The effect of marketing and advertising on children, young people and vulnerable people

Quantitative Research Report

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Date: March 2020
Prepared for: GambleAware

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List of abbreviations

GC – Gambling Commission

RO – Research Objective

SHS – Scottish Household Survey

FRS – Family Resources Survey

IMD – Index of Multiple Deprivation

SD – Standard Deviation

GOES – Gambling Outcome Expectancies Scale

OR – Odds Ratio

RQ – Research Question

Acknowledgements

We would like to thank our colleagues in NatCen and ScotCen, too numerous to mention, who assisted with the preparation and delivery of all aspects of the pilot and the main postal, online and telephone surveys. Many thanks to other members of the ISM consortium, led by Fiona Dobbie, and in particular Dr Nathan Critchlow for his invaluable input throughout the survey phase. We would also like to thank Steve Ginnis and Holly Kitson at Ipsos Mori for their thoughts on drafts of the report. We would also like to acknowledge the support we received from individuals such as Ian Angus, Laura Balla, Mark Etches and Beth Hiles in terms of getting access to the samples which made our own survey possible. We are grateful to those at the Scottish Government, Department for Work and Pensions and Office for National Statistics who we worked with in order to gain access to the Scottish Household Survey and Family Resources Survey samples. We also appreciate the support and advice provided throughout the project by GambleAware (in particular, Polly Newall, Clare Wylie and Alison Clare) as well as the members of the wider evaluation steering group. We are very grateful to our colleagues Lesley Birse, Paul Bradshaw, Stephen Hinchliffe and Jackie Palmer for their support throughout the project. Finally, we are very appreciative of all of the 11-24 year olds who took the time to participate in the survey.

1 Introduction

In March 2018, GambleAware commissioned two independent research consortia (the Institute for Social Marketing (ISM), in collaboration with ScotCen Social Research, Professor Gerda Reith and Dr Philip Newall; and Ipsos Mori, in collaboration with the University of Bristol and DEMOS) to assess the extent, nature and impact of gambling marketing on children, young people and vulnerable groups in the UK. ScotCen and ISM have submitted reports in the earlier part of 2019 covering detailed qualitative research with children, young people and vulnerable groups (problem gamblers and those with mental health issues), a literature review and content analysis of gambling advertising in paid for media, and an analysis of gambling references in broadcasts of professional sport in the UK. In addition, an interim synthesis report led by Ipsos Mori was published in July 2019, which brought together findings from reports produced by both consortia, focusing on the exposure, tone and format of gambling related marketing and advertising. Ipsos Mori will also publish a final synthesis report drawing on all of the separate research strands in early 2020.

In February 2019, GambleAware commissioned ScotCen to conduct a survey of 11-24-year olds in England, Scotland and Wales. Although an online survey of those aged 11-24 had been part of the original commissioning process, delays in accessing the sample and issues encountered in the pilot resulted in a number of modifications, the major ones being:

- The survey changed mode from online only to a sequential postal-online-computer assisted telephone interview (CATI) model
- Incentives were to be offered on completion of the survey.

This report explores awareness of, and participation with, gambling marketing and its association with gambling-related knowledge, attitudes, and behaviour among those aged 11-24 years. It focuses on the results of the survey of 11-24-year olds.

The remainder of this chapter outlines the study rationale, along with the research aim and objectives and a summary of the research design. Chapter 2 presents the survey methodology. The main results are covered in Chapter 3 and are summarised and discussed further in Chapter 4. The main conclusions of the survey are outlined in Chapter 5.

1.1 Study background

Marketing is the main way in which gambling companies engage with new and existing customers. The most recent figures for industry expenditure on advertising show that spend on marketing increased 56% between 2014-17 and is now worth £1.5 billion (Regulus Partners 2018). Gambling companies adopt a multidimensional marketing strategy including traditional mass media advertising (such as TV, newspaper and billboards), sponsorship of major sporting events, online advertising (such as targeted communications) and odds advertising (such as financial incentives). Gambling marketing is clearly ubiquitous with 88% of adults in Great Britain having seen/heard gambling adverts or sponsorships at some point in their lives (Gambling Commission 2019a).

Gambling itself is also a popular activity. In 2018 the Gambling Commission found that 46% of the adult population of Great Britain had gambled in the past four weeks (Gambling Commission 2019a). Some research has demonstrated that gambling activities are almost as prevalent among young people as they are among adults, with 48% of 11-16-year olds in Great Britain having gambled at some point in their lives and 36% having gambled in the past four weeks (Gambling Commission 2019b).

With gambling being such a popular activity among all age groups, there is a compelling argument to be made for framing gambling as a public health issue. Whilst a majority can

enjoy the leisure benefits associated with gambling without causing harm, there are a considerable number of people who are problem gamblers. These are people who have experienced adverse consequences as a result of their gambling and who may have lost control of their gambling behaviour. According to the Gambling Commission's 2016 Combined Health Survey, 0.7% of the adult population of Great Britain are problem gamblers and 1.1% are at-risk gamblers who are likely to have experienced some gambling related problems leading to negative consequences (Gambling Commission 2019a).

Gambling Commission research demonstrates that problem gambling is also an issue among young people in Great Britain. However, caution must be taken when comparing the statistics for young people and adults due to the different ways of measuring problem gambling. That said, among 11-16-year olds, 1.7% were found to be problem gamblers in 2018 and 2.7% were considered at risk or problem gambling (Gambling Commission 2019b).

The costs associated with gambling therefore clearly constitute a public health concern, both for the individual and society (Gambling Commission 2018; MacGregor *et al* in press; The Lancet 2017). Whilst it is true that gambling generates significant revenues for both governments and the operators themselves, the costs to the government in health, welfare, housing and criminal justice are considerable. For instance, it is possible to see how the financial difficulties faced by individuals because of their problem gambling can lead to relationship problems, mental health issues, housing problems, work issues and potentially criminal activity. The Institute for Public Policy Research estimates that these interactions with the state cost the UK government between £260 million to £1.16 billion a year (Thorley, Stirling and Huynh 2016).

The legal basis for gambling activities has also been liberalised over the past few decades. The Gambling Act (2005) relaxed advertising regulations, allowing gambling to be marketed across all media and removing many existing restrictions placed on advertising in the industry. As a result, there has been a rapid expansion of opportunities for gambling advertising across different platforms.

This has had particular implications for gambling advertising in sport, with both traditional advertising campaigns before/after matches and in brand awareness such as team shirt sponsorship, which has more than doubled in the UK in the past 10 years (Lopez-Gonzalez and Griffiths 2018).

Mobile apps and social media have also increased the number of ways in which people are exposed to marketing and advertising, aggravating concerns about the effect of marketing, particularly on vulnerable groups and young people (MacGregor *et al* in press, Ipsos MORI 2019; Critchlow *et al* 2019). That said, codes of conduct and extensive frameworks are in place which govern the content, placement and targeting of advertising, including the licence conditions and codes of practice, UK advertising codes and the industry group for socially responsible advertising code. Nevertheless, there are legitimate concerns that the legal framework is unable to keep pace with ever evolving technologies and gambling marketing practices. For instance, in a recent report the National Audit Organisation concluded that the Gambling Commission, the body which regulates commercial gambling in Great Britain, is constrained by factors outside its control, such as inflexible funding and a lack of evidence on how industry developments affect consumers, which will likely be ineffective at addressing changing practices as a result (National Audit Office 2020).

In general, the Gambling Act (2005) represented a Great Britain wide-strategy which 'aimed to permit' gambling and framed the activity as a legitimate leisure pursuit in which individuals

choose to engage. The Act requires the protection of children and other vulnerable groups from being harmed by gambling as a condition which is outlined in the statutory licensing objectives set by the Gambling Commission on behalf of the UK Government. However, concerns remain that this approach is difficult to implement due to the multifaceted nature of gambling-related harm which the 'aimed to permit' strategy may not address.

In summary, all of these developments indicate that the marketing and advertising environment for gambling has altered significantly over the last ten years, with young people in the UK now growing up whilst being widely exposed to gambling marketing. Binde's review in 2014 concluded that there was very little empirical evidence assessing the impacts of gambling advertising and outlined five priority areas for future research in relation to gambling marketing. These were; surveying the volume and forms of gambling advertising; content analysis of various types of gambling advertising; impact of gambling advertising; perceptions of advertising and risk factors for problem gambling. Our study is highly relevant to the priority areas for research and helps address elements of an increasingly urgent evidence and policy gap.

1.2 Study aim, objectives and questions

The overall aim of this research was to understand the content, reach and effect of gambling marketing and advertising on children, young people and vulnerable people. This was to be achieved via three research objectives (RO):

- RO1: Explore whether gambling marketing and advertising influences children and young people's attitudes towards gambling, in what ways and the impact of this.
- RO2: Examine the tone and content of gambling marketing and advertising across all media, including social media affiliates, and explore the potential impact of this on children, young people and vulnerable people.
- RO3: Identify specific themes and features of gambling advertising that children, young people and vulnerable groups are particularly susceptible to.

These ROs were further defined through the following eight research questions (RQ), grouped below under three headings:

Format and content:

- RQ1) Focusing on marketing and advertising across all media, where and how often does gambling advertising occur?
- RQ2) What are the main themes and features used to market and advertise gambling products?
- RQ3) What are the specific themes or features of gambling marketing and advertising which children, young people and vulnerable groups are particularly susceptible to?

Advertising impacts:

- RQ4) To what extent are children, young people and vulnerable groups exposed to gambling marketing and advertising and what is the impact of this on attitudes, knowledge and gambling behaviour?
- RQ5) How does the impact of gambling advertising or marketing vary by different mediums?
- RQ6) How does the influence of marketing and advertising compare with other actors, such as parental gambling, parental facilitation, and moral or religious beliefs?

Online advertising and social media:

- RQ7) To what extent are children and young people exposed to online advertising in non-age restricted online environments, and on what channel or platform are they most likely to encounter gambling marketing and advertising?
- RQ8) To what extent does seeing an online advertisement, promotion or offer lead to people clicking through to an online gambling website to place a bet or spend money on gambling?

The survey of 11-24 year olds component mainly addresses research questions 1, 4, 6 and 7. The other research questions, and different study components, are brought together in the overarching synthesis reports (Ipsos Mori 2019).

It is important to note that the following definitions were used in the original commissioning documents prepared by GambleAware:

- Those aged 11-17 years: children and young people
- Those aged 18-24 years: young adults.

These definitions are the ones used by ScotCen within this report, and it should be noted that most analyses by age compared the results of children and young people (aged 11-17 years) with young adults (aged 18-24 years).

The minimum legal age for gambling in the UK of 18 years applies to adult gaming centres, betting shops, bingo halls, casinos, racetracks and online gambling. Exceptions to this are the National Lottery, lotteries and football pools where the legal minimum age is 16. Activities such as gaming machines, coin pushers, teddy grabbers, gambling with family/friends and some lower stakes fruit machines in family entertainment centres and amusement arcades do not have a minimum legal age. As such, different gambling activities covered in the survey may not be legal for those aged under 16 or 18 years.

2 Methodology

2.1 Summary

The cross-sectional survey of those aged 11-24 years in England, Scotland and Wales adopted an initial combined postal and online approach, with sample members invited to respond either via a paper questionnaire or web survey. This was followed by a telephone survey of eligible participants in the non-responding households.

All households in the survey were sent invitation letters and paper questionnaires (n=6125) on 21st May 2019. The letters asked those aged 11-24 in the household to either complete and return the paper questionnaire or complete the survey online via the links and login details provided. A further copy of the postal questionnaire was sent to all households after two weeks. In addition, those households which had provided email addresses also received a direct email invitation with embedded links (up to four unique codes per household) to more easily enable online completion of the survey.

Non-responding households which had provided telephone numbers (n=4155) were contacted from 26th July 2019 onwards. Each number was contacted an average of 11 times over a seven-week period. Where contact was made, a telephone interview was attempted. However, during these calls, individuals were also advised they could still complete the survey by post or online if they preferred, and the telephone interviewer had the ability to send the unique online link to a different email address if requested.

The questionnaire was developed with reference to relevant literature and similar work on the impact of alcohol marketing on young people, and included both questions used in other relevant surveys on gambling and the impact of alcohol marketing, as well as bespoke questions.

2.2 Ethics

Ethical approval for the survey and qualitative research was granted by NatCen Research Ethics Committee in April 2018. A REC amendment covering the change of survey mode was approved in April 2019.

2.3 Sample

ScotCen contacted the Scottish Government and the Department of Work and Pensions (DWP) in order to get access to the Scottish Household Survey (SHS) and Family Resources Survey (FRS) participant datasets. These nationally representative surveys ask how many people, and of what age, are living in each participating household, and also ask respondents if they consent to be recontacted to take part in future research projects. As the sample for our gambling survey is drawn from nationally representative surveys, it is possible to weight the results so that they are representative of those aged 11-24 in England, Scotland and Wales. This is a major strength of this study.

It was possible to select a sample from both surveys in which participating households contained at least one person in the 11-24 age range. ScotCen entered into data sharing agreements with the Scottish Government and DWP and received information on 3410 households in Scotland which had been part of SHS (2014-16) and 2835 households from FRS covering England and Wales (FRS 2017). About 52% of SHS respondents provided an email address and over 98% provided at least one telephone number. Of the FRS household sample, 36% provided an email address and 76% at least one telephone number.

The questionnaire was piloted on a sample of 120 respondents from SHS only due to delays in accessing the FRS sample.

2.4 Recruitment and fieldwork

The sample data provided included the contact details for only one named householder. It is important to note that ScotCen did not have access to the age of the named household contact. Thus, in some cases, the named contact would have been aged between 11 and 24 but, in other cases, the target respondent(s) was/were the child(ren) or young people in the care of the named household contact. In such cases, the named household contact was invited to act as a gatekeeper and to pass on information about the survey to any eligible young people living in their household. All individuals in sampled households within the target age range were eligible and encouraged to participate in the survey.

All eligible households were invited to take part by post and, where possible, by email. The sequence of mailings is given in Table 2-a.

Table 2-a - Details of survey recruitment mailings

	Paper	Email	Mailing date
Mailing 1	Invitation letter, paper questionnaire and instructions to complete online	Email invitation	21/05/19
Mailing 2	Reminder letter, paper questionnaire and instructions to complete online	Email reminder 1	04/06/19
Mailing 3		Email reminder 2	18/06/19

Postal mailings contained an invitation letter giving full details of the survey, a paper copy of the questionnaire, a freepost return envelope and instructions on how to complete the survey online if they preferred. Additional paper copies of the questionnaire were available on request. Emails included an introduction to the survey, details on how to find out more information (via a dedicated study webpage and email address) and four unique URLs which respondents could use to access the survey. Online respondents were required to set up a password on accessing the survey so that their responses could not be seen by anyone who had access to the unique URLs.

Due to the timing of the project fieldwork, all households received the invite and reminder postal mailing. However, only those households from which no responses had been received were sent the email reminders.

Five weeks following the initial mailing, non-responding households for which a telephone number was provided were contacted by telephone interviewers and invited to complete the survey by phone. The telephone interviewers attempted to contact the householders on average 11 times and phoned on different days and times in order to maximise the chance of success.

A £5 high street shopping voucher was offered for every completed survey. These were posted to respondents on receipt of their completed survey.

2.5 Response rate

It is very difficult to calculate an accurate response rate for the survey for a number of reasons:

- Due to the timelag between respondents participating in the original SHS and FRS surveys and then being asked to complete or pass on the gambling survey, the contact details for potential respondents was not always up-to-date. As not everyone will have

responded to say that they received a postal or email survey in error, it is difficult to know how many of the issued sample were indeed eligible. Based on response rates to previous surveys, we would estimate that approximately 10% of households in the sampling frame may have moved on from their address or changed their details in the period following taking part in FRS or SHS.

- It was not possible to use email addresses and telephone contact numbers for those who did not provide them during the SHS and FRS surveys.
- In the instances in which the main SHS and FRS contact was a gatekeeper, it is not possible to know how many passed details of the survey on to those aged 11-24 within the household. Indeed, the survey pilot demonstrated that parents/carers were not always willing to pass on questionnaires as they thought that their children had no or little knowledge of, or interest in, gambling.
- The telephone survey estimated that 50% of those households they contacted did not have anyone eligible to complete the survey within them and a further 20% could not be contacted using the telephone number provided in the sample.

As a result, our mail-out to 6125 addresses resulted in 1091 responses from those aged 11-24, from 912 households. Given the issues outlined above, the household response rate is likely to be approximately 33%. However, as the samples were generated from existing nationally representative surveys, it was possible to weight the achieved sample to the population of those aged 11-24 in England, Scotland and Wales.

2.6 Weighting

Survey weights were calculated and applied to address non-response bias and ensure that the profile of the weighted sample matched the target population profile in terms of age, sex and region. All respondents to the gambling survey came from households that had previously participated in either the Scottish Household Survey (SHS) or the Family Resources Survey (FRS). For each of these surveys, household weights are provided to account for each responding household's composition relative to the population of interest. These were, in turn, used to account for those factors which may affect the likelihood of a household responding to either the SHS or the FRS.

The full weighting note is included in Appendix 7.2.

2.7 Analysis

A series of derived variables were constructed for use in the analysis. Full details of these variables are given in Appendix 7.3.

Initial analysis explored overall figures on awareness of, attitudes towards and engagement in gambling marketing, views of and participation in gambling activities and friends' and family members' views of gambling.

Further analyses examined how these initial results varied by age group, sex, area deprivation (using the relevant Index of Multiple Deprivation – IMD) and, where relevant, gambling status.

Multivariable analysis (logistic regression) was used to examine the association between factors such as awareness of gambling advertising, engagement with gambling advertising, family and peer views of gambling and gambling behaviour, and key outcomes of interest – i.e. gambling susceptibility amongst non-current gamblers and current gambling behaviour – after controlling for key demographic, socio-economic and other factors of potential influence. Odds ratios are presented in the regression tables.

Significance testing at $P<0.001$, $P<0.01$ and $P<0.05$ are presented in the results section, where appropriate.

3 Results

This chapter describes the results of the analyses carried out in order to answer the research questions. Details of how all variables have been derived are outlined below and in Appendix 7.3.

Thereafter, the first section gives a description of the demographic profile of the sample. Next, gambling activity of 11-24 year olds is described in respect to gambling prevalence, gambling activities in which 11-24 year olds most commonly take part, risk of problem gambling and susceptibility to future gambling. Section 3.4 addresses motivations and outcome expectancies for gambling. Section 3.5 explores young people's exposure to gambling marketing including their attitudes towards marketing in general and gambling marketing in particular, their awareness of gambling marketing, brand awareness and engagement with gambling marketing. Section 3.6 addresses the influences of peers and family on gambling behaviour and outcome expectancies. Section 3.7 describes the relative influences of these different factors on gambling behaviour and susceptibility (regression models).

3.1 Glossary

Current gambler - Respondents were asked how often they took part in gambling activities. Those who reported that they never usually took part in any gambling activities were classified as 'not current gamblers'. All other responses (ranging from once a month or less to every day) were considered to be current gamblers. Respondents did not have to have spent their own money on gambling activities to be classified as current gamblers.

Ever gambler - Respondents were asked what age they were when they had first spent their own money on gambling. Those who responded that they had never spent their own money on gambling were classed as "never gamblers". Respondents who had spent their own money on gambling at any age were classed as "ever gamblers".

Susceptibility to gambling - All respondents were asked whether they thought that they would spend money on gambling in the next year. Those who were not current gamblers were categorised as susceptible to gambling within the next year if they selected the answer 'definitely yes', 'probably yes' and 'probably not', and not susceptible if they opted for 'definitely not'. This approach to classifying susceptibility has also been used in relation to youth susceptibility to consume alcohol (Critchlow et al, 2019a).

Risk of problem gambling - Problem gambling among adolescents is commonly measured using the DSM-IV-MR-J 10-item scale. Due to limitations of the length of the questionnaire, two items from the DSM-IV-MR-J relating to preoccupation and loss of control were used in this survey to give an indication of the risk of problem gambling among current gamblers. These were selected after discussion within the research team. Although it would have been more robust to use the full scale, these two were selected as being particularly likely to be experienced across the 11-24 age range. For example, it was not appropriate to include items which referred to school (e.g. missing school, spending school dinner money). Table 3-a shows the questions used and the way in which responses were classified to give an indication of being at risk of problem gambling among current gamblers:

Table 3-a - Categorisation of DSM-IV-MR-J item responses to give risk of problem gambling

Risk of problem gambling	In the past year, how often have you found yourself thinking about or planning to gamble?	In the past year, have you spent much more that you planned to on gambling?
High risk	Often	Often
Low risk	Often	Sometimes
Low risk	Sometimes	Often
Low risk	Sometimes	Sometimes
No risk	Once or twice/ Never	Once or twice/Never

Exposure to gambling marketing - Respondents were asked to select all the ways in which they had seen or heard gambling being advertised in the last month from a list of 19 items including "None of the above" (listed in Appendix 7.1). Respondents who did not select any of the items were omitted from analysis. The total number of types of gambling advertising seen or heard by each person was calculated to give the exposure to gambling marketing. Exposure is either given as the mean number of items of gambling advertising seen, or as categories based on the tertile splits of responses: Low (0-5), Average (6-8), High (9-17).

Engagement with gambling marketing - Respondents were asked to select all the ways with which they had engaged with gambling marketing from a list of 9 items including "None of the above" (listed in Appendix 7.1). The list of items was developed from a similar approach used in assessing the impact of participating in alcohol marketing on young people (Critchlow et al, 2019c) and adapted to reflect findings on advertising spend and exposure (Ipsos MORI, 2019). The total number of types of gambling advertising engaged with was calculated to give a count of the number of types of gambling advertising with which the respondent had engaged. Gambling advertising engagement is either given as mean number of types of gambling advertising engaged with or as categories: None, One, Two or more. Given the very low numbers of respondents engaging with gambling marketing and the large proportion of respondents selecting "none of the above", these categories are not based on tertile splits.

Attitudes towards advertising and gambling advertising - Respondents were asked about their views on advertising in general and gambling advertising specifically using a 5-point Likert scale ranging from "I like adverts a lot" to "I dislike adverts a lot". In each case, the two positive categories (I like adverts a lot/a little) were combined to give overall positive views of advertising/gambling advertising, and the neutral category (I neither like nor dislike adverts) and negative categories (I dislike adverts a lot/a little) were combined to give overall neutral and negative views of advertising, as is the case in previous research into alcohol and tobacco marketing (Critchlow et al, 2019a).

Gambling Outcomes Expectancies Scale (GOES) - The questionnaire (see Appendix 7.1) included an adapted version of the Gambling Outcome Expectancies Scale to explore respondents' perceptions of the outcomes of gambling behaviour (Flack and Morris, 2015; Flack and Morris, 2016). GOES was designed to assess interrelated gambling motivations. The adapted GOES scale comprises of 18 agreement statements which are split into five subscales; gambling for excitement (statements 1-3), escape (statements 4-7), ego enhancement (statements 8-11), socialisation (statements 12-14), and money (statements 15-18), and

measures beliefs about the perceived outcomes of gambling, independent of gambling frequency.

The scale was adapted to use a 5 item Likert scale from strongly agree to strongly disagree with a neutral mid-point. Respondents were asked to rate their agreement with each statement and responses were scored (strongly agree=5, strongly disagree=1). An average score was calculated for each subscale, with any response above 3 (3 itself is neutral) meaning that the young people were more likely to agree with the statement, and any score below 3 indicating overall disagreement.

Peer and carer gambling status - Respondents were asked how often their female carer, male carer and closest friend took part in gambling activities. Where it was reported that these people never took part in any gambling activities, respondents were classified as "not current gamblers". For all other responses (ranging from once a month or less to every day), these people were considered to be current gamblers.

Perceived carer gambling acceptability - Respondents were also asked if they thought their female carer and male carer would find it to be acceptable if the respondent spent money on gambling. In each case, the two answer options relating to gambling being considered acceptable (totally acceptable/somewhat acceptable) were combined to give an overall acceptable category, and the neutral (neither acceptable nor unacceptable) and two negative answer options (totally unacceptable/somewhat unacceptable) were combined to give an overall not acceptable and neutral category.

Young people - The survey used the following definitions of young people, as per the original commissioning documents prepared by GambleAware: those aged 11-17 are considered children and young people and those aged 18-24 young adults.

3.2 Sample characteristics

Table 3-b shows full characteristics of the weighted and unweighted sample. The weighted sample is designed to be representative of 11-24 year olds in England, Scotland and Wales. After weighting, the sample was 51% male and 49% female. Forty-seven percent of the sample were children and young people aged 11 to 17 and 53% were young adults aged between 18 and 24. The mean age was 17.53 (SD=3.95). Most of the sample was White British (81%) and living in England (85%). Just over one-half (51%) of the respondents had spent their own money on gambling ("ever gamblers"), and 42% were categorised as current gamblers. Forty percent of those aged 11-24 were categorised as being susceptible to gambling.

Table 3-b - Sample characteristics of weighted and unweighted sample

	Unweighted		***Weighted***	
Variable	%	n	%	n
Age				
11-17	63.2	676	47.4	511
18-24	36.8	394	52.6	567
Not reported	-	21	-	12
Gender				
Male	46.4	485	51.3	530
Female	53.6	560	48.7	504
Not reported	-	46	-	57
Ethnicity				
White British	85.6	906	80.7	858
All other ethnicities	14.4	152	19.3	205
Not reported	-	33	-	27
Country				
England	46.9	506	85.4	927
Scotland	49.8	538	8.0	87
Wales	3.1	34	6.3	68
Other[a]	[b]	2	[b]	3
Not reported	-	11	-	8
IMD Quintile				
1 (most deprived)	11.8	128	15.6	170
2	17.1	186	18.4	201
3	22.5	245	22.0	240
4	22.5	245	18.3	199
5 (least deprived)	26.2	285	25.7	280
Not available	-	2	-	2
Ever gambled status [c]				
Never gambled	53.5	580	49.0	532
Ever gambled	46.5	504	51.0	554
Not reported	-	7	-	6
Current gambling status [d]				
Not current gambler	64.1	696	58.4	634
Current gambler	35.9	390	41.6	452
Not reported	-	5	-	5
Susceptibility to gambling [e,f]				
Susceptible to gambling	44.0	274	40.4	229
Not susceptible to gambling	56.0	349	59.6	338
Missing values	-	73	-	67

[a] Respondents who were living in England, Scotland or Wales when they took part in FRS or SHS but had subsequently moved to another country
[b] Percentage rounds to less than 1
[c] Never gambled = Has never spent their own money on gambling
[d] Not current gambler = Never usually takes part in gambling activities
[e] Base = all respondents who are not current gamblers
[f] Not susceptible to gambling = Responded that they will definitely not spend money on gambling in the next year

3.3 Gambling activity

In order to understand the impact of gambling marketing, it is important to gain a clear picture of the ways in which those aged 11-24 are engaging in gambling, and the frequency of their gambling activities. This section describes the survey findings related to gambling activity and mode. Risk of problem gambling and susceptibility to future gambling are also discussed.

3.3.1 Prevalence of gambling among children, young people and young adults

Respondents who reported that they never usually took part in any gambling activities were classified as 'not current gamblers'. All other responses (ranging from once a month or less to every day) were considered to be current gamblers. Table 3-c shows that, overall, 42% of the total weighted sample were current gamblers. As might be expected, this was significantly higher in those 18-24 (60%) compared with those aged 11-17 (23%).

Table 3-c - Rates of current gambling by age, gender, ethnicity, country and IMD

	% current gambler	p value	weighted n
Total	41.6		1086
Age		<0.001	
11-17	22.5		510
18-24	59.8		563
Gender		n.s.	
Male	47.5		530
Female	38.6		499
Ethnicity		n.s.	
White British	42.0		853
All other ethnicities	42.8		205
Country lived in		n.s.	
England	42.1		922
Scotland	43.5		86
Wales	34.4		68
Other	100.0		3
IMD Quintile		n.s.	
1 (most deprived)	51.4		169
2	41.5		201
3	35.0		240
4	40.9		195
5 (least deprived)	42.2		280

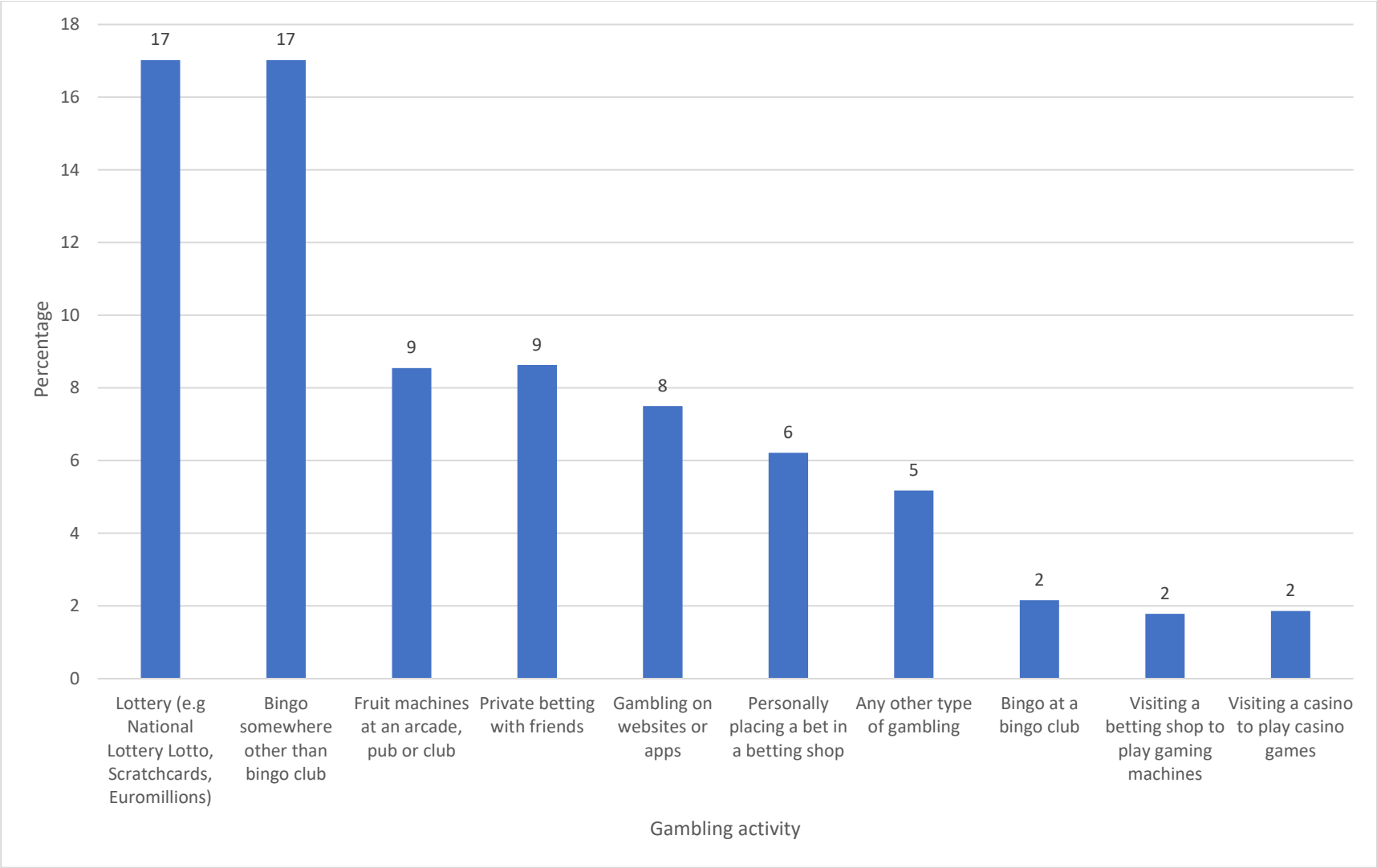
The proportion of those aged 11-24 who had ever spent their own money on a gambling activity was slightly higher. Fifty-one percent reported that they were 'ever gamblers' – they had spent their own money on gambling (Table 3-d). Again, the proportion of those who had ever spent their own money on gambling was higher among young adults aged 18 to 24 (68%) than among children and young people aged 11-17 (33%) ($p < 0.001$). Fifty-six percent of males were ever gamblers compared with 47% of females ($p=0.08$).

Table 3-d – Percentage of 11-24 year olds who have ever spent their own money on gambling, by age and gender

	% ever gambler		**Weighted n**
	Male	Female	
Total	55.6	47.3	1085
11-17	35.7	29.2	510
18-24	73.5	64.1	563

Figure 3-a shows the proportion of the respondents who reported spending their own money in the last month on each of ten types of gambling activity specified in the survey. Those aged 11-24 most commonly indicated that they had not taken part in any gambling activities in the previous month (66%). The proportion who had not taken part in any of the activities listed was higher in 11-17 year olds (79%) than in 18-24 year olds (54%). The most common activities in which those aged 11-24 had spent their own money were taking part in a lottery (including scratch cards: 17%), playing bingo at somewhere other than a bingo club (17%) and playing fruit machines in an arcade, pub or club (8%).

Figure 3-a - Percentage of 11-24 year olds who have spent their own money on each gambling activity in the last month (weighted n=1076; unweighted n= 1075)



Due to the differing age restrictions on gambling activities[1], it is interesting to explore the types of gambling activities taken part in by those who are below the legal age limit. Due to the small numbers of respondents[2] who spent their own money on at least one gambling activity in the last month within each age group, the figures in Table 3-e are based on unweighted data and should be interpreted with caution[3].

Table 3-e – Percentage of respondents who spent their own money on each type of gambling activity in the last month

	% in each age group who spent their own money on each activity in the last month			
	11-15	16-17	18-24	All age groups
Taking part in a lottery	17.9	55.1	59.9	46.9
Visiting a betting shop	8.4	6.1	17.6	13.2
Gambling websites or apps	3.2	6.1	31.9	19.6
Fruit machines	43.2	26.5	19.8	27.6
Private betting with friends	35.8	30.6	19.8	26.1
Bingo at a bingo club	4.2	4.1	8.2	6.4
Bingo somewhere other than a club	17.9	55.1	59.9	46.9
Visiting a casino to play casino games	1.1	0.0	5.5	3.4
Visiting a betting shop to play gambling machines	1.1	0.0	3.8	2.5
Unweighted base [a]	95	49	182	326

[a] Base = All respondents who spent their own money on at least one of the listed gambling activities in the last month

Non-age restricted activities such as some types of fruit machines (44%), private betting with friends (36%) and playing bingo at somewhere other than a bingo club (e.g. social club, holiday park) (18%) were the most commonly reported gambling activities among those aged 11 to 15 who had spent their own money on gambling (unweighted base: n=95). However, a small proportion of those under the legal age limit reported that they had spent their own money on age restricted activities such as taking part in a lottery (18%) or visiting a betting shop (8%). It must also be recognised that we cannot be certain that all of those, for example, stating that they were playing fruit machines or bingo were doing so legally.

In the 16 to 17 age group (unweighted base: n=49), taking part in a lottery (55%) and bingo at somewhere other than a bingo club (55%) were the most commonly reported gambling activities. Again, a small proportion of those under the legal age limit reported that they had spent their own money on age restricted activities such as visiting a betting shop (6%) or using a gambling website or app (6%). The proportion of those young adults (aged 18-24; unweighted base: n=182) who spent their own money on age-restricted gambling activities such as taking part in a lottery (60%), using a gambling website or app (32%) or visiting a betting shop (18%) is higher than among those who are aged below the legal age limit.

[1] The minimum legal age for gambling in the UK of 18 years old applies to adult gaming centres, betting shops, bingo halls, casinos, racetracks and online gambling. Exceptions to this are the National Lottery, lotteries and football pools where the legal age is 16. Activities such as gaming machines, coin pushers, teddy grabbers and some lower stakes fruit machines in family entertainment centres and amusement arcades do not have a minimum legal age.
[2] Base sizes of 50 and under, representing less than 5% of the sample, are classed as small bases
[3] The small bases in this table, particularly for 16-17 year olds means that robust conclusions cannot be drawn about the differences in gambling activities in these groups. E.g. although 55% of 16-17 year olds report having spent their own money on bingo, as an unweighted proportion of only 49 young people this corresponds to only 27 people. In addition, these figures are not weighted and therefore cannot be said to be representative all 16-17 year olds.

The higher percentage of young people and adults taking part in a lottery over the age of 16 and visiting a betting shop or using a gambling website or app over the age of 18 may be plausibly explained by the fact that those in the older age group were legally permitted to take part in these activities. However, a small proportion of young people reported gambling on activities when they are below the legal age limit, and it would appear that in some cases children and young people are able to participate in gambling activities below the minimum legal participating age.

3.3.2 Risk of problem gambling

Table 3-f shows that the prevalence of being at high risk of problem gambling amongst those aged 11-24 was low, with 2.2% and 5.6% of current gamblers being classed as being at high risk and low risk of problem gambling respectively[4]. As 42% of the full sample reported being current gamblers, this means that 0.9% of the sample overall would be categorised as being at high risk of problem gambling. Due to the relatively low percentage of respondents who were classified as at higher and lower risk of problem gambling, it was not possible to carry out detailed sub-group analysis.

Table 3-f Risk of problem gambling among current gamblers

			Current gambler
Risk of problem gambling	higher risk	%	2.2
	lower risk	%	5.6
	no risk	%	93.1
Weighted base [a]			452

[a] Base = all current gamblers

[4] Two items from the DSM-IV-MR-J relating to preoccupation and loss of control were used in this survey to give an indication of the risk of problem gambling among current gamblers (no risk/low risk/high risk)

3.3.3 Susceptibility to spending money on gambling in the next year

Table 3-g shows that, overall, 40% of those who were not current gamblers were susceptible to gambling. This did not differ significantly by age, gender, ethnicity, IMD and location.

Table 3-g - Susceptibility to spending money on gambling in the next year by age and gender

	% susceptible to gambling	p value	weighted n
Total	40.4		567
Age		n.s.	
11-17	38.2		353
18-24	43.4		203
Gender		n.s.	
Male	38.6		252
Female	42.9		277
Ethnicity		n.s.	
White British	43.1		445
All other ethnicities	29.6		106
Country lived in		n.s.	
England	38.3		477
Scotland	48.2		43
Wales	52.3		40
IMD Quintile		n.s.	
1 (most deprived)	40.5		70
2	39.8		100
3	36.1		146
4	49.0		109
5 (least deprived)	38.9		140

3.4 Outcome expectancies for gambling

Views of and attitudes towards gambling were measured using an adapted version of the Gambling Outcomes Expectancies Scale (GOES), as described in Appendix 7.3. GOES is composed of five subscales which assess expectations of gambling outcomes in terms of excitement, escape, ego enhancement, money and sociability. Respondents were asked to indicate the extent to which they agreed or disagreed with each of the 18 statements on a 5-point Likert scale. An average score was calculated for each subscale, with higher scores meaning that those aged 11-24 were more likely to agree with the statement. Table 3-h shows that overall, 11-24 year olds had average scores which indicated that they disagreed with the statements which made up all five subscales. Disagreement was least strong for the subscales relating to excitement and money, meaning that, overall, those aged 11-24 were more likely to disagree less strongly with (or feel more neutral towards) statements that indicated that gambling could provide both a source of excitement and a financial windfall. In terms of individual statements, highest level of agreement was observed in the following: gambling is a rush (46%), gambling provides a good chance to win big with small money (40%) and gambling is a way to make big money (39%). Lowest agreement was seen with items relating to gambling being the best way to relax (3%) and a way to help clear the mind (7%). No significant difference was seen in mean GOES scores by age or gender. Current gamblers had significantly higher mean scores in the excitement and money subscales compared with those who were not current gamblers, and those aged 11-24 who were susceptible to gambling had

significantly higher mean scores than those who were not susceptible in all the GOES subscales.

Table 3-h - Mean scores for Gambling Outcome Expectancies Scale Subscales by age, gender, current gambling status and susceptibility to gambling

	Mean Gambling Outcome Expectancies Scale /5					Weighted n
	Excitement	Escape	Ego enhancement	Money	Sociability	
Total	2.8	1.8	2.1	2.7	2.5	1053[a]
Age						
11-17	2.7	1.8	2.1	2.7	2.6	490
18-24	2.8	1.7	2.1	2.8	2.5	557
Gender						
Male	2.8	1.8	2.1	2.9	2.5	517
Female	2.7	1.8	2.1	2.7	2.6	486
Current gambler status	*			**		
Current gambler	2.9	1.8	2.2	3.2	2.5	444
Not current gambler	2.6	1.7	2.0	2.4	2.5	604
Susceptibility to gambling[b]	**	*	**	**	**	
Susceptible	2.9	1.9	2.3	2.7	2.8	218
Not susceptible	2.5	1.7	1.8	2.2	2.4	323

* $p<0.05$
** $p<0.001$
[a] Base = All respondents who answered all items on the Gambling Outcome Expectancies Scale
[b] Base = all respondents who are not current gamblers

3.5 Gambling marketing

The previous section explored children's, young people's and young adults' views of and attitudes towards gambling, their gambling practices as well as their risk of problem gambling and susceptibility to gamble in the future. Having examined those aged 11-24's engagement with gambling activities, this section will focus on the multifaceted factors which affect their gambling practices. In particular, this section will examine exposure to and engagement with gambling marketing, brand awareness, and investigate the complex personal, behavioural and contextual characteristics which influence these.

3.5.1 Attitudes towards advertising and gambling advertising

Table 3-i shows that, overall, a majority of respondents felt negative towards both marketing in general and gambling marketing specifically. Only 17% of those aged 11-24 said that they like adverts a little or a lot, and an even smaller proportion (5%) said that they liked gambling marketing a little or a lot.

Table 3-i - Percentage of young people aged 11-24 who hold positive, neutral and negative views of advertising and gambling advertising

	Positive %	Neutral %	Negative %	Weighted n
Advertising	16.8	23.7	59.5	1083
Gambling advertising	4.6	29.3	66.1	1083

3.5.2 Awareness of gambling marketing

The survey asked those aged 11-24 to select all of the ways they had been aware of gambling being promoted in the last month from a list of 17 types of gambling marketing.

Figure 3-b illustrates the types of gambling marketing 11-24 year olds had been aware of in the past month. The most commonly cited type of marketing that those aged 11-24 were aware of was seeing gambling adverts on television (85%). Seeing adverts in shops, window displays or places in shops where you can gamble was the next most commonly reported (70%). Over half of the respondents were aware of gambling marketing on social media, pop-up adverts on websites and sports marketing. Only 4% of those aged 11-24 reported having no awareness of any types of gambling marketing in the previous month.

Figure 3-b - Percentage of 11-24 year olds who had seen each type of gambling marketing in the last month (weighted n = 1079)

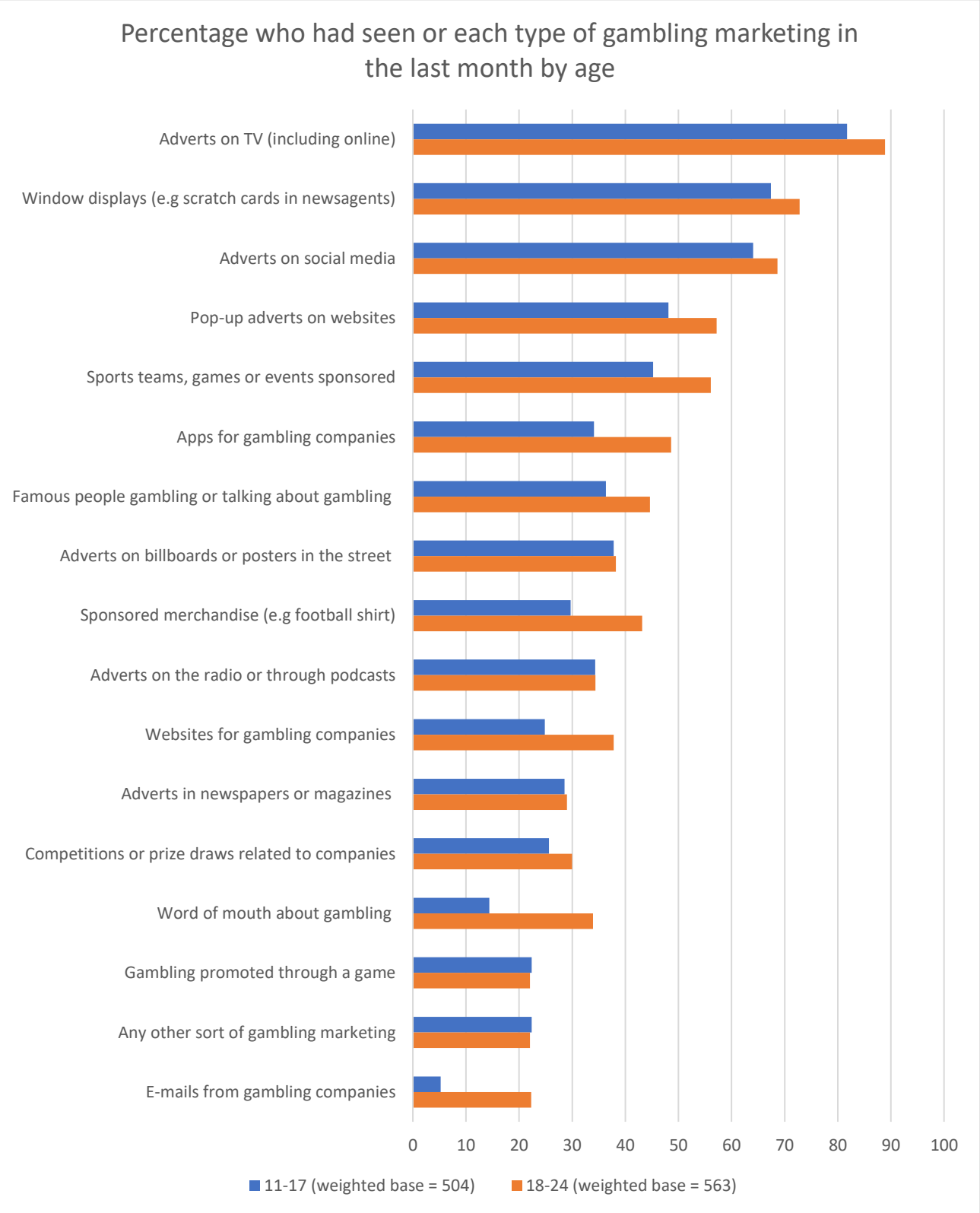


Table 3-j shows that mean number of types of marketing observed across the sample during the previous month was 6.5 types of gambling marketing. Those aged 11-24 who reported having gambled in the past month reported having seen a significantly higher number of adverts than their counterparts who had not (mean=7.9 types of gambling marketing), as did young adults (mean=7.3) and male respondents (mean=7.2). Those susceptible to gambling in the next year also reported significantly higher exposure to gambling marketing.

Table 3-j - Mean awareness of gambling marketing by age, gender, current gambling status and susceptibility to gambling

Variable	*Mean*	*P value*	*weighted n*
Total	6.5		1056
Gender		<0.05	
Male	7.2		520
Female	6.0		485
Age		<0.001	
11-17	5.9		487
18-24	7.3		557
Current gambling status		<0.001	
Current gambler	7.9		449
Not current gambler	5.7		605
Susceptibility to gambling[a]		<0.001	
Susceptible	6.8		227
Non-susceptible	5.0		321

[a] Base = all respondents who are not current gamblers

3.5.3 Engagement with gambling marketing

Those aged 11-24 years reported being exposed to and aware of a wide range of gambling marketing. However, it was also important to explore whether they also actively participated with any of the marketing activities. Respondents were asked to select all the ways in which they had engaged with gambling marketing in the past month from a list of eight options, ranging from attending an event sponsored by a gambling company to liking a post on social media (Figure 3-c).

As Figure 3-c illustrates, the most common type of marketing those aged 11-24 engaged with in the previous month was discussing a gambling company or marketing with a friend or family member. Nine percent of respondents owned or wore merchandise sponsored by a gambling company, such as a football shirt. However, 67% said that they had not engaged with gambling marketing in any way in the previous month.

Figure 3-c - Percentage of those aged 11-24 who engaged with each type of gambling marketing in the last month

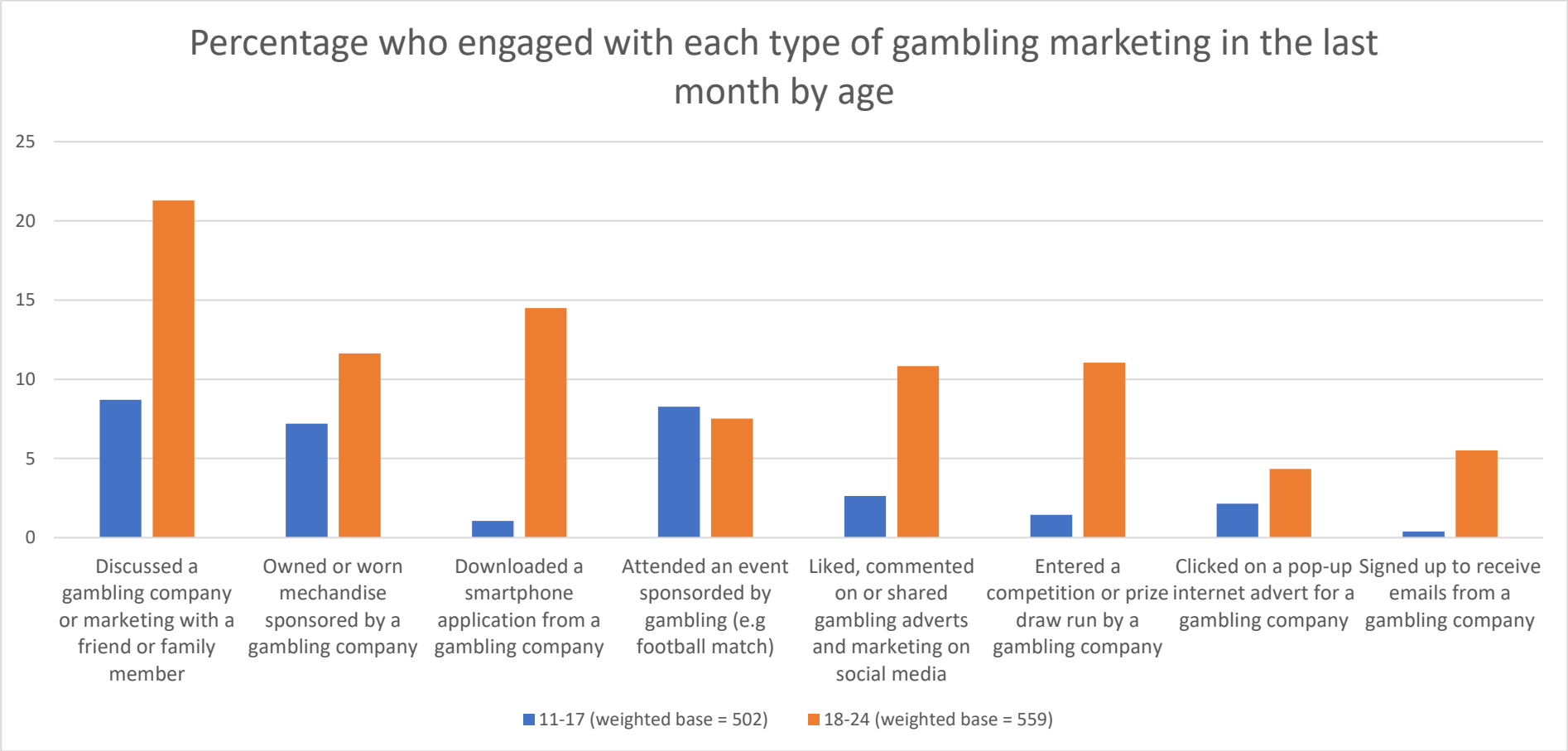


Table 3-k shows that those aged 11-24 engaged with on average fewer than one of the eight options outlined in Figure 3-c in the previous month. Participation in gambling marketing was highest among those who were current gamblers, the only group to engage with an average of more than one type in a month, and among young adults (18-24-year olds).

Table 3-k – Mean number of types of gambling marketing participated in by age, gender, current gambling status and susceptibility to gambling

Variable	*mean*	*P value*	*weighted n*
Total	0.6		1073
Age		<0.001	
11-17	0.3		502
18-24	0.9		559
Gender		<0.05	
Male	0.8		526
Female	0.4		497
Current gambling status		<0.001	
Current gambler	1.1		449
Non-gambler	0.2		619
Susceptibility to gambling[a]		<0.001	
Susceptible	0.4		227
Non-susceptible	0.1		335

[a] Base = all respondents who are not current gamblers

3.5.4 Brand awareness

The survey also assessed brand awareness by asking those aged 11-24 years to select brand names they had seen or heard of from a list of the ten companies with the greatest advertising spend in the month prior to the survey launch plus a dummy brand, Cogibet, to test reliability. Less than 3% (n=28) of respondents reported having heard about the dummy brand, suggesting that this is a reliable measure of their awareness of the brands. As can be seen in Table 3-l, respondents had heard of more than seven of the ten brands on average (mean=7.3). Brand awareness was highest among those who had engaged with two or more types of gambling marketing in the past month (mean=8.9), and those who had a high level of awareness of gambling advertising (mean=8.7). In addition, those who were current gamblers were able to recall significantly more brands (mean=8.3), as were those who were more susceptible to gambling (mean=7.1) and young men (mean=7.7).

Table 3-l – Mean brand awareness by age, gender, current gambling status and susceptibility to gambling

Variable	*mean*	*P value*	*weighted n*
Total	7.3		1080
Age		<0.001	
11-17	6.5		505
18-24	8.0		563
Gender		<0.001	
Male	7.7		527
Female	6.8		501
Current gambling status		<0.001	
Current gambler	8.3		452
Non-gambler	6.5		623
Marketing awareness		<0.001	
Low (0-5)	6.1		439
Medium (6-8)	7.6		297
High (9-17)	8.7		320
Marketing engagement		<0.001	
None	6.7		717
One	8.1		208
Two or more	8.9		148
Susceptibility to gambling[a]		<0.001	
Susceptible	7.1		229
Non-susceptible	6.0		338

[a] Base = all respondents who are not current gamblers

3.5.5 Age and health warnings

The 11-24 year olds were also asked about whether they had seen any information in gambling marketing that suggests you need to be a certain age to gamble. As can be seen in Table 3-m, a majority of those aged 11-24 (53%) had observed such age warnings. Among those who had a greater awareness of gambling marketing and among those who had participated in two or more marketing activities, awareness of age warnings was 70% and 72% respectively. Having seen age warnings was significantly higher among males (58%) and current gamblers (64%). Only 8% of those who engaged with gambling marketing two or more times during the previous month were not aware of the warnings.

Table 3-m – Percentage of those aged 11-24 who recall having seen information in gambling marketing which suggested that they had to be a certain age to gamble

	Age warnings				
Variable	% seen	% not seen	% not sure	P value	weighted n
Total	53.5	26.6	19.9		1076
Age				n.s.	1076
11-17	56.6	23.1	20.3		504
18-24	50.6	29.6	19.8		563
Gender				<0.05	
Male	58.4	22.0	19.6		526
Female	48.4	31.8	19.9		501
Current gambling status				<0.001	
Current gambler	64.4	16.6	19.0		452
Non-gambler	45.8	33.5	20.7		619
Marketing awareness				<0.001	
Low (0-5)	40.7	33.3	26.0		439
Average (6-8)	57.2	25.2	17.7		297
High (9-17)	70.2	15.7	14.2		317
Marketing engagement				<0.05	
None	47.3	31.2	21.4		717
One	61.0	24.1	14.9		205
Two or more	72.3	8.5	19.2		148
Susceptibility to gambling[a]				n.s.	619
Susceptible	47.4	31.2	21.5		226
Non-susceptible	43.0	36.5	20.6		337

[a] Base = all respondents who are not current gamblers

The survey also asked if the children, young people and young adults had seen any information, health messages or warnings in gambling marketing in the past month. It should be noted that awareness of the health warnings was consistently lower than awareness of age-related warnings among the respondents. Table 3-n demonstrates that a similar percentage of those aged 11-24 had and had not observed health warnings in gambling marketing (38%). Those who participated in two or more types of gambling marketing reported the highest level of awareness of the warnings (66%). In addition, significantly more men (48%), current gamblers (50%) and those with high marketing awareness (55%) had seen health warnings.

Table 3-n - Percentage of those aged 11-24 who recall having seen health messages or warnings in gambling marketing

	Seen health warnings				
	% seen	% not seen	% not sure	p	weighted n
Total	38.0	45.8	16.1		1074
Age				n.s.	
11-17	34.2	45.6	20.2		502
18-24	41.6	45.8	12.7		563
Gender				<0.001	
Male	48.2	35.2	16.6		524
Female	28.8	56.4	14.8		501
Current gambling status				<0.001	
Current gambler	49.8	36.2	14.0		452
Non-gambler	29.7	52.5	17.8		617
Marketing awareness				<0.001	
Low (0-5)	23.3	54.8	21.9		438
Average (6-8)	44.0	40.2	15.8		296
High (9-17)	55.0	35.9	9.1		317
Marketing engagement				<0.001	
None	28.7	52.6	18.7		716
One	50.6	41.8	7.6		204
Two or more	65.9	20.4	13.6		148
Susceptibility to gambling[a]				n.s.	617
Susceptible	37.3	50.1	12.6		226
Non-susceptible	43.0	52.8	20.8		335

[a] Base = all respondents who are not current gamblers

3.5.6 Awareness of gambling marketing and outcome expectancies for gambling

The association between exposure to marketing and outcome expectancies for, and views of, gambling were examined through the use of the GOES scale. Table 3-o shows that there was no significant difference in GOES scores by awareness of gambling marketing. However, 11-24 year olds who had participated in two or more types of marketing had significantly higher scores in the excitement, ego enhancement and money subscales (Table 3-p).

Table 3-o - Mean scores for adapted Gambling Outcome Expectancies subscales by categories of number of types of gambling marketing seen over the last month

	Mean Gambling Outcome Expectancies Scale /5					Weighted n
	Excitement	Escape	Ego enhancement	Money	Sociability	
Total	2.8	1.8	2.1	2.7	2.5	1053[a]
Awareness of marketing	-	-	-	-	-	
Low (0 to 5)	2.7	1.9	2.1	2.6	2.5	420
Average (6 to 8)	2.8	1.7	2.1	2.7	2.5	288
High (9 to 17)	2.9	1.7	2.2	3.0	2.6	313

* p<0.05
**p<0.001
[a] Base = all respondents who answered all items on the GOES scale

Table 3-p - Mean scores for adapted Gambling Outcome Expectancies subscales by categories of number of types of gambling marketing participated in over the last month

	Mean Gambling Outcome Expectancies Scale /5					Weighted n
	Excitement	Escape	Ego enhancement	Money	Sociability	
Total	2.8	1.8	2.1	2.7	2.5	1053[a]
Engagement with marketing	**	-	*	**	-	
None	2.7	1.8	2.0	2.6	2.5	690
One	2.8	1.8	2.1	3.0	2.6	199
Two or more	3.1	1.9	2.5	3.4	2.7	146

* p<0.05
**p<0.001
[a] Base = all respondents who answered all items on the GOES scale

3.6 Family and peer influence

Both the published literature and findings from the qualitative workstreams suggest that family and peer influence, and parental/carer attitudes towards gambling, are likely to have an impact on knowledge and views of gambling and its marketing, as well as susceptibility to gambling and gambling behaviour (Pitt et al, 2017; Ipsos MORI, 2019, MacGregor et al, in press).

Those aged 11-24 were asked about how often their mother/female carer, father/male carer and closest friend (used as a proxy for peer) gambled. In each case, all valid answers other than "*never*" were classified as 'gamblers'. The respondents were also asked how acceptable their parents or carers would consider it to be if they spent their own money on gambling. The responses "*totally acceptable*" and "*somewhat acceptable*" were classified as acceptable and all other valid answers were classified as not acceptable or neutral.

Table 3-q demonstrates that gambling was more prevalent among male carers (47%) than in female carers (35%) and peers (31%), while perceived attitudes towards the respondent's gambling was similar for both female carers and male carers, with about one-quarter reporting that gambling was acceptable.

Table 3-q – Carer and peer gambling status and perceived acceptability of gambling

	%	Weighted n
Female carer gambling status		
Female carer gambler	34.5	368
Female carer non-gambler	65.5	697
Not reported	-	26
Male carer gambling status		
Male carer gambler	47.5	472
Male carer non-gambler	52.5	522
Not reported	-	97
Peer gambling status		
Closest friend gambler	31.3	326
Closest friend non-gambler	68.7	714
Not reported	-	51
Female carer gambling acceptability		
Female carer gambling acceptable	22.9	243
Female carer gambling not acceptable or neutral	77.1	819
Not reported	-	29
Male carer gambling acceptability		
Male carer gambling acceptable	25.3	251
Male carer gambling not acceptable or neutral	77.1	744
Not reported	-	96

3.6.1 Interaction between parental gambling status and perceived parental attitude towards gambling

Table 3-r shows that there is a significant association between parental/carer gambling status and perceived parental acceptability of the respondent's gambling, with male and female parents/carers who gamble perceived as being more likely to find gambling acceptable (39% and 37% respectively). Only 15% of female carers and 13% of male carers who did not gamble were viewed as finding the respondent's potential gambling as being acceptable.

Table 3-r – Percentage of young people aged 11-24 who think their female or male carer finds gambling acceptable, by female and male carer gambling status

	Carer finds gambling to be acceptable		
	%	p value	weighted n
Total female carer	22.9		1062
Female carer gambling status		<0.001	
Female carer gambler	37.4		368
Female carer non-gambler	15.3		695
Total male carer	25.3		995
Male carer gambling status		<0.001	
Male carer gambler	38.9		472
Male carer non-gambler	13.0		520

3.6.2 Influence on gambling and susceptibility

Overall, a higher proportion of those aged 11-24 who had a female parent/carer, male parent/carer or closest friend who gambled were current gamblers than those who had non-gambling carers and peers (Table 3-s). This effect was particularly strong for 11-24 year olds who had a closest friend who was a gambler – 84% of those with such a friend were current gamblers themselves compared with 23% of those with a non-gambling closest friend.

Table 3-s – Percentage of those aged 11-24 who are current gamblers by carer and peer gambling status

	Current gambler		
	%	p value	Weighted n
Total	41.6		1086
Female carer gambling status		<0.001	
Female carer gambler	56.0		364
Female carer non-gambler	34.8		696
Male carer gambling status		<0.001	
Male carer gambler	52.3		468
Male carer non-gambler	33.2		521
Peer gambling status		<0.001	
Closest friend gambler	83.8		321
Closest friend non-gambler	23.2		714

In terms of susceptibility to gambling, 51% of respondents who had a male parent/carer who gambled were categorised as susceptible to gambling in the next year compared with 34% of those whose male parent/carer did not gamble (Table 3-t).

Table 3-t - Percentage of those aged 11-24 who are susceptible to gambling by carer and peer gambling status

	Susceptible to gambling		
	%	p value	Weighted n
Total	40.4		567 [a]
Female carer gambling status		n.s.	
Female carer gambler	43.9		134
Female carer non-gambler	39.5		417
Male carer gambling status		<0.05	
Male carer gambler	50.6		188
Male carer non-gambler	34.0		326
Peer gambling status		n.s.	
Closest friend gambler	51.6		34
Closest friend non-gambler	39.2		501

[a] Base = all respondent who are not current gamblers

Perceived parental acceptability of gambling also had a significant association with the current gambling status and susceptibility to gambling of those aged 11-24 (Table 3-u). The respondents with both male and female carers who considered gambling to be acceptable were more likely to be current gamblers (68% (male carer: gambling acceptable) and 71% (female carer: gambling acceptable)). Likewise, the percentage of those aged 11-24 who were susceptible to gambling was higher among those who thought that their carers would consider it acceptable for them to gamble (56% (male carer: gambling acceptable) and 68% (female carer: gambling acceptable)) (Table 3-v).

Table 3-u - Percentage of those aged 11-24 who are current gamblers by perceived carer gambling carer acceptability

	Current gambler		
	%	p value	Weighted n
Total	41.6		1086
Female carer gambling acceptability		<0.001	
Female carer gambling acceptable	70.6		242
Female carer gambling not acceptable or neutral	33.7		815
Male carer gambling status		<0.001	
Male carer gambling acceptable	68.0		251
Male carer gambling not acceptable or neutral	33.4		738

Table 3-v - Percentage of those aged 11-24 who are susceptible to gambling by perceived carer gambling carer acceptability

	Susceptible to gambling		
	%	p value	Weighted n
Total	40.4		567[a]
Female carer gambling acceptability		<0.001	
Female carer gambling acceptable	67.6		61
Female carer gambling not acceptable or neutral	37.3		488
Male carer gambling status		<0.05	
Male carer gambling acceptable	56.4		73
Male carer gambling not acceptable or neutral	37.2		443

[a] Base = all respondent who are not current gamblers

3.6.3 Influence on exposure to marketing and outcome expectancies for gambling

Table 3-w demonstrates that a significant association was observed for 11-24 year olds whose closest friend gambled in relation to the number of types of marketing seen (mean=8.5), types of marketing participated in (mean=1.4), and brand awareness (mean=8.7). Respondents who had a male carer who gambled had on average seen significantly more types of gambling marketing in the last month (mean=7.1) and were aware of a higher number of gambling brands (mean=7.6). No significant association was identified between having a female carer who gambled and awareness of gambling marketing, participating in gambling marketing or brand awareness.

Table 3-x shows that the mean number of types of gambling marketing seen (mean=7.6), engagement with marketing (mean=0.9) and mean brand awareness (mean=7.9) was significantly higher among those aged 11-24 whose male carer viewed their gambling as being acceptable. For those with female carers who thought gambling was acceptable, significant results were observed for mean number of types of marketing participated in (mean=0.9) and mean brand awareness (mean=8.0), but not for types of gambling marketing seen.

Table 3-w – Mean number of types of marketing seen, participated in and brand awareness by carer and peer gambling status

	Mean marketing awareness			Mean number of types of marketing engaged in			Mean brand awareness		
	Mean	p value	Weighted n	Mean	p value	Weighted n	Mean	p value	Weighted n
Total	6.5		1056	0.6		1073	7.3		1080
Female carer gambling status		n.s.			n.s.			n.s.	
Female carer gambler	6.6		358	0.6		361	7.4		364
Female carer non-gambler	6.7		675	0.6		686	7.3		690
Male carer gambling status		<0.05			n.s.			<0.05	
Male carer gambler	7.1		460	0.6		469	7.6		471
Male carer non-gambler	6.3		502	0.6		508	7.0		513
Peer gambling status		<0.001			<0.001			<0.001	
Closest friend gambler	8.5		321	1.4		323	8.7		326
Closest friend non-gambler	5.8		689	0.3		700	6.8		704

Table 3-x - Mean number of types of marketing seen, participated in and brand awareness by perceived carer gambling acceptability

	Mean marketing awareness			Mean number of types of marketing engaged in			Mean brand awareness		
	Mean	p value	Weighted n	Mean	p value	Weighted n	Mean	p value	Weighted n
Total	6.5		1056	0.6		1073	7.3		1080
Female carer gambling acceptability		n.s.			<0.05			<0.05	
Female carer gambling acceptable	7.3		242	0.9		241	8.0		243
Female carer gambling not acceptable or neutral	6.4		788	0.5		804	7.1		809
Male carer gambling status		<0.05			<0.05			<0.05	
Male carer gambling acceptable	7.6		248	0.9		249	7.9		251
Male carer gambling not acceptable or neutral	6.3		715	0.5		728	7.1		733

Overall, 11-24 year olds who had a male carer, female carer or closest friend who gambled tended to report significantly more positive attitudes towards gambling in almost all subscales of the Gambling Outcome Expectancies Scale (Table 3-y). Highest and most significant differences were seen in the excitement and money subscales, indicating that those who have a female carer, male carer or closest friend who gamble were more likely to agree or hold more neutral views in relation to statements that suggest that gambling is exciting and a way to make a large amount of money.

Similarly, those aged 11-24 who had a female carer or male carer who viewed their gambling as being acceptable reported less negative attitudes towards gambling in almost all subscales of the Gambling Outcome Expectancies Scale (Table 3-z). Significantly higher mean scores for the excitement and money subscales were observed among 11-24 year olds for both male and female carers who perceived the respondent's gambling to be acceptable.

Table 3-y - Mean scores for adapted Gambling Outcome Expectancies subscales by carer and peer gambling status

	Mean Gambling Outcome Expectancies Scale /5					
	Excitement	Escape	Ego enhancement	Money	Sociability	Weighted n
Total	2.8	1.8	2.1	2.7	2.5	1053
Female carer gambling status	**	**	*	**	*	
Female carer gambler	3.0	2.0	2.3	3.1	2.7	358
Female carer non-gambler	2.7	1.7	2.0	2.6	2.5	676
Male carer gambling status	**	**	*	**	**	
Male carer gambler	3.0	1.9	2.2	3.0	2.7	461
Male carer non-gambler	2.6	1.6	2.0	2.5	2.4	506
Peer gambling status	*		*	**	*	
Closest friend gambler	2.9	1.8	2.3	3.2	2.7	321
Closest friend non-gambler	2.7	1.8	2.0	2.6	2.5	692

Table 3-z - Mean scores for adapted Gambling Outcome Expectancies subscales by perceived carer gambling acceptability

	Mean Gambling Outcome Expectancies Scale /5					
	Excitement	Escape	Ego enhancement	Money	Sociability	Weighted n
Total	2.8	1.8	2.1	2.7	2.5	1053
Female carer gambling acceptability	*			**		
Female carer gambling acceptable	2.9	1.8	2.2	3.3	2.7	241
Female carer gambling not acceptable or neutral	2.7	1.8	2.1	2.6	2.5	791
Male carer gambling status	*		*	**		
Male carer gambling acceptable	2.9	1.8	2.3	3.2	2.7	249
Male carer gambling not acceptable or neutral	2.7	1.8	2.0	2.6	2.5	720

3.7 Modelling the influence of marketing relative to other factors

Stepwise logistic regression was conducted to examine the following among the children and young people and young adults:

- Model 1: factors associated with gambling susceptibility in non-current gamblers
- Model 2: factors associated with current gambling.

Full results of the logistic regression are presented in appendix 7.4.

Table 3-aa and Table 3-bb demonstrate the results of step 4, the stage of the regression in which the potential association of all factors are considered together, demonstrated that the factors most strongly associated with gambling susceptibility (Model 1) were high levels of gambling marketing awareness (OR: 1.8), increasing age (OR: 1.7), high brand awareness (OR: 1.6),) and engagement with gambling marketing activity (OR: 1.7) and the GOES Money subscale (OR: 1.3).

In terms of Model 2, the factors most strongly associated with current gambling were peer gambling (OR: 6.4), engagement with two or more types of gambling marketing (OR: 3.2), increasing age (OR: 2.5) parental gambling (OR: 2.3) and high brand awareness (OR: 2.0). The confidence intervals for the odds ratios for these factors overlapped, with the exception of peer gambling which only overlapped with marketing engagement. This suggest that peer gambling has the greatest association with current gambling, with those who have a close friend who gambles having six times the odds of being a current gambler than those without a close friend who gambles.

Table 3-aa – Step 4 of logistic regression: factors associated with gambling susceptibility among non-gamblers aged 11-24

	Positive/negative association	Odds ratio	
Gender: Female	+	1.4	*
Base: Male			
Age: 18-24	+	1.7	**
Base: 11-17			
Either parent gambles		1.2	
Base: Neither parent gambles			
Peers gamble		1.6	
Base: Peers do not gamble			
Gambling acceptable to at least one parent		1.4	
Base: Gambling not acceptable to parents			
Lives independently from parents		0.5	
Base: Lives with parents			
Positive towards advertising		1.0	
Base: Negative or neutral towards advertising			
Lives in Scotland		1.2	
Base: Lives in England / Wales			
Area deprivation: Most deprived quintile		1.0	
Quintile 2		1.1	
Quintile 3		0.9	
Quintile 4		1.0	
Base: Least deprived quintile			
Average Number of types of marketing seen (6 to 8)		1.1	
High number of types of marketing seen (9 to 17)	+	1.8	**
Base: Low number of types of marketing seen (0 to 5)			
Average number of brands aware of (7 to 8)	+	1.5	*
High number of brands aware of (9 to 10)	+	1.6	**
Base: Low number of brands aware of (0 to 6)			
Participated in marketing	+	1.7	**
Base: Not participated in marketing			
Mean score for GOES Excitement items	+	1.2	*
Mean score for GOES Escape items		0.9	
Mean score for GOES Ego items		1.0	
Mean score for GOES Social items	+	1.2	*
Mean score for GOES Money items	+	1.3	***
Interaction: Age 18-24 by Mean score for GOES Excitement items			
Interaction: Age by Mean score for GOES Money items			
Constant		0.047	***
Nagelkerke R2		0.200	

(Base = 623; * Significant at the 10% level, ** Significant at the 5% level, * significant at the 1% level)**

Table 3-bb – Step 4 of logistic regression: factors associated with current gambling among those aged 11-24

	Positive/negative association	Odds ratio	
Gender: Female		1.0	
Base: Male			
Age: 18-24	+	2.5	***
Base: 11-17			
Either parent gambles	+	2.3	***
Base: Neither parent gambles			
Peers gamble	+	6.4	***
Base: Peers do not gamble			
Gambling acceptable to at least one parent	+	1.5	**
Base: Gambling not acceptable to parents			
Lives independently from parents		1.4	
Base: Lives with parents			
Positive towards advertising		0.9	
Base: Negative or neutral towards advertising			
Lives in Scotland		0.9	
Base: Lives in England / Wales			
Area deprivation: Most deprived quintile		0.9	
Quintile 2		1.0	
Quintile 3	+	0.6	**
Quintile 4		1.0	
Base: Least deprived quintile			
Average number of types of marketing seen (6 to 8)		0.8	
High number of types of marketing seen (9 to 17)		0.7	
Base: Low number of types of marketing seen (0 to 5)			
Average number of brands aware of (7 to 8)		1.2	
High number of brands aware of (9 to 10)	+	1.1	***
Base: Low number of brands aware of (0 to 6)			
Participated in one type of marketing	+	1.4	*
Participated in two or more types of marketing	+	3.190	***
Base: Not participated in marketing			
Mean score for GOES Excitement items	+	1.4	***
Mean score for GOES Escape items		1.0	
Mean score for GOES Ego items		1.0	
Mean score for GOES Social items	-	0.7	***
Mean score for GOES Money items	+	1.3	***
Interaction: Age 18-24 by Mean score for GOES Excitement items			
Interaction: Age 18-24 by Mean score for GOES Social items			
Interaction: Age by Mean score for GOES Money items			
Constant		0.059	***
Nagelkerke R2		0.457	

(Base=1086; * Significant at the 10% level, ** Significant at the 5% level, * significant at the 1% level)**

4 Discussion

ScotCen submitted a report on its qualitative research with children, young people and young adults aged 11-24, as well as with vulnerable groups (those with lived experience of mental health problems and problem gamblers) in May 2019 (MacGregor et al, in press). Initially it had been intended to submit a report combining this qualitative research with a survey of those aged 11-24 in Britain. Unfortunately, due to delays encountered in accessing the sample, the survey fieldwork did not commence until May 2019, and was finally completed in July/August 2019. As a result, this second report focuses on the findings of the quantitative survey.

The cross-sectional survey of those aged 11-24 adopted a postal-web design, followed by a telephone interview phase. In total, 1091 11-24 year olds responded (approximate 33% household response rate). As they had been drawn from two nationally representative population-based surveys, the Family Resources Survey (FRS) and the Scottish Household Survey (SHS), it was possible to weight the respondents to match the profile of the target population profile in terms of age, sex and region.

This section will report on the main findings of the survey, with an emphasis on how the results relate to the main research questions the survey was designed to address.

Gambling behaviours of the young people

About one-half (51%) of those aged 11-24 reported that they had gambled previously. In addition, 42% of respondents stated that they were current gamblers. Those aged 18-24 were much more likely to be current gamblers (60%) compared with those aged 11-17 (23%), which might be anticipated given that they were above the minimum legal participation age for all gambling activities in the UK. Current gamblers were also asked two questions to assess their risk of becoming a problem gambler. Two percent were classified as being at high risk (this would equate to approximately 1% of the whole sample) and 6% were categorised as being at low risk. Although we did not use a recognised problem gambling scale within the survey, 1-2% of those aged 11-24 years being at high risk of problem gambling does correspond to the results of other surveys. It is also important to note that the question on gambling susceptibility showed that 40% of those who had never gambled thought that they might spend money on gambling in the coming year.

The most commonly reported gambling activities in the previous month were taking part in the lottery (including scratchcards) (17%) and playing bingo at somewhere other than a bingo club (17%). Playing fruit machines (9%) and private betting with friends (9%) were the next most commonly cited gambling activities engaged in during the previous month. It should be noted though, that two-thirds of those aged 11-24 said that they had not spent any of their own money on gambling in the previous month.

Clearly, there should be a difference in the gambling activities the respondents are participating in by age, given that many examples (e.g. playing machines in betting shops) are restricted to those aged 18 and over, those playing the lottery have to be aged 16 and over, and some activities such as lower stake fruit machines may have no age limit whatsoever. Those in the 11-15 age category were most likely to say that they had played fruit machines, had been betting privately with friends and playing bingo in an environment other than a bingo club. Similarly, those aged 16-17 were most likely to say that they had played the lottery, and a large increase in the percentage of those aged 18 and above was observed for those visiting bookmakers and using gambling websites and apps. This suggests that a large majority of those aged 11-24 were accessing gambling activities legally, though a minority of those aged

under 18 years reported that they had participated in gambling activities illegally, such as gambling online. It is also important to note that it is not always possible to ascertain from the answer categories if the gambling activity is being accessed legally or not. Still, the increase in respondents saying that they were participating in the various activities when age restrictions no longer applied to them gives some confidence that the gambling practices in the previous month were reported accurately and accessed legally.

Family and peer influence

In total, the respondents stated that 47% of male parents/carers, 35% of female parents/carers and 31% of peers (closest friend) were current gamblers. It was reported that about one-quarter of the male and female carers perceived that gambling was acceptable, and indeed those carers who gambled were much more likely to find the gambling of the respondent as acceptable (almost 40% stating that it was acceptable). Of course, it is possible that those who gamble hold more positive views of gambling more generally, but it should also be noted that these are the perceptions of the respondents, and not the actual expressed views of parents, carers or peers.

A higher percentage of those aged 11-24 who had a female carer, male carer or, in particular, closest friend who gambled were current gamblers compared with those who had non-gambling carers and peers. It should be noted that 84% of those with a closest friend who gambled were current gamblers themselves. Previous research has demonstrated the influence of having parents/carers and/or close friends who gamble (Pitt et al, 2017). The potential association of parents/carers and peers on the young people's gambling susceptibility and current gambling behaviour was a crucial part of the logistic regression analysis (see below).

Views of and attitudes towards gambling

In the survey those aged 11-24 were asked to complete a modified version of the Gambling Outcome Expectancies Scale (GOES) to assess their views and attitudes towards gambling. The responses to the 18 statements in the GOES instrument can be classified into five sub-scales: excitement, escape, ego enhancement, money (financial gain) and sociability. The results demonstrated that 11-24 year olds responded most favourably to statements in the excitement, financial gain and sociability subscales. For example, the respondents were most likely to agree with the statements; gambling is a rush (46%), gambling provides a good chance to win big with small money (40%) and gambling is a way to make big money (39%). These views did not differ by age or gender, but it should be noted that current gamblers had significantly higher scores in the excitement and financial gain subscales compared with non-current gamblers. For the 11-24 year olds who hold positive views about gambling, it does appear that the most appealing aspects relate to the exhilaration, intensity and unpredictability of the experience, and very importantly the knowledge that it is possible, if unlikely, to have a major financial windfall.

However, it is also important to note that the mean GOES scores were quite low across the whole sample and tended to be below the neutral point (mean=3), which means that respondents tended to disagree with the statements. The exception to this was that current gamblers were more likely to agree with the money subscale overall (mean=3.2), though the mean for the other subscales were all below the neutral point. This suggests that both non and current gamblers held generally negative views about gambling.

Gambling marketing

The main function of the survey component was to establish the prevalence of the awareness of different types of gambling marketing, assess engagement with this marketing and examine

the impacts of this marketing, whilst also considering the effects of other key influences, such as parental and peer gambling, among 11-24 year olds. As a result, the survey helps answer the following research questions:

- RQ1) Focusing on marketing and advertising across all media, where and how often does gambling advertising occur?
- RQ4) To what extent are children, young people and vulnerable groups exposed to gambling marketing and advertising and what is the impact of this on attitudes, knowledge and gambling behaviour?
- RQ5) How does the impact of gambling advertising or marketing vary by different mediums?
- RQ6) How does the influence of marketing and advertising compare with other actors, such as parental gambling, parental facilitation, and moral or religious beliefs?
- RQ7) To what extent are children and young people exposed to online advertising in non-age restricted online environments, and on what channel or platform are they most likely to encounter gambling marketing and advertising?

Views of marketing

Only 17% of respondents held mainly positive views of viewing adverts in general. When asked about gambling marketing specifically, only 5% said that they liked gambling adverts. It is difficult to know why gambling marketing appears to be less popular than viewing adverts in general among 11-24 year olds. However, children and young people are being exposed to marketing for activities they are not legally allowed to participate in (and have reported that they have little interest in), which may be contributing to this predominantly negative view.

Awareness of gambling marketing and brands

Only 4% of survey respondents stated that they had not recalled any gambling promotions in the previous month, whereas the rest of the sample remembered an average of 6.5 different examples. Perhaps unsurprisingly, the most common mode of gambling promotion in the previous month cited by the respondents was gambling adverts on television (84%). Almost 70% percent of those aged 11-24 also reported seeing gambling marketing in shops, window displays and at the till (lottery and scratchcard displays). Two-thirds of 11-24 year olds remembered seeing such promotions on social media.

The level of awareness of gambling promotions expressed, and the range of modes of marketing that the young people cited, does support the view that gambling marketing is ubiquitous, children, young people and young adults are aware of it whether they have gambled or not, and it is contributing to the normalisation of gambling activities in these facets of society. Given the timing of the survey, with the bulk of the fieldwork conducted in May-July 2019, it is possible that the awareness of gambling adverts on television will not be as high after August 2019 when the whistle to whistle ban on adverts before the 9pm watershed came into force, though evidently shirt sponsorship and pitchside advertising remain. Even allowing for this, though, almost all of those aged 11-24 were aware of gambling marketing in multiple forms, whether they were at the younger end of the spectrum (mean = 5.9 types) or non-gamblers (mean=5.7 types). It is also important to recognise that current gamblers (mean=7.9) and those susceptible to gambling in the coming year (mean=6.8) had a higher level of awareness of gambling marketing.

By providing a list of the 10 gambling brand names with the biggest spend in advertising in the month prior to survey launch, it was possible to assess the level of brand awareness among those aged 11-24. The qualitative research showed that young people were able to recognise gambling brands from a segment of a logo, even if they had stated that they had little

knowledge of or interest in gambling and its marketing. Similarly, 11-24 year olds were aware on average 7.3 of the 10 named brands in the survey. Whilst it is true that those who were aged 18-24, male, current gamblers, had higher awareness of and had engaged with gambling marketing and were susceptible to gambling reported the highest levels of brand awareness, arguably the most important finding is the very high brand awareness reported by those, for example, who were aged 11-17 (mean=6.5 brands) and had lower levels of gambling marketing awareness (mean=6.2 brands). This does suggest, again, that gambling marketing and branding has been very successful in increasing knowledge and awareness of gambling among 11-24 year olds. Of course, it may be argued that respondents may have ticked more brands than they were actually aware of, though the fact that only 28 individuals reported that they were aware of the 'dummy brand' Cogibet supports the view that this is a reliable estimate of the brand awareness of those aged 11-24 years. It was not possible to conduct a brand recognition exercise due to the different survey modes.

Awareness of age-restriction information and health warnings

In the survey, 53% had seen some form of age-restricted messages related to gambling advertising in the previous month, whereas only 38% were aware of any health information or warnings. In addition, awareness of this type of messaging does not necessarily mean that those aged 11-24 thought that it was memorable or effective. The results of the quantitative research indicate that age and health-related information and warnings need to be much more prominent in the context of the overall gambling advert in order for such information to be noticed, as 11-24 year olds are much more aware of gambling marketing than they are of its associated age and health-related information.

Engagement with gambling marketing

The fact that gambling marketing may have the potential to influence young people's and young adults' awareness, knowledge and brand awareness does not necessarily mean that it would have any further effect on more active engagement with marketing and on gambling behaviour. As would be expected, the level of the actual engagement with gambling promotions in the previous month of those aged 11-24 years is much lower than their reported levels of gambling marketing and brand awareness. In total, 33% of respondents had engaged with at least one type of gambling marketing more actively, with the most commonly cited activity being the discussion of gambling marketing or a gambling company with friends (15%). In the previous month, those aged 11-24 had engaged with a mean of 0.6 types of marketing, though it is important to note that this figure was highest for current gamblers (mean=1.1). It seems logical that those who engage with gambling marketing more actively would not only have greater awareness of gambling marketing but would also be more likely to be current gamblers when compared with those who do not engage with the marketing.

Potential influence of gambling marketing

Logistic regression was conducted to examine factors associated with susceptibility to gambling (among those who had never gambled) and current gambling. This showed that increasing age (18-24 years), having parents who gamble, parents holding favourable attitudes to gambling and, in particular, having close friends who gamble were associated with respondents' current gambling. Higher levels of gambling marketing awareness were significantly associated with susceptibility to gamble only, and not for participating in current gambling activities, when other factors were controlled for. On the other hand, higher brand awareness was significantly associated with both susceptibility to gamble and current gambling among the survey participants. It is also important to note that increased engagement with gambling marketing was associated with both susceptibility to gamble and current gambling. The GOES results showed that higher scores in the money and excitement

subscales were both significantly associated with respondents both being more susceptible to gamble and also to be current gamblers.

These results demonstrate that the factors associated with gambling susceptibility and current gambling among those aged 11-24 years are complex and multifactorial. It is also important to emphasise that these are the results from a cross-sectional, not a longitudinal, survey and as a result we cannot demonstrate causality. Nevertheless, the results suggest that higher levels of awareness of gambling marketing is associated with increased susceptibility to gamble, and higher brand awareness is associated with both gambling susceptibility and current gambling. Even if the higher awareness of marketing was not associated with current gambling per se, unlike higher levels of brand awareness, more active engagement with the marketing (for example, discussing a gambling company or gambling marketing with family or friends) was associated with both gambling susceptibility and current gambling status. More active participation with marketing has previously been shown to be more strongly associated with the behaviour in question, such as alcohol consumption, than marketing awareness (Gordon et al, 2011). However, the results also suggest that this is only one part of a complex narrative, in which increasing age, parental attitudes which are favourable to gambling and the presence of parental gambling itself, as well as the influence of peer gambling behaviour, also have a major impact on the gambling of 11-24 year olds. Of course, it may also be argued that those who gamble are more likely to be aware of, and engage with, gambling marketing. In addition, even ignoring other associated factors, it is unlikely that gambling marketing operates in such a straightforward and linear fashion only, with increased awareness of marketing and gambling brands leading to greater knowledge of gambling, leading to gambling marketing engagement and initiation of gambling behaviour.

Strengths and limitations

The major strengths and limitations of the survey of 11-24 year olds were:

- Due to delays in gaining access to the samples, some of those who were invited to participate had out-of-date contact information. For example, respondents had moved to a new house or changed other contact details (emails and phone numbers) since they participated in the SHS and FRS surveys. The use of gatekeepers, particularly for those aged below 18 years, may also have impacted upon distribution of the questionnaires to eligible participants. The telephone survey in particular suggested that contact information held for potential participants may not always have been accurate.
- The survey was cross-sectional, and as such it is not possible to infer causal links between variables. Although associations were found between high levels of marketing awareness, brand awareness, marketing engagement and gambling susceptibility and behaviour, as this study is not part of a longitudinal series the direction of effect for these and other factors cannot be inferred.
- Due to the need to make a predominantly web and telephone-based survey short and concise, particularly for the children and young people completing the survey, it was not possible to include, for example, full problem gambling scales or risk of problem gambling scales. However, the focus of the survey was on gambling marketing – it was never intended to examine problem gambling in detail within the survey element. Also, as the prevalence of 'problem gambling' in adult populations is estimated to be 1-2%, even doubling the sample size to around 2000 would potentially only have generated responses from about 20-40 of those experiencing problems with their gambling.

- It was possible to use the findings in the qualitative report, as well as findings from other strands of the overall research study, to interpret and explain the responses to the survey.
- Logistic regression: there is some unexplained variation in the models, which may be due to factors we were unable to measure in the survey. Only two outcome measures were used, and there may be others that may identify a different set of factors associated with the outcome measures. The large number of variables included in the models may lead to issues with samples size and hidden interactions between them, but collinearity and the stability of the models were both tested for, and both models appeared to be robust and stable.
- As the sample for this study was drawn from two nationally representative surveys (FRS and SHS), SHS and FRS data were both weighted to account for sampling probabilities and non-response bias, to make them representative of the population in private households in England, Scotland and Wales. These weights were further adjusted to take into account potential sampling and non-response bias to the gambling survey, to make the survey representative of the population of 11-24 year olds living in private households across Britain on key features, such as age, sex and region. However, it is recognised that the sample may not be perfectly representative on other attributes, such as exposure to advertising, though there is no evidence to suggest any bias in the sample.
- Scotland is over-represented in the sample, with the result that the effective sample size is considerably smaller than the actual sample size. As a result, unweighted figures may mislead the reader. Weighting has been appropriately applied to reduce bias in the survey, whereas unweighted figures would be biased towards Scotland rather than reflecting the position across Britain.
- Previous surveys have been conducted with those aged 11-16, or adults aged 16 and above, and have not had such a focus on gambling marketing. As it was possible to weight the sample in this study, it is likely that this is the most robust and reliable survey of the views and influence of gambling marketing on children, young people and young adults in Britain conducted to this date, and the findings can be generalised across the whole 11-24 years age range.

5 Conclusions and recommendations

The results of both the quantitative and qualitative research are consistent, and show that children, young people and young adults are exposed to and aware of gambling marketing and branding across a wide range of media on a regular basis. A high level of awareness of gambling marketing is associated with increased susceptibility to gamble among non-gamblers, and higher brand awareness was also found to be associated with current gambling. More active engagement and participation with the marketing is, in turn, significantly associated with gambling susceptibility and current gambling.

Gambling marketing is only one part of a complex picture, in which, for example, favourable parental views towards gambling, parental gambling behaviour and gambling among peers are all significantly associated with current gambling among those aged 11-24 years. In addition, as this is a cross-sectional survey it could also be argued that current gamblers are more likely to be interested in and engage with gambling marketing than non-gamblers. However, the results of the quantitative research suggest that gambling marketing and the promotion of gambling brands are associated with the knowledge and views towards gambling of those aged 11-24, are associated with gambling susceptibility and, in turn, if individuals engage with the marketing more actively are significantly associated with current gambling activities. Future longitudinal research is required to explore the nature of the association in more detail.

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7 Appendices

7.1 Questionnaire

NatCen
Social Research that works for society

Young People's survey on Gambling Promotion

This is a survey about your awareness, knowledge and experiences of gambling and how it is advertised and marketed. You do not need to have gambled to take part and no special knowledge about gambling is needed.

This survey is for young people aged between 11 and 24 only.

The survey takes around 10 minutes to complete. Please follow the instructions and answer each question, then seal your completed questionnaire in the freepost envelope and post it back to us.

Once we've received it, we will post your £5 high street voucher to you.

Please note: your voucher may take up to 4 weeks to arrive.

P12482/<Serial number><Ckl> <barcode>

By gambling, we mean risking something such as money on a game, or on the outcome of an event, in the hope of winning more money or prizes (e.g. buying a lottery ticket, placing a bet on a sporting event, betting money on card games with your friends or playing gambling games like roulette online or on a smartphone app).

GAMBLING ACTIVITY

This first set of questions will ask you about your gambling activity

1 Have you spent any of YOUR money on any of the following in the last month? We want to know about games you played yourself.

PLEASE READ THE LIST CAREFULLY AND SELECT ALL OF THE ACTIVITIES THAT YOU HAVE TAKEN PART IN

- Taking part in a lottery for example National Lottery Lotto (the main National lottery draw), Health Lottery, Postcode Lottery, Scratchcards, Euromillions, Thunderball, Hotpicks ☐
- Personally placing a bet at a betting shop for example visiting a bookies to bet on football or horse racing ☐
- Gambling websites or apps where you can win real money or other prizes for example poker, casino games, bingo, betting on sport or racing ☐
- Fruit machines (puggies, slot machines) at an arcade, pub or club ☐
- Private betting with friends for example playing cards or placing a private bet for money on the outcome of an event ☐
- Bingo at a bingo club ☐
- Bingo at somewhere other than a bingo club for example social club, holiday park ☐
- Visiting a betting shop to play gaming machines ☐
- Visiting a casino to play casino games ☐
- Any other type of gambling ☐
- None of the above ☐

2 **The first time you spent your own money on gambling, what age were you?**

- 13 years old or younger ☐
- 14 - 15 years old ☐
- 16 – 17 years old ☐
- 18 years or older ☐
- I have never spent my own money on gambling or betting ☐

3 **How much of your own money, if any, did you spend on gambling in the last seven days? Please round to the nearest pound.**

If you didn't spend any of your own money in the last seven days, please write 0.

£

4 **How much of someone else's money, if any, did you spend on gambling in the last seven days? For example, by using someone else's bank card, online account or asking someone to place a bet for you. Please round to the nearest pound.**

If you didn't spend any of someone else's money in the last seven days, please write 0.

£

5 **How often do you usually participate in gambling activities?**

- Never ☐ → GO TO QUESTION 8
- Once a month or less ☐
- A few times a month ☐
- A few times a week ☐
- Every day or almost every day ☐

→ ANSWER QUSTIONS 6 AND 7

6 **In the past year, how often have you found yourself thinking about gambling or planning to gamble?**

- Never ☐
- Once or twice ☐
- Sometimes ☐
- Often ☐

7 **In the past year, have you ever spent much more than you planned to on gambling?**

- Never ☐
- Once or twice ☐
- Sometimes ☐
- Often ☐

8 **Do you think you will spend money on gambling in the next year?**

- Definitely not ☐
- Probably not ☐
- Probably yes ☐
- Definitely yes ☐
- Not sure ☐

GAMBLING MARKETING

The next set of questions asks about your opinions on gambling marketing and advertising.

Just a reminder, when we say gambling, we mean risking something such as money on a game, or on the outcome of event, in the hope of winning more money or prizes (e.g. buying a lottery ticket, placing a bet on a sporting event, betting money on card games with your friends or playing gambling games like roulette online or on a smartphone app).

By gambling marketing, we mean all the different ways that a gambling company can communicate or promote themselves to an audience and encourage them to gamble.

Remember, we are interested in the different forms of gambling marketing that **you** have seen, not the experiences of others.

9 **Over the last month, have you seen or heard gambling being promoted in any of the following ways?**

PLEASE READ THE LIST CAREFULLY AND SELECT ALL THAT YOU HAVE SEEN OR HEARD

- Adverts for gambling in newspapers or magazines (including leaflets inserted) ☐
- Adverts for gambling on television (including online TV) ☐
- Adverts for gambling on billboards or posters in the street ☐
- Famous people in films, television or magazines gambling or talking about gambling ☐
- Sports teams, games or events sponsored by a gambling company ☐
- Merchandise sponsored by a gambling company (e.g. football shirt) ☐
- Competitions or prize draws related to gambling companies ☐
- Adverts for gambling on the radio or through podcasts ☐
- Shops, window displays or places in shops where you can gamble (e.g. betting shop, or lotteries and scratch cards in newsagents) ☐
- Adverts for gambling on social media such as YouTube, Facebook, Twitter and other social media websites ☐
- Smartphone applications for gambling companies ☐
- Websites for gambling companies ☐
- E-mails from gambling companies ☐
- Pop-up adverts for gambling companies on websites ☐
- Word of mouth from a friend or family member about gambling ☐
- Gambling promoted through a video game or online game ☐
- Any other sort of gambling marketing ☐
- None of the above ☐

When we say gambling company, we mean companies through which you can spend money on gambling such as a bookmakers, lottery or casino. These can be in a physical location or online.

10 Over the last month, have you done any of the following things?

PLEASE READ THE LIST CAREFULLY AND SELECT ALL THAT YOU HAVE DONE

- Attended an event sponsored by a gambling company (e.g. a football match) ☐
- Owned or worn merchandise sponsored by a gambling company (e.g. a football shirt) ☐
- Entered a competition or a prize draw run by a gambling company ☐
- Liked, commented on or shared gambling adverts and marketing on social media (e.g. YouTube, Facebook, Twitter and other social media websites) ☐
- Downloaded a smartphone application from a gambling company ☐
- Signed up to receive emails from a gambling company ☐
- Clicked on a pop-up internet advert for a gambling company ☐
- Discussed a gambling company or gambling marketing with a friend or family member ☐
- None of the above ☐

11 **Which of the following brand names have you seen or heard of?**

PLEASE READ THE LIST CAREFULLY AND SELECT ALL THE BRANDS YOU HAVE HEARD OF

- Postcode Lottery ☐
- The National Lottery ☐
- Tombola ☐
- Ladbrokes ☐
- The Health Lottery ☐
- SkyBet, Sky Casino etc. ☐
- Betfair ☐
- Cogibet ☐
- William Hill ☐
- Coral ☐
- Paddy Power ☐
- None of the above ☐

12 **Over the last month, have you seen any information in gambling marketing (e.g. on TV or on social media) that suggests you need to be a certain age to gamble?**

Yes ☐ No ☐ Not sure ☐

13 **Over the last month, have you seen any information, health messages, or warnings in gambling marketing?**

Yes ☐ No ☐ Not sure ☐

YOUR VIEWS ON GAMBLING

14 **Now we are going to give you some statements about gambling. Please read each statement carefully and rate how much you agree or disagree with it.**

	Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree
Gambling is a rush	☐	☐	☐	☐	☐
Gambling is about enjoying intensive feelings	☐	☐	☐	☐	☐
Gambling gives a feeling of being really alive	☐	☐	☐	☐	☐
Gambling is a way to forget everyday problems	☐	☐	☐	☐	☐
Gambling is the best way to relax	☐	☐	☐	☐	☐
Gambling can help clear your mind	☐	☐	☐	☐	☐
Gambling helps release tension	☐	☐	☐	☐	☐
Gambling is about feeling like an expert	☐	☐	☐	☐	☐
Gambling produces a feeling of importance	☐	☐	☐	☐	☐
Gambling is about feeling in control	☐	☐	☐	☐	☐
Gambling produces a feeling of being powerful	☐	☐	☐	☐	☐
Gambling is a way to win big money immediately	☐	☐	☐	☐	☐
Gambling provides a good chance to win big with small money	☐	☐	☐	☐	☐
Gambling is a way to make big money	☐	☐	☐	☐	☐
Gambling provides an opportunity to be with similar people	☐	☐	☐	☐	☐
Gambling is a way to meet new people	☐	☐	☐	☐	☐
Gambling provides an opportunity to get along with other people favourably	☐	☐	☐	☐	☐
Gambling provides an opportunity to be with friends	☐	☐	☐	☐	☐

YOUR FRIENDS' AND FAMILY'S VIEWS OF GAMBLING

The next set of questions asks about what your friends and family think about gambling.

15 As far as you know, how often does your mum or female carer spend money on gambling?

- Never ☐
- Once a month or less ☐
- A few times a month ☐
- Daily or almost daily ☐
- I don't have or see this person ☐

16 As far as you know, how often does your dad or male carer spend money on gambling?

- Never ☐
- Once a month or less ☐
- A few times a month ☐
- Daily or almost daily ☐
- I don't have or see this person ☐

17 As far as you know, how often does your closest friend spend money on gambling?

- Never ☐
- Once a month or less ☐
- A few times a month ☐
- Daily or almost daily ☐
- I don't have or see this person ☐

18 If you spent money on gambling, do <u>you</u> think your mum or female carer would consider it to be...

- Totally acceptable ☐
- Somewhat acceptable ☐
- Neither acceptable nor unacceptable ☐
- Somewhat unacceptable ☐
- Totally unacceptable ☐
- I don't have or see this person ☐

19 If you spent money on gambling, do <u>you</u> think your dad or male carer would consider it to be...

- Totally acceptable ☐
- Somewhat acceptable ☐
- Neither acceptable nor unacceptable ☐
- Somewhat unacceptable ☐
- Totally unacceptable ☐
- I don't have or see this person ☐

YOUR VIEWS ON ADVERTISING

20 People have different views on adverts. Which of the following statements best describes how you feel about seeing adverts on the whole?

- I like adverts a lot ☐
- I like adverts a little ☐
- I neither like nor dislike adverts ☐
- I dislike adverts a little ☐
- I dislike adverts a lot ☐

21 People have different views on gambling adverts. Which of the following statements best describes how you feel about seeing gambling adverts on the whole?

- I like gambling adverts a lot ☐
- I like gambling adverts a little ☐
- I neither like nor dislike gambling adverts ☐
- I dislike gambling adverts a little ☐
- I dislike gambling adverts a lot ☐

ABOUT YOU

To finish, we would like to ask you some questions about yourself. Don't worry if you're not sure of the answer or you don't want to answer a question, you can just skip to the next question.

22 What is your gender?

- Male ☐
- Female ☐
- Prefer to self describe, please write in: ☐
- Prefer not to answer ☐

23 What age were you on your last birthday?

☐☐

24 Which country do you live in?

- England ☐
- Scotland ☐
- Wales ☐
- Other, please write in: ☐

25 **Which of the following best describes your current living arrangement?**

- Living with parent(s) or other adult family member(s) ☐
- Living with a spouse or partner ☐
- Living with friend(s) or housemate(s) ☐
- Not living with any other adults ☐
- None of these ☐

26 **Are you in:**

- Full time education ☐
- Part time education ☐
- Not in education ☐

27 **Are you in:**

- Full time work ☐
- Part time work ☐
- Not in work ☐

28 **What is your ethnic group?**

PLEASE SELECT ONE OPTION THAT BEST DESCRIBES YOUR ETHNIC GROUP

White
- White British ☐
- White Irish ☐
- White Gypsy/Traveller ☐
- White Polish ☐
- Other White ☐

Mixed or multiple ethnic group
- Any mixed or multiple ethnic groups ☐

Asian or Asian British
- Pakistani or Pakistani British ☐
- Indian or Indian British ☐
- Bangladeshi or Bangladeshi British ☐
- Chinese or Chinese British ☐
- Other Asian ☐

African
- African or African British ☐
- Other African ☐

Caribbean or Black
- Caribbean or Caribbean British ☐
- Black or Black British ☐
- Other Caribbean or Black ☐

Other ethnic groups
- Arab or Arab British ☐
- Other ethnic group ☐

Prefer not to answer ☐

29 **What is your religion?**

- No religion ☐
- Christian (any denominations) ☐
- Buddhist ☐
- Hindu ☐
- Jewish ☐
- Muslim ☐
- Sikh ☐

Any other religion, please write in

If you are aged between 11 and 15, please answer questions 30 to 35.

If you are aged 16 or 17, please answer questions 30 to 36.

If you are aged between 18 and 24, please answer question 36.

30 **Do you have your own bedroom for yourself?**

- Yes ☐
- No ☐

31 **How many computers does your family own (including PCs, Macs, laptops and tablets, not including game consoles and smartphones)?**

- None ☐
- One ☐
- Two ☐
- More than two ☐

32 **Does your family own a car, van or truck?**

- No ☐
- Yes, one ☐
- Yes, two or more ☐

33 **Does your family have a dishwasher at home?**

- Yes ☐
- No ☐

34 **How many bathrooms (room with a bath/shower or both) in your home?**

- None ☐
- One ☐
- Two ☐
- More than two ☐

35 **How many times did you and your family travel out of the UK for a holiday/vacation last year?**

- None ☐
- One ☐
- Two ☐
- More than two ☐

36 **Thinking of the income of your household as a whole, which of the following bands represents the household's total income from all sources over the last 12 months before any deductions for taxes, National Insurance contributions, health insurance payments, superannuation payments etc.?**

Per week	Per month	Per year	
Less than £100	Less than £433	Less than £5200	☐
£100 to £199	£433 to £846	£5,200 to £10,399	☐
£200 to £299	£847 to £1,299	£10,400 to £15,599	☐
£300 to £399	£1,300 to £1,732	£15,600 to £20,799	☐
£400 to £499	£1,733 to £2,165	£20,800 to £25,999	☐
£500 to £699	£2,166 to £3,032	£26,000 to £36,399	☐
£700 to £999	£3,033 to £4,332	£36,400 to £51,999	☐
£1,000 to £1,499	£4,333 to £6,499	£52,000 to £77,999	☐
£1,500 or more	£6,500 or more	£78,000 or more	☐
		Not sure	☐

35 **How many times did you and your family travel out of the UK for a holiday/vacation last year?**

- None ☐
- One ☐
- Two ☐
- More than two ☐

36 **Thinking of the income of your household as a whole, which of the following bands represents the household's total income from all sources over the last 12 months before any deductions for taxes, National Insurance contributions, health insurance payments, superannuation payments etc.?**

Per week	Per month	Per year	
Less than £100	Less than £433	Less than £5200	☐
£100 to £199	£433 to £846	£5,200 to £10,399	☐
£200 to £299	£847 to £1,299	£10,400 to £15,599	☐
£300 to £399	£1,300 to £1,732	£15,600 to £20,799	☐
£400 to £499	£1,733 to £2,165	£20,800 to £25,999	☐
£500 to £699	£2,166 to £3,032	£26,000 to £36,399	☐
£700 to £999	£3,033 to £4,332	£36,400 to £51,999	☐
£1,000 to £1,499	£4,333 to £6,499	£52,000 to £77,999	☐
£1,500 or more	£6,500 or more	£78,000 or more	☐
		Not sure	☐

Please tell us your full name so that we can send you a £5 high street voucher.

We will send you a high street voucher for £5 to the address we have on record. That is the address where we sent your original letter.

If you would like us to use another address, please contact us to update your address. You can do that by either calling us on Freephone 0800 652 0201 or by emailing gamblingsurvey@scotcen.org.uk and telling us your serial number (the 7 digit number on the front of this questionnaire) and where you would like your voucher to be sent.

Thank you for taking part.

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7.2 Weighting note

Calibration weighting was used to ensure that the profile of the weighted sample matches the target population profile in terms of age, sex and region. All respondents to the gambling survey came from households that had previously participated in either the Scottish Household Survey (SHS) or the Family Resources Survey (FRS). For each of these surveys, household weights are provided to account for each responding household's composition relative to the population of interest. These were, in turn, used to account for those factors which may affect the likelihood of a household responding to either the SHS or the FRS. The household weight used to weigh cases from the SHS was *LA_WT*,[5] while households that originally responded to the FRS were weighted by *Gross4*.[6]

Once the household weights from the SHS and the FRS were applied, survey respondents were weighted to the marginal age/sex and region distributions using calibration weighting. Only children and young people aged 11-24 were eligible to take part in the survey, therefore the data have been weighted to the British population aged 11-24 based on 2018 Mid-Year Estimates data from the Office for National Statistics/General Register Office for Scotland.

The sample design meant that households in Scotland were oversampled relative to the population. Over half (51%) of respondents to the survey were from Scotland, compared to less than one in ten (8%) of the estimated population of 11-24's in Britain. Because of this, respondents from Scotland (Table 7-a) were weighted separately to those from England/Wales (Table 7-b) to ensure that the weighted profile of respondents matched the population estimates.

Once these had been calculated, the weights for Scottish and English/Welsh respondents were appended and scaled to the responding sample size. The resulting weighted frequencies are compared to the population estimates in Table 7-a.

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[5] Background to the weighting for the SHS is available here: https://www.gov.scot/publications/scottish-household-survey-methodology-fieldwork-outcomes-2017/pages/9/

[6] Background to the weighting for the FRS, as part of the 2011 grossing methodology review, is available here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/321819/frs-grossing-methodology-review-2011-census-updates.pdf

Table 7-a - Unweighted/weighted frequencies of Scottish respondents

Category	Population	Unweighted respondents	Respondents weighted by household weight (SHS)	Respondent weighted by calibration weight
	%	%	%	%
Age/sex				
Male 11-13	10.2	11.3	9.1	10.2
Male 14-17	12.9	16.9	15.6	12.9
Male 18-24	27.8	19.4	22.3	27.8
Female 11-13	9.7	13.1	12.7	9.7
Female 14-17	12.4	18.2	17.3	12.4
Female 18-24	27.0	21.1	23.0	27.0
Region				
East Scotland	37.6	37.7	38.4	37.4
South/West Central Scotland	45.8	38.8	42.7	45.7
North East Scotland/Highlands	16.6	23.4	18.9	16.9

Table 7-b - Unweighted/weighted frequencies of English/Welsh respondents

Category	Population	Unweighted respondents	Respondents weighted by household weight (FRS)	Respondents weighted by final weight
	%	%	%	%
Age/sex				
Male 11-13	10.9	15.6	13.4	10.9
Male 14-17	13.5	17.1	16.1	13.5
Male 18-24	26.9	13.2	15.8	26.9
Female 11-13	10.4	14.3	13.1	10.4
Female 14-17	12.9	19.6	18.0	12.9
Female 18-24	25.4	20.2	23.7	25.4
Region				
North England/Wales	32.1	30.2	27.1	32.0
Midlands/East of England	28.7	30.4	28.4	28.7
London/South of England	39.2	39.4	44.5	39.3

Table 7-c - Combined unweighted/weighted frequencies (all respondents)

Category	Population	Unweighted respondents	Respondents weighted by household weight (SHS/FRS)	Respondents weighted by final weight
	%	%	%	%
Age/sex				
Male 11-13	10.8	13.4	11.2	10.8
Male 14-17	13.5	17.0	15.9	13.5
Male 18-24	27.0	16.3	19.1	27.0
Female 11-13	10.3	13.7	12.9	10.3
Female 14-17	12.8	18.9	17.6	12.8
Female 18-24	25.5	20.6	23.3	25.5
Scotland				
East Scotland	3.1	19.1	19.4	3.1
South/West Central Scotland	3.7	19.6	21.6	3.7
North East Scotland/Highlands	1.4	11.8	9.5	1.4
Total	8.2	50.5	50.5	8.2
England/Wales				
North England/Wales	29.4	14.9	13.4	29.4
Midlands/East of England	26.4	15.0	14.0	26.3
London/South of England	36.0	19.5	22.0	36.1
Total	91.8	49.5	49.5	91.8

The oversampling of Scottish cases relative to the population means that, when all respondents are combined, this has a substantial impact on the effective sample size. The combined sample has an effective sample size of 460 cases (compared to an unweighted total of 1091).

7.3 Description of derived variables

Demographic variables

Age

Respondents were split into two age groups: 11-17 and 18-24. Respondents who gave an age outwith the 11-24 age bracket were removed from the dataset.

For analysis of gambling activities only, respondents are split by age groups 11-15, 16 and 17, and 18-24. This is to reflect the complex age restrictions relating to gambling activities. The minimum legal age for gambling in the UK of 18 years old applies to adult gaming centres, betting shops, bingo halls, casinos, racetracks and online gambling. Exceptions to this are the National Lottery, lotteries and football where the legal age is 16. Activities such as gaming machines, coin pushers, teddy grabbers and some lower stakes fruit machines in family entertainment centres and amusement arcades do not have a minimum legal age.

Gender

Only respondents who responded “male” or “female” are included in the derived age variable. Individuals who preferred to self-describe and individuals who selected “prefer not to say” are omitted from this variable.

IMD

Deprivation quintile was derived based on postcode of the original address provided in the SHS or FRS sample file. Scottish, English and Welsh Index of Multiple Deprivation were used to give a deprivation quintile for each household.

Gambling activity variables

Current gambler

Respondents were asked how often they took part in gambling activities. Those who reported that they never usually took part in any gambling activities were classified as 'not current gamblers'. All other responses (ranging from once a month or less to every day) were considered to be current gamblers. Respondents did not have to have spent their own money on gambling activities to be classified as current gamblers.

Ever gambler

Respondents were asked what age they were when they had first spent their own money on gambling. Those who responded that they had never spent their own money on gambling were classed as "never gamblers". Respondents who had spent their own money on gambling at any age were classed as "ever gamblers".

Susceptibility to gambling

All respondents were asked whether they thought that they would spend money on gambling in the next year. Those who were not current gamblers were categorised as susceptible to gambling within the next year if they selected the answer 'definitely yes', 'probably yes' and 'probably not', and not susceptible if they opted for 'definitely not'. This approach to classifying susceptibility has also been used in relation to youth susceptibility to consume alcohol (Critchlow et al, 2019a).

Risk of problem gambling

Problem gambling among adolescents is commonly measured using two items from the DSM-IV-MR-J 10-item scale. These two items from the DSM-IV-MR-J relate to preoccupation and loss of control to give an indication of the risk of problem gambling among current gamblers. The purpose of this was to identify a potential sub-group within the sample of those at higher risk of problem gambling to be used in the analysis, and not to provide a reliable estimate of problem gambling within the population.

The table below shows the questions used and the way in which responses were classified to give an indication of being at risk of problem gambling among current gamblers.

Table 7-d - Classification of risk of problem gambling

Risk of problem gambling	In the past year, how often have you found yourself thinking about or planning to gamble?	In the past year, have you spent much more that you planned to on gambling?
High risk	Often	Often
Low risk	Often	Sometimes
Low risk	Sometimes	Often
Low risk	Sometimes	Sometimes
No risk	Once or twice/ Never	Once or twice/Never

Gambling marketing variables

Exposure to gambling marketing

Respondents were asked to select all the ways in which they had seen or heard gambling being advertised in the last month from a list of 19 items including “None of the above”. Respondents who did not select any of the items were omitted from analysis. The total number of types of gambling advertising seen or heard by each person was calculated to give the exposure to gambling marketing. Exposure is either given as the mean number of items of gambling advertising seen, or as categories based on the tertile splits of responses: Low (0-5), Average (6-8), High (9-17).

Engagement with gambling marketing

Respondents were asked to select all the ways with which they had engaged with gambling marketing from a list of 9 items including “None of the above”. Respondents who did not select any of the items were omitted from analysis. The total number of types of gambling advertising engaged with was calculated to give a count of the number of types of gambling advertising with which the respondent had engaged. Gambling advertising engagement is either given as mean number of types of gambling advertising engaged with or as categories: None, One, Two or more. Given the very low numbers of respondents engaging with gambling marketing and the large proportion of respondents selecting “none of the above”, these categories are not based on tertile splits.

Attitudes towards advertising and gambling advertising

Respondents were asked about their views on advertising in general and gambling advertising specifically using a 5-point scale ranging from “I like adverts a lot” to “I dislike adverts a lot”. In each case, the two positive categories (I like adverts a lot/a little) were combined to give overall positive views of advertising/gambling advertising, and the neutral category (I neither like nor dislike adverts) and negative categories (I dislike adverts a lot/a little) were combined to give overall neutral and negative views of advertising.

Gambling Outcomes Expectancies Scale (GOES)

The questionnaire included an adapted version of the Gambling Outcome Expectancies Scale to explore respondents’ perceptions of the outcomes of gambling behaviour (Flack and Morris, 2015; Flack and Morris, 2016). GOES was designed to assess interrelated gambling motivations including gambling for excitement, escape, ego enhancement, socialisation, and money, and measures beliefs about the perceived outcomes of gambling, independent of gambling frequency.

The adapted GOES comprises of 18 agreement statements which are split into five subscales (

Table 7-e). The scale was adapted to use a 5 item Likert scale from strongly agree to strongly disagree with a neutral mid-point. Respondents were asked to rate their agreement with each statement and responses were scored (strongly agree=5, strongly disagree=1). An average score was calculated for each subscale, with any response above 3 meaning that the young people were more likely to agree with the statement.

Table 7-e – Gambling Outcome Expectancies Scale agreement statements and subscales

Subscale	Statement
Excitement items	Gambling is a rush
	Gambling is about enjoying intensive feelings
	Gambling gives a feeling of really being alive
Escape	Gambling is a way to forget everyday problems
	Gambling is the best way to relax
	Gambling can help clear your mind
	Gambling helps release tension
Ego enhancement	Gambling is about feeling like an expert
	Gambling produces a feeling of importance
	Gambling is about feeling in control
	Gambling produces a feeling of being powerful
Money	Gambling is a way to win big money immediately
	Gambling provides a good chance to win big with small money
	Gambling is a way to make big money
Sociability	Gambling provides an opportunity to be with similar people
	Gambling is a way to meet new people
	Gambling provides an opportunity to get along with other people favourably
	Gambling provides an opportunity to be with friends

Friends' and family's views of gambling

Peer and carer gambling status

Respondents were asked how often their female carer, male carer and closest friend took part in gambling activities. Where it was reported that these people never took part in any gambling activities were classified as "not current gamblers". For all other responses (ranging from once a month or less to every day), these people were considered to be current gamblers.

Perceived carer gambling acceptability

Respondents were also asked if they thought their female carer and male carer would find it to be acceptable if the respondent spent money on gambling. In each case, the two answer options relating to gambling being considered acceptable (totally acceptable/somewhat acceptable) were combined to give an overall acceptable category, and the neutral (neither acceptable nor unacceptable) and two negative answer option (totally unacceptable/somewhat unacceptable) were combined to give and overall not acceptable and neutral category.

7.4 Regression model

Table 7-f and Table 7-g demonstrate the results of the logistic regression analyses.

In summary, separate steps were used in constructing the model to allow us to focus on different types of risk factor one at a time: step 1 – demographics and family / peer gambling; step 2 – marketing and brand awareness; step 3 – engagement in marketing; step 4 – views and attitudes towards gambling.

In the base model (step 1), key demographics plus parental gambling and attitudes to gambling, as well as peer gambling, were added. In Model 1, while there were some statistically significant findings, the key demographic variables excluding age were not associated with gambling susceptibility, though peer gambling and parental gambling acceptability were found to be associated. However, in Model 2 peer gambling was found to be particularly important in predicting current gambling behaviour (OR=8.5). Parental gambling and at least one parent/carer finding gambling acceptable were also statistically significant in Model 2 from step 1 onwards, and age (being in the young adult group) was significant from steps 1 to 4.

Following this, gambling marketing awareness (low: 0-5 items, mid: 6-8 items, high: 9-17 items) and gambling brand awareness (low: 0-6 brands, mid: 7-8 brands, high: 9-10 brands) were added to the models (step 2). High levels of awareness were significantly related to gambling susceptibility (OR: 2.0) compared with the base category of low awareness, but were not found to predict current gambling. However, higher brand awareness predicted both gambling susceptibility (OR: 1.7) and current gambling (OR: 2.0) from step 2 onwards.

For step 3, engagement with gambling marketing (no engagement, involvement with one or more types (Model 1); no engagement, involvement with one type and two or more types (Model 2)) were added to the models. Engagement in gambling marketing was significantly associated to both susceptibility to gamble (OR: 1.9) and current gambling (e.g., two or more types: OR: 3.2).

Views of and attitudes towards gambling, using the five GOES subscales, were added to the models (step 4). Table 7-f and Table 7-g show that higher mean scores in the 'excitement' and 'money' scales were significantly associated with both gambling susceptibility (e.g., 'money': OR: 1.3) and current gambling ('excitement' (OR: 1.4) and 'money' (OR: 1.2)). However, those who had higher mean scores for agreeing that gambling is a social activity were less likely to be current gamblers.

It is best to examine Step 4, the stage of the regression in which the potential association of all factors are considered together. This demonstrated that the factors most strongly associated with gambling susceptibility (Model 1) were high levels of gambling marketing awareness (OR: 1.8), increasing age (OR: 1.7), high brand awareness (OR: 1.6) and engagement with gambling marketing activity (OR: 1.7). In terms of Model 2, the factors most strongly associated with current gambling were peer gambling (OR: 6.4), engagement with two or more types of gambling marketing (OR: 3.2), increasing age (OR: 2.5) parental gambling (OR: 2.3) and high brand awareness (OR: 2.0). The confidence intervals for the odds ratios for these five factors overlapped, with the exception of peer gambling which only overlapped with marketing engagement. This suggests that peer gambling has the greatest association with current gambling, with those who have a close friend who gambles having six times the odds of being a current gambler than those without a close friend who gambles.

Table 7-f - Logistic regression: factors associated with gambling susceptibility among non-gamblers aged 11-24 (Base = 623; * Significant at the 10% level, ** Significant at the 5% level, * significant at the 1% level)**

	Step 1 Odds ratio		Step 2 Odds ratio		Step 3 Odds ratio		Step 4 Odds ratio	
Gender: Female	1.2		1.4	*	1.5	**	1.4	*
Base: Male								
Age: 18-24	1.7	**	1.5	*	1.6	**	1.7	**
Base: 11-17								
Either parent gambles	1.4	*	1.3		1.3		1.2	
Base: Neither parent gambles								
Peers gamble	2.1	**	1.7		1.5		1.7	
Base: Peers do not gamble								
Gambling acceptable to at least one parent	1.7	**	1.6	**	1.5	*	1.4	
Base: Gambling not acceptable to parents								
Lives independently from parents	0.5	*	0.4	**	0.4	**	0.5	
Base: Lives with parents								
Positive towards advertising	1.2		1.2		1.2		1.0	
Base: Negative or neutral towards advertising								
Lives in Scotland	1.3	*	1.3		1.3		1.2	
Base: Lives in England / Wales								
Area deprivation: Most deprived quintile	1.0		1.0		1.0		1.0	
Quintile 2	1.1		1.1		1.1		1.1	
Quintile 3	0.8		0.9		0.9		0.9	
Quintile 4	1.0		1.0		1.0		1.0	
Base: Least deprived quintile								
Average Number of types of marketing seen (6 to 8)			1.2		1.1		1.1	
High number of types of marketing seen (9 to 17)			1.1	***	1.7	**	1.8	**
Base: Low number of types of marketing seen (0 to 5)								
Average number of brands aware of (7 to 8)			1.7	**	1.7	**	1.5	*
High number of brands aware of (9 to 10)			1.7	**	1.7	**	1.6	**
Base: Low number of brands aware of (0 to 6)								
Participated in marketing					1.9	***	1.7	**
Base: Not participated in marketing								
Mean score for GOES Excitement items							1.3	*
Mean score for GOES Escape items							0.9	
Mean score for GOES Ego items							1.0	
Mean score for GOES Social items							1.2	*
Mean score for GOES Money items							1.2	***

	Step 1 Odds ratio	Step 2 Odds ratio	Step 3 Odds ratio	Step 4 Odds ratio
Interaction: Age 18-24 by Mean score for GOES Excitement items				
Interaction: Age by Mean score for GOES Money items				
Constant	0.423 ***	0.256 ***	0.236 ***	0.047 ***
Nagelkerke R2	0.075	0.125	0.137	0.200

Table 7-g - Logistic regression: factors associated with current gambling among those aged 11-24 (Base=1086; * Significant at the 10% level, ** Significant at the 5% level, * significant at the 1% level)**

	Step 1 Odds ratio	Step 2 Odds ratio	Step 3 Odds ratio	Step 4 Odds ratio
Gender: Female	0.8	0.9	1.0	1.0
Age: 18-24	2.6 ***	2.4 ***	2.5 ***	2.5 ***
Either parent gambles	2.5 ***	2.4 ***	2.4 ***	2.3 ***
Peers gamble	8.5 ***	7.7 ***	6.4 ***	6.4 ***
Gambling acceptable to at least one parent	1.7 ***	1.6 ***	1.6 **	1.5 **
Lives independently from parents	1.4	1.3	1.3	1.4
Positive towards advertising	1.0	1.1	1.0	0.9
Lives in Scotland	0.9	0.8	0.8	0.9
Area deprivation: Most deprived quintile	1.0	0.9	0.9	0.9
Quintile 2	1.2	1.1	1.0	1.0
Quintile 3	0.7	0.7 *	0.6 *	0.6 **
Quintile 4	1.1	1.0	1.0	1.0
0.8				
Average number of types of marketing seen (6 to 8)		0.9	0.8	0.8
High number of types of marketing seen (9 to 17)		1.0	0.7	0.7
Base: Low number of types of marketing seen (0 to 5)				
Average number of brands aware of (7 to 8)		1.3	1.2	1.2
High number of brands aware if (9 to 10)		2.0 **	1.9 **	2.0 **
Base: Low number of brands aware of (0 to 6)				
Participated in one type of marketing			1.6 **	1.4 *
Participated in two or more types of marketing			3.2 **	3.2 **
Base: Not participated in marketing				
Mean score for GOES Excitement items				1.4 **
Mean score for GOES Escape items				1.0
Mean score for GOES Ego items				0.9
Mean score for GOES Social items				0.7 **

	Step 1 Odds ratio	Step 2 Odds ratio	Step 3 Odds ratio	Step 4 Odds ratio
Mean score for GOES Money items **Interaction: Age 18-24 by Mean score for GOES Excitement items** **Interaction: Age 18-24 by Mean score for GOES Social items** **Interaction: Age by Mean score for GOES Money items**				1.3 ***
Constant	0.131 ***	0.103 ***	0.100 ***	0.059 ***
Nagelkerke R2	0.403	0.414	0.432	0.457