents had a gambling problem, household income and marital status. So, men were 1.73 times more likely than average to be classified as problem gamblers; people who said that either of their parents had a gambling problem were 2.44 times more likely; people in the lowest income bracket were 2.96 times more likely and separated/divorced people were 2.14 times more likely than *average* to be classified as a problem gambler. (An odds ratio of below one indicates that a sub-group is *less likely* than average to be classified as a problem gambler.) The association with household income is particularly interesting, since Chapter 3 showed that the level of gambling participation was *lowest* for the lower income groups.

Table 6.8 Odds of an individual being classified as a problem gambler according to SOGS

<i>All</i>	
	Odds ratios
Sex***	
Male	1.73***
Female	0.58***
Whether either parent had a gambling problem***	
Yes	2.44***
No	0.41***
Household income**	
Less than £15,600	2.96***
£15,600 to £31,199	1.93*
£31,200 and above	0.42
Marital status*	
Married/living as married	0.54*
Separated/divorced	2.14*
Widowed	0.58
Single	1.50
<i>No. of cases in the analysis</i>	7366
<i>Significance:</i>	* p<0.05
	** p<0.01
	***p<0.001
<i>Significance levels are shown for the overall effect of each variable (in the left hand column) and for each sub-group (in the right hand column).</i>	

The pattern of results from the DSM-IV logistic regression was similar, except marital status was no longer significant in the equation. Men were 1.67 times more likely, people who said that a parent was a problem gambler were 3.18 times more likely, and people in the lowest income bracket were 2.71 times more likely to be classified as a problem gambler. (Table 6.9)

Table 6.9 Odds of an individual being classified as a problem gambler according to the DSM-IV

<i>All</i>	
	Odds ratios
Sex**	
Male	1.67**
Female	0.60**
Whether either parent had a gambling problem***	
Yes	3.18***
No	0.31***
Household income**	
Less than £15,600	2.71**
£15,600 to £31,199	1.33
£31,200 and above	0.78
<i>No. of cases in the analysis</i>	7480
<i>Significance:</i>	* p<0.05
	** p<0.01
	***p<0.001
<i>Significance levels are shown for the overall effect of each variable (in the left hand column) and for each sub-group (in the right hand column).</i>	

Taken together, the results from the two logistic regressions suggest that problem gambling (as measured by the screening instruments) is significantly associated with: being male, parental gambling problems and having a low household income. In addition, according to one of the screens (SOGS) there is a significant association with being separated or divorced.

Endnotes

WEIGHTED BASES FOR Table 6.7 Problem gambling prevalence, by socio-demographic characteristics

	SOGS	DSM-IV
<i>Bases (weighted):</i>		
<u>Sex</u>		
Male	3589	3663
Female	3783	3840
<u>Age group</u>		
16-24	1015	1027
25-34	1449	1467
35-44	1340	1358
45-54	1199	1235
55-64	912	927
65+	1458	1471
<u>Marital status</u>		
Married/living as married	4709	4792
Separated/divorced	507	515
Widowed	617	622
Single	1556	1574
<u>Economic activity status</u>		
In paid work	4095	4174
Retired	1593	1610
Other	1588	1604
<u>Social class of highest income householder</u>		
Manual	3900	3962
Non-manual	3241	3290
<u>Household income level</u>		
Less than £15,600	2502	2536
£15,600 to £31,199	2066	2099
£32,000 and over	1709	1740
<u>Qualification level</u>		
Professional qualification or above	2035	2063
O'/A' levels	1992	2023
Other or no qualifications	3054	3104
<u>Either parent had a gambling problem^{a)}</u>		
Yes	195	197
No	7307	7306
<u>Consider themselves to have had a gambling problem</u>		
Yes	120	121
No	7118	7231

UNWEIGHTED BASES FOR Table 6.7
Problem gambling prevalence, by socio-demographic characteristics

	SOGS	DSM-IV
<u>Sex</u>		
Male	3464	3529
Female	3902	3951
<u>Age group</u>		
16-24	905	914
25-34	1324	1340
35-44	1444	1464
45-54	1312	1349
55-64	978	994
65+	1387	1402
<u>Marital status</u>		
Married/living as married	4831	4915
Separated/divorced	525	534
Widowed	569	575
Single	1441	1456
<u>Economic activity status</u>		
In paid work	4114	4191
Retired	1568	1587
Other	1569	1586
<u>Social class of highest income householder</u>		
Manual	3914	3977
Non-manual	3225	3272
<u>Household income level</u>		
Less than £15,600	2449	2484
£15,600 to £31,199	2066	2905
£32,000 and over	1735	1767
<u>Qualification level</u>		
Professional qualification or above	2035	2061
O'/A' levels	1978	2007
Other or no qualifications	3042	3095
<u>Either parent had a gambling problem</u>		
Yes	192	194
No	7174	7286
<u>Consider themselves to have had a gambling problem</u>		
Yes	108	109
No	7110	7226

APPENDIX 1: CHARACTERISTICS OF THE SAMPLE

This appendix describes the characteristics of the sample of people who completed questionnaires for the survey. The issued sample consisted of 7700 addresses selected at random from the Postcode Address File; at each selected address, every person aged 16 and over was eligible for inclusion in the survey. Questionnaires were completed and returned by 7680 people in 4385 households. The achieved sample was weighted to reflect the sex and age distribution of the general population in Britain. Aside from sex and age, however, there may be differences between the sample and the general population which could affect the representativeness of the results. Where possible the socio-demographic characteristics of the sample described below are compared with independent data (eg, from the General Household Survey) in order to identify potential differences between the sample and the adult British population.

The details of sample selection, response and weighting may be found in Appendix 2: Methodology.

A1.1 SEX AND AGE DISTRIBUTION

Looking first at sex, there were slightly more women than men in the sample: 51% and 49% respectively. This exactly reflects the sex distribution found among the general population aged 16 and over (as intended by the weighting strategy).

Also because of weighting, the age distribution was identical to that among the British population: 14% were aged 16-24, 38% were aged 25-44, 29% were aged 45-64, and 20% were aged 65 and over. Men were more likely than women to be in the youngest age categories (54% were aged under 45 compared with 49% of women), while women were more likely to be aged 65 and over (23%, compared with 17% of men). (Table A1.1)

Table A1.1 Age, by sex

All

Age categories	Sex		Total
	Men	Women	
	%	%	%
16-24	14	13	14
25-34	21	19	20
35-44	19	17	18
45-54	17	16	16
55-64	13	12	13
65-74	10	11	11
75 and over	7	12	9
<i>Bases (weighted):</i>	<i>3738</i>	<i>3945</i>	<i>7682</i>
<i>Bases (unweighted):</i>	<i>3603</i>	<i>4059</i>	<i>7662</i>

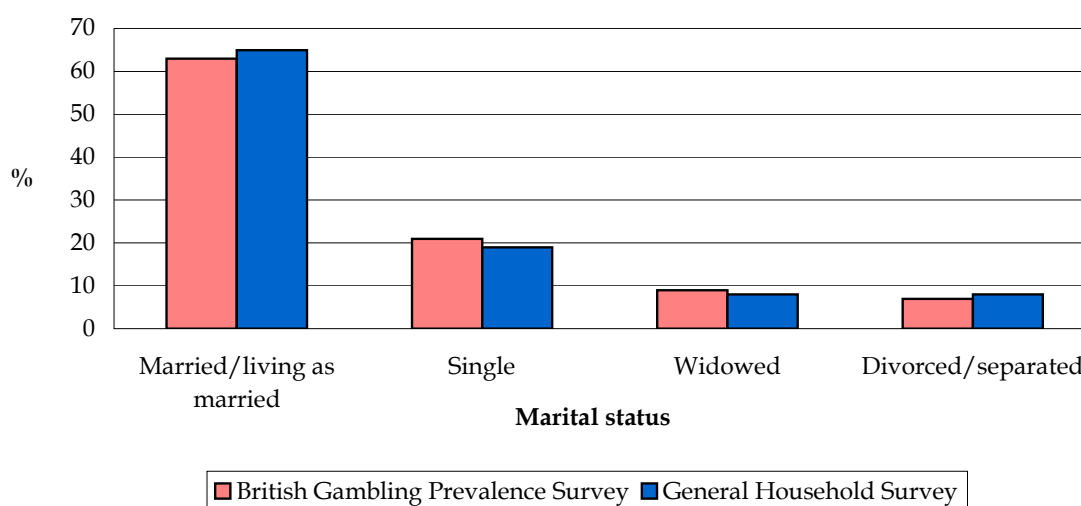
Age was not known for 18 respondents.

A1.2 MARITAL STATUS

Nearly two-thirds (63%) of respondents were married (or living as married) while 16% were separated, widowed or divorced, and 21% were single. Men were more likely than women to be married (67% compared with 60%), while women were more likely to be widowed (13% were, compared with 4% of men). This is very close to the distribution among the general population as measured by the 1998 General Household Survey (GHS), where 65% of the population were married (or living as married) and 19% were single.¹ (Table A1.2 and Figure A1.A)

Table A1.2 Marital status, by sex*All*

Marital status	Sex		Total
	Men	Women	
	%	%	%
Married/living as married	67	60	63
Separated	2	2	2
Widowed	4	13	9
Divorced	4	6	5
Single	24	19	21
<i>Bases (weighted):</i>	<i>3670</i>	<i>3894</i>	<i>7564</i>
<i>Bases (unweighted):</i>	<i>3542</i>	<i>4006</i>	<i>7548</i>

Figure A1.A: Marital status

A1.3 ECONOMIC ACTIVITY AND SOCIAL CLASS

There are two social class measures available within the survey. Firstly, every respondent was asked to describe their current economic activity, and to provide details of their current or last paid job in order to assign each person to a social class based on their own occupation. Secondly, one person within every household that participated in the survey was designated the ‘highest income householder’ based on a definition which has recently been developed for use on government surveys (and which is replacing the previously used ‘head of household’).²

A1.3.1 Respondent’s economic activity and social class

Looking first at the respondent’s own economic activity, it can be seen from Table A1.3 that slightly over half of the sample (56%) were in paid work at the time of the survey. The next largest group was the retired (22%); this was followed by people who were looking after their home or family (9%), in full-time education (5%), unemployed (4%), and unable to work because of a long-term health condition (4%).

In order to assess how representative the sample was in terms of economic activity, the survey data was compared with the interviewer-administered Family Resources Survey (FRS). In nearly all respects, the comparisons of economic activity between the survey and the FRS were very close; the

biggest differences were that the British Gambling Prevalence Survey had a higher proportion of students (5% compared with 1% in the FRS) and a higher proportion of women who said they were looking after the family or home (16% and 10% respectively).³

Economic activity differed between men and women, with two-thirds of men (65%) and half of women (47%) being in paid work. Women, on the other hand, were more likely than men to be looking after the family or home (16% of women compared with less than 0.5% of men) and to be retired (24% and 19% respectively).

Table A1.3 Economic activity of respondent, by sex

All

Economic activity	Sex		Total
	Men	Women	
	%	%	%
In paid work	65	47	56
Unemployed	5	3	4
Unable to work because of long-term disability or ill health	4	3	4
Looking after the family or home	*	16	9
Retired	19	24	22
In full-time education	5	5	5
Other activity	*	1	*
<i>Bases (weighted):</i>	3700	3885	7585
<i>Bases (unweighted):</i>	3566	3996	7562

As expected there were also very large variations in economic activity by age. For example, respondents aged 16-24 were by far the most likely to be in full-time education (32%) or unemployed (10%). Respondents aged 25-54 were the most likely to be in paid work (78%). The proportion of respondents saying they were retired increased with age, from 32% at ages 55-64 to 87% at ages 65 and above. (Table not shown.)

Respondents were asked to provide details of their current or last paid job, which enabled office coding of occupation and the assignment of social class.⁴ Overall, based on their own occupations, one in three respondents were in Social Class I (5%) and II (28%); one in four (25%) were in Social Class IINM; one in five (21%) were in Social Class IIIM; and one in five were in Social Classes IV (16%) and V (5%).

Compared with men, women were much more likely to be in Social Class IINM (38% compared with 12%), and much less likely to be in Social Class IIIM (9% compared with 32%). Women were also less likely than men to be in Social Classes I and II (29% were compared with 38% of men), and slightly more likely to be in Social Classes IV and V (24% compared with 18% of men). (Table A1.4)

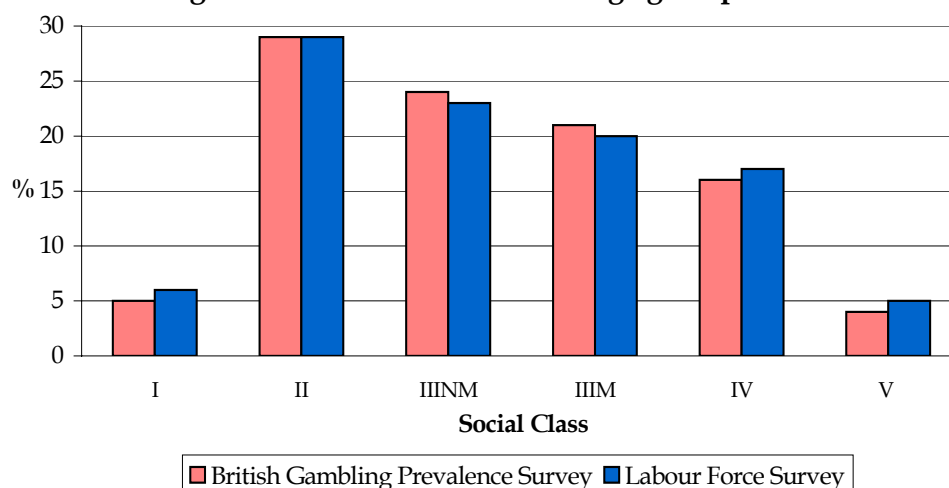
This social class distribution for respondents of working age is a close representation of the general population as a whole.⁵ (Figure A1.B)

Table A1.4 Social class of respondent, by sex

Social class	Sex		Total
	Men	Women	
	%	%	%
I	8	3	5
II	31	26	28
IIINM	12	38	25
IIIM	32	9	21
IV	14	18	16
V	4	6	5
<i>Bases (weighted):</i>	3392	3329	6721
<i>Bases (unweighted):</i>	3274	3448	6722

People who have never worked or who provided insufficient details to derive social class have been excluded from the table.

Figure A1.B: Social class of working-age respondents



A1.3.2 Social class of highest income householder

As well as establishing social class based on the respondent’s own occupation, a social class was also assigned to the ‘highest income householder’ based on that person’s current or most recent occupation. It is the social class of the highest income householder which is used for analysis throughout the report.

Since the majority of highest income householders are men, a comparison of Tables A1.4 and A1.5 shows that, for men, the distribution of social class based on respondent’s own occupation is very similar to that based on the occupation of the highest income householder. However, for women respondents the distributions are quite different: in particular, compared with their own occupation, far more women are found in Social Class IIIM, and fewer in Social Class IIINM, when looking at the categorisation based on the highest income householder.

Table A1.5 Social class of highest income householder, by sex

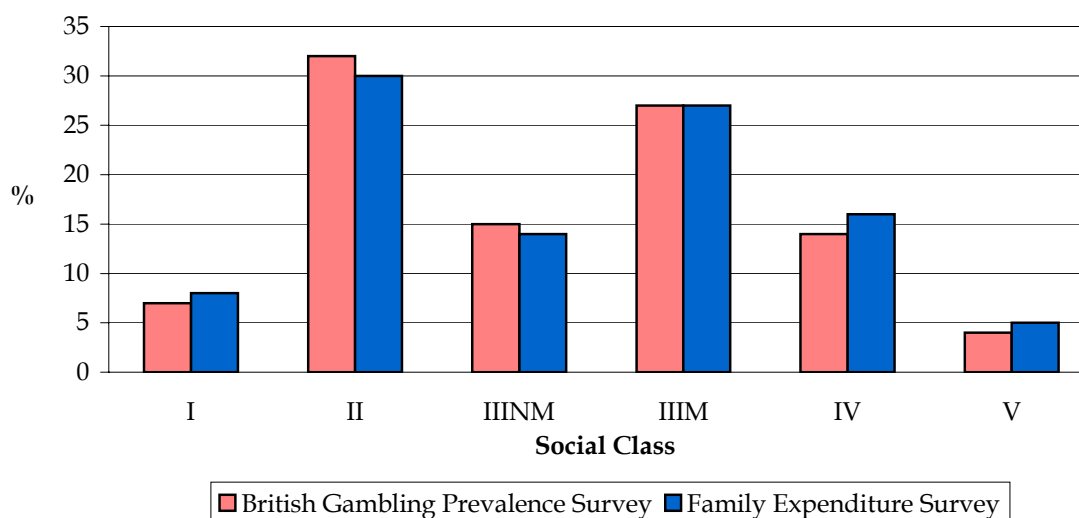
All

Social class	Sex of respondent		Total
	Men	Women	
	%	%	%
I	8	6	7
II	33	31	32
IIINM	12	18	15
IIIM	30	25	27
IV	14	15	14
V	3	5	4
<i>Bases (weighted):</i>	3649	3794	7443
<i>Bases (unweighted):</i>	3522	3922	7444

People living in households where the highest income householder never worked or who provided insufficient details to derive social class have been excluded from the table.

The social class distribution for highest income householder shown in Table A1.5 appears to be quite close to that for the general population. Figure A1.C compares social class from the British Gambling Prevalence Survey with social class from the Family Expenditure Survey (FES).⁶ Although the comparison is not exact (as the FES uses occupation of head of household), the closeness of the social class distributions suggests that the achieved sample is a good representation of the population as a whole in this respect. The British Gambling Prevalence Survey appears to slightly under-represent people from households in Social Classes IV and V. While the differences are small (and may be due to the differences in definition), this potential under-representation should be kept in mind when interpreting the results of the report.

Figure A1.C: Social class of highest income householder



A1.4 SOURCES AND LEVEL OF HOUSEHOLD INCOME

A1.4.1 Sources of household income

As part of the household interview, respondents were shown a card with a range of possible sources of income and were asked to indicate which types of income were received by any members of the household. The responses are shown in Table A1.6.

Table A1.6 Sources of household income, by sex

All

Sources of household income	Sex		Total
	Men	Women	
	%	%	%
Earnings from employment/self-employment	73	65	69
State retirement pension	21	29	25
Pension from a former employer	19	21	20
Child benefit	30	32	31
Job-seekers allowance	3	2	3
Income support	6	9	7
Family credit	2	3	3
Housing benefit	6	8	7
Other state benefits	8	9	9
Interest from savings or investments	19	19	19
Other kinds of regular income from outside the household (eg, rent, maintenance)	4	5	5
(Has no source of income)	*	*	*
<i>Bases (weighted):</i>	3703	3884	7587
<i>Bases (unweighted):</i>	3567	4001	7568

The columns add to more than 100% as more than one response could be given.

By far the most common source of income was earnings from employment or self-employment, with 69% of individuals living in households with this sort of income. (Note that the results in the table are based on individual respondents, not on households. Thus, while 69% of *individuals* lived in households that received earnings from paid work, the proportion of *households* in receipt of earnings from paid work was about 5% lower.) The next most common sources of income reported were: child benefit, with nearly one in three (31%) individuals living in households where child benefit was received; state pension (25%); pension from a former employer (20%); and interest from savings and investments (19%). Most of the other sources of income mentioned were other state benefits such as income support (7%), housing benefit (7%), job-seekers allowance (3%) and family credit (3%).

A1.4.2 Level of household income

As well as sources of income, respondents were also shown a card which contained different levels of income, and they were asked to choose which of the bands represented their *household's* gross income from all sources (ie, before any deductions for tax, etc). The median category was £15,600 to £20,799, which means that the majority of individuals lived in households with a gross income level below £20,800.

Overall, one in ten (10%) individuals lived in households with an income level below £5,200; about one in three (30%) said their household income was between £5,200 and £15,599; one in four (25%) had income levels between £15,600 and £25,999; 23% between £26,000 and £46,799; 10% between £46,800 and £99,999; and 2% had income levels of £100,000 or more. (A relatively high proportion, 15%, of respondents refused to answer this question or could not say; they have been excluded from the analysis.) The detailed results are shown in Table A1.7.

Table A1.7 Level of household income, by sex*All**

Household income level	Sex		Total
	Men	Women	
	%	%	%
£0 to £5,199	7	13	10
£5,200 to £10,399	14	18	16
£10,400 to £15,599	14	14	14
£15,600 to £20,799	13	12	12
£20,800 to £25,999	13	11	12
£26,000 to £31,199	9	8	9
£31,200 to £36,399	7	5	6
£36,400 to £46,799	9	7	8
£46,800 to £59,999	7	6	6
£60,000 to £79,999	3	3	3
£80,000 to £99,999	2	1	1
£100,000 to £149,999	1	1	1
£150,000 or more	1	1	1
<i>Bases (weighted):</i>	<i>3191</i>	<i>3340</i>	<i>6531</i>
<i>Bases (unweighted):</i>	<i>3066</i>	<i>3437</i>	<i>6503</i>

*At 15%, the proportion of respondents who refused to answer or could not say was higher than for most questions in the survey; as for all other analyses, these missing cases have been excluded from the table.

A1.5 QUALIFICATIONS

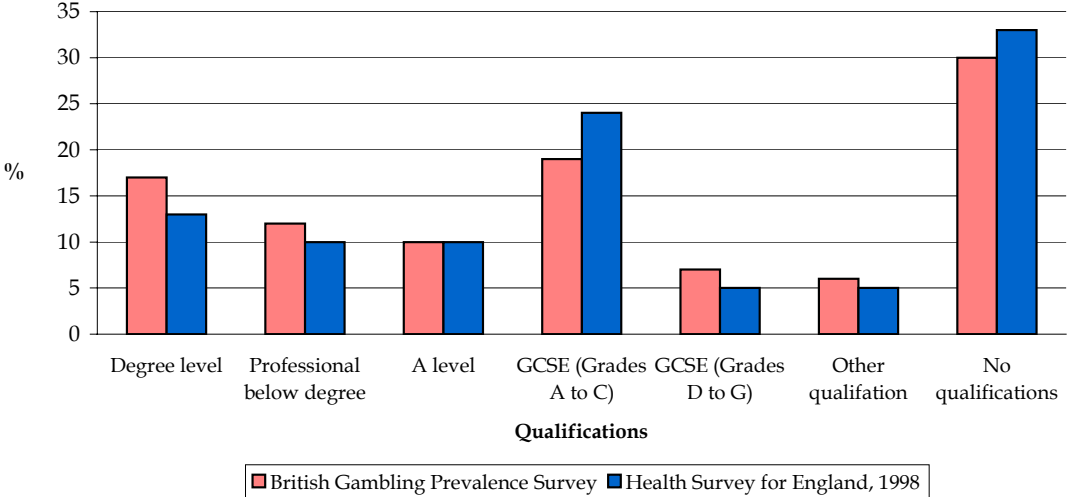
Respondents were asked for their highest educational or vocational qualification. These are shown in Table A1.8 by sex. At the top of the scale, 17% of respondents were qualified to degree level or above; at the other end, nearly one in three (30%) said they had no formal qualifications. Men were somewhat more likely than women to report having any qualifications and having degree level qualifications or higher. (It should be noted that the qualifications listed are the highest ones held at the time of the survey and that many younger respondents in particular were still in full-time education and thus in the process of increasing their level of qualification.)

Table A1.8 Qualifications, by sex*All*

Qualifications	Sex		Total
	Men	Women	
	%	%	%
Degree level qualification or above	20	13	17
Professional qualification below degree level	12	12	12
'A' levels or equivalent	10	9	10
GCSE grades A to C/'O' level passes or equivalent	17	20	19
GCSE grades D to G/CSE grades 2 to 5 or equivalent	7	7	7
Other qualifications	7	5	6
No formal qualifications	27	33	30
<i>Bases (weighted):</i>	<i>3589</i>	<i>3738</i>	<i>7327</i>
<i>Bases (unweighted):</i>	<i>3455</i>	<i>3849</i>	<i>7304</i>

This is very similar to the level of qualifications found in other surveys among the general population. For example, on the Health Survey for England (1998), 13% of respondents (aged 16 and over) had a degree level qualification while 33% had no formal qualifications.⁷ (Figure A1.D)

Figure A1.D: Qualifications



A1.6 ETHNIC GROUP

Respondents were asked to classify which ethnic group they considered they belonged to, using similar categories to those included in the 1991 Census. The vast majority of respondents classified themselves as white (95%). Of the non-white respondents, 1% were black (Caribbean or African), 2% were Indian, Pakistani or Bangladeshi; and 2% were Chinese or ‘another’ ethnic group.

These figures are very close to those for the British population as a whole: for example, in the 1998 General Household Survey 95% of British residents aged 16 and over classed themselves as white.

A1.7 TENURE AND TYPE OF ACCOMMODATION

A1.7.1 Tenure

When asked about the tenure of their accommodation, 73% of respondents said they lived in owner-occupied housing (whether owning outright or with a mortgage, or being part of a shared ownership scheme), and 26% said they paid rent either to the council or for privately rented accommodation (with 1% saying they lived rent free). Compared with the 1998 General Household Survey, the British Gambling Prevalence Survey contains a slightly higher proportion of owner-occupiers (73% compared with 69% in the General Household Survey).

A1.7.2 Type of accommodation

Interviewers coded the type of accommodation for every sampled address. About one in four (23%) respondents lived in a detached house, 33% in a semi-detached house, 26% in a terraced house, 15% in a purpose built flat, and 4% in a converted flat. As for the other comparisons with independent data sources, these figures closely resemble the population distribution (as measured by the 1998 General Household Survey).

A1.8 COUNTRY

The sample was distributed as follows throughout Britain: 84% England, 10% Scotland and 6% Wales. This compares favourably with external data (also from the General Household Survey) which shows the adult population to be distributed as follows: 86% England, 9% Scotland and 5% Wales.

Endnotes

- ¹ Bridgwood, A. Lilly, R. Thomas, M. Bacon, J. Sykes, W. Morris, S. *Living in Britain: Results from the 1998 General Household Survey*. 2000: London, The Stationery Office.
- ² The definition of 'highest income householder' has two elements. Firstly, the 'householder(s)' must be identified, that is the person(s) in whose name(s) the accommodation is owned or rented. If there is more than one householder, then the one with the highest income, whether from paid work or other sources, is identified as the 'highest income householder'.
- ³ Table 7.1, *Family Resources Survey: Great Britain 1997-98*. 1999: Leeds, Corporate Document Services. It should be noted that there are a number of differences between the British Gambling Prevalence Survey and the Family Resources Survey (FRS) which may affect the comparability of the data, in particular that fieldwork for the FRS was carried out in 1997-98 and that it is based on face-to-face interviewing.
- ⁴ When appropriate, respondents in the survey were assigned a social class using two alternative occupations. Firstly, everyone who had ever had a paid job was assigned a social class based on the details of their own current or most recent job. Secondly, each person was also assigned a social class based on the occupation of the highest income householder (HIH) within their residence. Clearly, both social class assignments would be the same within single adult households as well as for the HIH himself or herself; there would be only one (or even no) social class assignment in cases where the respondent (or the HIH) never had a paid job (or where the details provided were insufficient to determine occupation). Occupations were coded using the Registrar General's Standard Occupational Classification, and assigned to one of six social class categories:

<i>Social Class</i>	<i>Occupations</i>
I	Professional occupations
II	Managerial and technical occupations
IIINM	Skilled occupations, non-manual
IIIM	Skilled occupations, manual
IV	Partly skilled occupations
V	Unskilled occupations

In some analyses Social Classes I and II and Classes IV and V have been combined. In others, I, II and IIINM have been combined under the heading of 'non-manual', while IIIM, IV and V have been combined under the heading of 'manual'.
People who were in the armed forces, or whose occupation was not adequately described, or who had never worked, were not allocated a social class and are excluded from the tables. In households where the HIH was not interviewed, the social class of the HIH was derived from information provided from their spouse or partner.
- ⁵ The social class distribution for working age men and women is very similar to that shown in Matheson, J. Holding A. *Regional Trends 34*, 1999: London, The Stationery Office.
- ⁶ Down, D. *Family spending: a report on the 1998-99 Family Expenditure Survey*. 1999: London, The Stationery Office.
- ⁷ Erens, B. Primatesta, P. (eds) *Health Survey for England 1998*. 1999: London, The Stationery Office.

APPENDIX 2: METHODOLOGY

A2.1 SAMPLING

The population surveyed was the population, aged 16 and over, living in private households in England, Wales and Scotland. Those living in institutions were not covered. The sampling frame was the small user Postcode Address File (PAF). 280 postcode sectors were chosen as the primary sampling units (PSUs). Before selection the sectors were stratified by Government Office Region (GOR) (12 regions), population density (3 bands) and the proportion of household heads in non-manual occupation. Each postcode sector was split into two and 25 addresses were randomly selected within each half sector. 7000 addresses were selected in total. Within each household, all members aged 16 and over were eligible for inclusion in the survey.

A2.2 QUESTIONNAIRE PRE-TESTING

The first draft of the questionnaire was submitted to two stages of pre-testing, each of which consisted of two parts: cognitive testing and a pilot. The first stage took place in February 1999. 10 cognitive interviews were carried out, 5 of which were with problem gamblers who were living in a residential home for problem gamblers. The pilot involved interviews with another 44 people. Cognitive interviewing was done by a researcher, and involved asking respondents to 'think aloud' while completing the questionnaire. Cognitive interviewing draws on techniques from cognitive psychology, and is an extremely useful method of finding out how questions are interpreted. Pilot interviews involved interviewers, from the *National Centre's* fieldforce, carrying out a 'rehearsal' of the fieldwork procedure which would be used for the main survey. The interviewers noted down the respondents' feedback on the questionnaire, and reported back to the researchers via a 'debrief'.

It was the cognitive interviews which revealed that the questions on expenditure, using simply the word 'spend', were being interpreted in a number of different ways: that is 'outlay', 'stake', 'turnover' and 'net expenditure' (see Chapter 4). After considerable discussion with the Survey Steering Group, it was decided to develop and test another draft of the questionnaire. In this draft the gambling activities were separated into two groups, and explicit instructions were included on how expenditure calculations should be made. The two groups were based on the results of the pre-testing, which found that some activities were naturally calculated in terms of 'stake' (for example, lottery tickets, football pools, and bingo tickets); while others tended to be thought of more in terms of 'net expenditure' (for example, fruit machines, betting on horse races and table games). The questionnaire was shortened (as it was longer than anticipated) and a number of other (minor) amendments were made.

The second draft questionnaire was submitted to a second stage of pretesting in June 1999. Cognitive interviews were carried out with 9 people and pilot interviews with another 20 people. The redrafted expenditure section was much improved, and the majority of respondents were consistent in their interpretation of the questions. Thus, it was decided to proceed with this version, although it was recognised that it introduced the limitation of not allowing a calculation of 'total' spend (on all activities) for an individual. Questionnaire length was also fine, and so the questionnaire was finalised and professionally laid out by a graphic designer.

A2.3 FIELDWORK

Fieldwork began in early September 1999. Interviewers were personally briefed by the researchers at 12 half-day briefings which took place around Britain. An advance letter was sent to each sampled address detailing the aims of the survey and explaining that an interviewer would shortly be visiting the address.

At addresses where there was more than one household, interviewers used a Kish grid to randomly select one household. At each household, interviewers attempted to obtain a face to face interview with the highest income householder, collecting socio-demographic information about the household. Once the household questionnaire had been completed, every person aged 16 and over in the household was asked to fill in a self-completion questionnaire, which collected information about their gambling behaviour. (The household and self-completion questionnaires are included in Appendix 3). Interviewers were instructed either to wait while the questionnaire was completed, or to return at a later date to collect it. Fieldwork finished in January 2000.

A2.4 RESPONSE

Interviews were achieved at 4619 households (a response rate of 73% of in-scope addresses) and self-completion questionnaires were returned by 7,680 out of 8584 eligible individuals (a response rate of 89%). This represents an overall response rate of 65% (Table A2.1).

Table A2.1 Response

Addresses issued	7000	
Non-residential	639	
		%
In-scope	6361	100.0
No contact at address	290	5
Refused all information	1283	20
Other reason no interview	169	3
Household Qt completed	4619	73
		%
Eligible adults	8584	100
Personal refusal	242	3
Proxy refusal	179	2
Ill/away/incapacitated	75	1
Not returned	408	5
Self-completion Qt returned	7680	89
Overall response		65.0

A2.5 SCORING THE PROBLEM GAMBLING SCREENING INSTRUMENTS

Two screening instruments were used to identify problem gamblers, the SOGS and the DSM-IV. This section explains how each instrument was scored and the threshold used to classify a problem gambler.

A2.5.1 Scoring the SOGS

The SOGS questions (C9 to C28 of the self-completion questionnaire) were scored according to the system outlined by its developers.¹

The SOGS items along with the corresponding question number from the self-completion questionnaire are shown in the first two columns of Table A2.2. The third column shows which responses were counted as ‘positive’.

Table A2.2 Scoring the SOGS

Item	Question	‘Positive’
Chasing losses	C9	Most of the time/every time
Claimed to be winning when lost	C10	Some of the time/most of the time
Gambled more than intended	C11	Yes
People criticised gambling	C12	Yes
Felt guilty about what happens when gambling	C13	Yes
Like to stop but can’t	C14	Yes
Hidden signs of gambling	C15	Yes
Money arguments over gambling	C16b	Yes
Missed time from work or study	C17	Yes
Borrowed without paying back	C18	Yes
Borrowed from household money	C19	Yes
Borrowed from spouse/partner	C20	Yes
Borrowed from relatives	C21	Yes
Borrowed from banks	C22	Yes
Made cash withdrawals on credit card	C23	Yes
Received loans from loan sharks	C24	Yes
Cashed in stocks or shares	C25	Yes
Sold personal property	C26	Yes
Written cheques that bounced	C27	Yes
Problem with gambling	C28	Yes

The threshold for being classified as a problem gambler was a score 5 or more ‘positives’, in line with a number of previous studies abroad (see Chapter 5). A number of respondents failed to complete all 20 SOGS questions. Cases where more than half of the items (that is 11 or more) were missing were excluded from the analysis on problem gambling. A total of 314 cases (4% of the sample) were excluded for this reason.

A2.5.2 Scoring the DSM-IV

The DSM-IV criteria, along with the corresponding question number from the self-completion questionnaire are shown in the first two columns of Table A2.3. The third column shows which responses were counted as ‘positive’.

Table A2.3 Scoring the DSM-IV

Item	Question	‘Positive’
A preoccupation with gambling	C29	Fairly often/very often
A need to gamble with increasing amounts of money	C30	Fairly often/very often
Being restless or irritable when trying to stop gambling	C31	Fairly often/very often
Gambling as escapism	C32	Fairly often/very often
Having tried but fail to cut back or stop gambling	C34	Fairly often/very often
Chasing losses	C9	Most of the time/every time
Lying to people to conceal the extent of gambling	C33	Fairly often/very often
Having committed a crime to finance gambling	C35	Occasionally/fairly often/very often
Having risked or lost a relationship/job/educational opportunity because of gambling	C36	Occasionally/fairly often/very often
Reliance on others to help a financial crisis caused by gambling	C37	Occasionally/fairly often/very often

The threshold for ‘problem gambling’ was 3 or over, again in line with previous research (see Chapter 5). As with the SOGS, cases were excluded from the problem gambling analysis if more than half of the DSM-IV items were missing. A total of 200 cases (3% of the sample) were excluded for this reason.

A2.6 SCORING THE ATTITUDE TOWARDS GAMBLING SCALE

The attitude scale consists of questions C1 to C8 of the self-completion questionnaire (Appendix 3). A Cronbach’s alpha statistic² was calculated to ascertain whether there was enough similarity between each of the items to justify turning them into a scale. The Cronbach’s alpha showed a high level of internal consistency (.8155) so a scale was calculated. First, each question was recoded, so that a high number represented a ‘pro-gambling’ attitude (Table A2.4). Then, the individual scores for each item were summed together to produce an overall ‘pro-gambling scale’. The maximum score, representing the highest positive attitude towards gambling, was 40 (8 multiplied by 5).

Table A2.4 Scoring the attitude scale

C1	Always =5, Often =4, Sometimes =3, Rarely =2, Never =1, Not applicable =0
C2	Always =5, Often =4, Sometimes =3, Rarely =2, Never =1, Not applicable =0
C3	Always =1, Often =2, Sometimes =3, Rarely =4, Never =5, Not applicable =0
C4	Always =5, Often =4, Sometimes =3, Rarely =2, Never =1, Not applicable =0
C5	Always =1, Often =2, Sometimes =3, Rarely =4, Never =5, Not applicable =0
C6	Always =5, Often =4, Sometimes =3, Rarely =2, Never =1, Not applicable =0
C7	Always =5, Often =4, Sometimes =3, Rarely =2, Never =1, Not applicable =0
C8	Always =5, Often =4, Sometimes =3, Rarely =2, Never =1, Not applicable =0

A2.7 CALCULATING THE MEAN STAKE

Means were calculated for the amount staked on the National Lottery Draw, other lotteries, the football pools and bingo by substituting the mid-point of each band with a numerical value, and using this value to calculate an overall mean. Means were calculated **only** for respondents who had participated in each activity in the past week. An example of how the banded response categories presented in the questionnaire were substituted with numerical values is shown below:

Amount spent in the last 7 days on the National Lottery Draw

Response category	Numerical value
Less than £1	50p
£1	£1.00
£1.01-£5	£3.50
£5.01-£10	£7.50
£10.01-£20	£15.00
£20.01-£50	£35.00
More than £50	£50.00

It is important to note that, since these means are calculated from banded, rather than numeric data, they should not be viewed as ‘exact’ figures; rather, they provide an indication of differences in expenditure between different activities, and between different population sub-groups. Moreover, the maximum value in each case is simply taken as the highest response category (eg £50.00) and so the few outlying high values are not taken into account.

For the other gambling activities information was collected on ‘net expenditure’ rather than stake. In order to keep the questionnaire as simple as possible, the amount won was not collected, and so it is not possible to calculate mean expenditure for these activities.

A2.8 WEIGHTING

The data were weighted in two stages. The first corrected for household selection probabilities in the small number of addresses (28) which were found to consist of more than one household. The second corrected for individual for non-response, so that the sample reflected the age and sex distribution of the general population. Comparison with the age and sex profile of the British population according to estimates from the Office for National Statistics³ showed that the achieved sample was in fact a very close reflection of the general population, and, therefore, the weights were very small. Table A2.5 compares the population estimates with the achieved *unweighted* sample for the British Gambling Prevalence Survey and shows the average weight for each sub-group.

Table A2.5 Comparison of the unweighted sample with population estimates

Age	Population estimates		British Gambling Prevalence Survey		Average weight	
	% male	% female	% male	% female	Weight (men)	Weight (women)
16-19	3.2	3.0	3.0	2.9	1.05	1.05
20-24	3.8	3.6	2.9	3.4	1.34	1.06
25-34	10.0	9.6	8.3	9.6	1.20	1.00
35-44	9.1	8.9	9.2	10.3	0.99	0.87
45-54	8.2	8.3	8.7	9.4	0.95	0.88
55-64	6.2	6.3	6.4	7.1	0.97	0.88
65-74	4.9	5.7	5.3	5.8	0.92	0.99
75+	3.3	6.0	3.2	4.6	1.02	1.29
Total	48.6	51.4	47.0	53.00	1.04	0.97

A2.9 DATA PROCESSING AND ANALYSIS

Completed questionnaires were subject to a manual edit, before keying, to check key routing and numeric data entries. Occupations were coded to the Standard Occupational Classification (SOC) from which social class was derived.

A computer edit program was written to check all code ranges and routing. After keying, records which failed to pass the computer edit were amended by reference back to the questionnaire, and errors corrected or missing information/not answered codes added where necessary. This process was repeated until all records passed the edit as 'clean'. All information was treated confidentially, and all data records are anonymous.

Analysis of the survey findings was carried out using both Quantum and SPSS analysis packages.

A2.10 STATISTICAL SIGNIFICANCE

All survey data are estimates of the 'true' proportion of the population sampled. With random sampling methods it is possible to estimate the margins of error either side of each percentage indicating a range within which the 'true' percentage will fall.

These margins of error vary according to both the percentage estimates from the sample and the number of people included in the sample. Table A2.6 indicates the '95% confidence intervals' that users of the tables in the report should allow, taking both of these criteria into account. That is, the

table shows the range in which we would expect the 'true' percentage to fall 95 times out of 100. For example, if the estimated value is 50% and the sample size is 8,000 the true value is likely to be between 49% and 51%.

Table A2.6 Confidence intervals

Sample Size	Percentage									
	10%		25%		50%		75%		90%	
100	4%	16%	17%	33%	40%	60%	67%	83%	84%	96%
200	6%	14%	19%	31%	43%	57%	68%	82%	86%	94%
500	7%	13%	21%	29%	46%	54%	71%	79%	87%	93%
1000	8%	12%	22%	28%	47%	53%	72%	78%	88%	92%
2000	9%	11%	23%	27%	48%	52%	73%	77%	89%	91%
3000	9%	11%	23%	27%	48%	52%	73%	77%	89%	91%
4000	9%	11%	24%	26%	48%	52%	74%	76%	89%	91%
5000	9%	11%	24%	26%	49%	51%	74%	76%	89%	91%
6000	9%	11%	24%	26%	49%	51%	74%	76%	89%	91%
7000	9%	11%	24%	26%	49%	51%	74%	76%	89%	91%
8000	9%	11%	24%	26%	49%	51%	74%	76%	89%	91%

Endnotes

- ¹ Lesieur, HR & Blume, SB. *The South Oaks Gambling Screen (SOGS): A new instrument for the identification of pathological gamblers*. Am J Psychiatry 1987; **144**: 1184-1188.
- ² Reliability analysis studies the properties of measurement scales and the items that make them up. A Cronbach's Alpha is a model of internal consistency, based on the average inter-item correlation.
- ³ Office for National Statistics: *Mid 1998 population estimates*. Government Statistical Service, 1999.

APPENDIX 3: THE QUESTIONNAIRES