

# A national survey of online gambling behaviours

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**Objectives.** The aim of this study is to look at an Irish population in relation to the online gambling activities people are engaging with, the reasons for gambling online, their attitudes to online gambling and the financial/mental health consequences of online gambling.

**Methods.** The outline for this study was adapted from a study by McCormack *et al.* (2014) in relation to online gambling, with the aim of replicating this study in an Irish population. An online survey consisting of 11 categories related to online gambling was advertised online over a 7-month period. Participants answered on activities gambled online, devices used, duration of time gambling, as well mental health/financial consequences of their gambling.

**Results.** A total of 208 users participated in the online survey. The most popular gambling activity played was Sports Betting (26.9%) and the most commonly used device was Mobile app (68.6%). The main reason for gambling online was ‘To win money’ (84.6%), the main reason for ending gambling sessions – ‘Had something else to do’ (67.3%) and the most prominent emotion experienced – Excitement (60.6%). There were findings related to the severity of gambling addiction (75% – had to borrow or sell to fund gambling) and their attitudes towards online gambling (strongly agreed – 39.9% – The potential dangers of gambling should be advertised).

**Conclusions.** Online gamblers in Ireland share similar behavioural profiles to online gamblers in the United Kingdom and worldwide. The majority of participants in this research have been adversely affected from both a mental and financial perspective due to their gambling behaviours.

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## Introduction

Over the last 20 years, we have seen an exponential rise in the content that we can access almost instantaneously via the internet and gambling is no exception. Online gambling has proven to be a popular activity, with the British Gambling Prevalence Study 2010 showing that 14% of participants surveyed had used the internet to gamble in the past year (Wardle *et al.* 2011).

There are many reasons why online gambling has gained popularity for some over conventional gambling, such as permanent availability, anonymity and increased speed of play (Barrault & Varescon, 2016). The ability to gamble from the comfort of your own home has also been cited as a reason to gamble online (King & Barak, 1999). Indeed, these improvements in accessibility and ease of betting are some of the reasons why online gambling can be more addictive than conventional gambling, especially in young gamblers (Chóliz, 2016).

This is of concern as this addictive nature could lead to an increase in the incidence and prevalence of problem gambling. Problem gambling is an urge to gamble

despite harmful negative consequences or a desire to stop (Jazaeri & Habil, 2012). There are many factors that could indicate problem gambling amongst online gamblers. Participants that engaged in two or more activities online or in certain activities, such as live action sports betting or poker, were more likely to be problem gamblers (McCormack *et al.* 2013; LaPlante *et al.* 2014). Also, participants that owned multiple online accounts were more involved gamblers and engaged in gambling more frequently with higher rates of gambling problems (Gainsbury *et al.* 2015). Interestingly, multiple account holders engaged with websites based on price, betting options and payout rates *versus* legality and consumer protection features that would be characteristic of single account holders (Gainsbury *et al.* 2015). In addition, there is evidence that use of state licensed websites for online gambling cause less overall harm (Costes *et al.* 2016) and that rates of sub-clinical disordered gambling were higher in environments with less strict regulation of advertising for online gambling (Planzer *et al.* 2014).

There is also a large body of evidence looking at the effect that problem gambling can have on mental health (Scholes-Balog & Hemphill, 2012). Responsible gamblers tend to use gambling as a leisure activity whereas problem gamblers try and use gambling as a way of

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modifying their current mood state (Wood & Griffiths, 2015). Problem gamblers reported negative mood states after gambling online and negative mood states in general (King & Barak, 1999). In line with multiple account users, people engaging in multiple gambling activities online had the highest prevalence of mental health disorder (Lloyd *et al.* 2010b) and online gamblers were more at risk of alcohol and cannabis misuse (Kairouz *et al.* 2012; Scholes-Balog & Hemphill, 2012).

Currently, there is very little information on the attitudes and behaviours of online gamblers in Ireland. Therefore, the aim of this survey is to highlight what online gambling activities people are engaging with online, their reasons for choosing to gamble online, their attitudes to online gambling and the consequences of their online gambling from both a financial and mental health perspective.

## Methods

### Participants

In total, 209 participants engaged in the online survey; one participant was excluded as they only answered demographic questions. Overall 208 participant's responses were analysed. The survey was online from December 2014 to June 2015 and was advertised online and with general media outlets. An information sheet preceded taking the survey including information on what the research is about, the reason for conducting the research, how the data will be used, how privacy of data will be maintained, the benefits and risks of taking part in the survey, information about if you change your mind during the survey and finding out about the results of the survey, along with contact details for further information. Ethical approval was obtained from the Human Research Ethics Committee – Sciences based in the UCD Office of Research Ethics, Roebuck Castle, University College Dublin, Belfield, Dublin 4.

### Survey design

The survey consisted of demographic data questions and 11 main categories of questions related to gambling adapted from a similar UK study (McCormack *et al.* 2014). In terms of demographic data, there were questions on gender, age and county of residence. In terms of questions related to gambling, there were questions pertaining to the activities gambled online (poker, sport betting, horse racing, spread betting, lottery, blackjack, dog racing, bingo, fruit machine, roulette, instant win scratch cards). This question was measured on a Likert scale ranging from 'never' to 'most days'. The devices used to gamble online (desktop, mobile app, laptop, tablet) and duration of time spent gambling, in terms of

average session length and years spent gambling online, were also measured.

The survey also contained questions regarding reasons for gambling online (to win money, enjoyment, access, convenience, availability, challenge, bet at own pace, better value, comfort, bet in play, stimulation, anonymity, competition, greater flexibility in stake size, free bets, dislike atmosphere in offline venues, high speed of play online, safer, escape, offline venues too far away, spend less online, multiple games, influenced by others, adverts, free practice games and other) and reasons for ending a gambling session (won a lot of money, tiredness, frustration, boredom, had something else to do, lost too much money, reached a target, run out of money). There was also data collected on the aspects important to people when choosing a gambling app or website (recommendations, variety of games, advertisements, celebrity endorsement, ease of use, free offers, brand name, graphics, friends use it).

The emotions experienced when gambling online were also assessed (excitement, happy, no difference, frustrated, escape, anger, ashamed, empty, lonely, irritable, relaxed, euphoria, other) as well as the severity and impact of gambling online has had on the participant in the previous 12 months (borrowing money, financial problems, health problems, gambling larger amounts, felt that you might have a problem with gambling, betting more than can afford, criticised for having a gambling problem, felt guilty about your gambling, trying to win back lost money). Participants were also asked about previous treatments, if any, were received for gambling addiction.

Participants were also asked to answer questions around statements pertaining to gambling and their attitude around gambling. These 18 statements have previously been used in research around gambling and online gambling (Wardle *et al.* 2011; McCormack *et al.* 2014) and answered on a Likert scale ranging from 'disagree strongly' to 'agree strongly'.

### Analysis

Descriptive statistics were performed on all 11 questions pertaining to gambling. The variables included activities gambled online, device used to gamble online, reasons for gambling online, duration gambling online, average gambling session time, severity of gambling, emotions experienced gambling online, reasons for choosing website, reasons to end gambling sessions and attitude statements around gambling.

## Results

In total, 209 participants undertook the online survey (179 male, 30 female); one male was excluded due to

filling out only their age and gender and no responses to the survey questions. Participants were asked to complete 12 survey questions along with information on gender, age and county of residence. There was variable uptake for some of the multiple option questions and these are addressed in the relevant question's section. Participants from all over Ireland completed the survey, with 42% of applicants from Dublin. The mean age of participants was 39 years for males (s.d. = 12.7) and 38.5 years for females (s.d. = 14.0), as shown in Table 1.

### Activities gambled online

The most popular activities engaged by males online were Horse Race Betting (26.9% – 56 participants) and Sports Betting (24.0% – 50 participants), with just over half of the total sample size engaging in these activities for most days of the week. Both these activities were also engaged in on a less frequent basis (1–4 times per month, <1 per month) by a large proportion of the male and female population – Horse Race Betting (1–4 times per month – 23.6% – 49 participants), <1 per month (19.7% – 41 participants) and Sports Betting (1–4 times per month (26.9% – 56 participants), <1 per month (18.8% – 39 participants).

Lottery was not played online with the same frequency (most days) compared with Horse Race Betting and Sports Betting, but was played by a higher proportion of males and females on a less frequent basis (1–4 times per month (males 21.2% – 44 participants,

females 4.3% – 9 participants) and <1 per month (males 22.1% – 46 participants, females 4.8% – 10 participants)). A higher proportion of males also engaged in Poker on a less frequent basis (1–4 times per month (males 9.6% – 20 participants) and <1 per month (males 18.8% – 39 participants)). Instant Win Scratch Cards, despite being very infrequently played for most days of the week, were popular amongst both males and females on a less frequent basis (1–4 times per month (males 5.8% – 12 participants, females 1.9% – 4 participants) and <1 per month (males 16.3% – 34 participants, females 2.9% – 6 participants)).

The least engaged with activities online were Bingo (92.8% – 193 participants), Fruit Machines (88.5% – 184 participants) and Spread Betting (87.5% – 182 participants), with the majority of participants stating they had never engaged with these games online. The full list of responses are outlined in Table 2.

### Devices used

In total, 188 patients answered questions about the devices that they use to gamble. Participants were allowed to select more than one option. Mobile app (129 participants – 68.6%) was the most common device used to gamble online, followed by laptop (114 participants – 60.6%) and desktop (82 participants – 43.6%). Tablet was the least commonly used (53 participants – 28.2%). 58.5% (110) of participants used more than one device, with 28.7% (54) using two devices, 17.0% (32) using three devices and 12.8% (24) using all four devices listed.

### Reasons for gambling online

Participants were advised to select which of the aspects of the gambling experience listed were important to them. The total responses for each gambling experience are listed in Table 3. The most important aspect of the gambling experience selected was To win money (84.6%), followed by Enjoyment (76.0%), Access (71.6%), Convenience (71.2%) and Availability (65.4%). The least important aspects according to the survey were Adverts (12.0%) and Free practice games (9.1%).

### Duration of gambling session/years gambling online

On average, participants spent 2.8 hours (s.d. 3.3) per gambling session with female participants spending more time on average [3.4 hours (s.d. 4.2)] than male participants. Male participants, however, had a higher median duration of time spent per gambling session (3 hours) compared with female participants (1 hour). The median duration for the total sample was 1.5 hours.

Male participants spent an average duration of 8.0 years (s.d. 5.1) gambling online with a median duration

**Table 1.** Participant demographics

	<i>n</i>	Age [Mean (s.d.)]	
Gender			
Male	178	39.0 (12.7)	
Female	30	38.5 (14.0)	
Total	208	38.9 (12.9)	
Counties			
Antrim	6	Limerick	7
Armagh	3	Longford	1
Carlow	4	Louth	3
Cavan	3	Mayo	7
Clare	3	Meath	9
Cork	13	Monaghan	2
Donegal	1	Offaly	2
Down	2	Roscommon	2
Dublin	89	Sligo	1
Galway	8	Tipperary	5
Kerry	3	Westmeath	3
Kildare	12	Wexford	4
Kilkenny	3	Wicklow	8
Laois	4		

**Table 2.** Responses to the question – 'How often do you engage in any of the following activities online?'

	Never [ <i>n</i> (%), based on total <i>n</i> ]		< 1 per month [ <i>n</i> (%), based on total <i>n</i> ]		1–4 times per month [ <i>n</i> (%), based on total <i>n</i> ]		Most days [ <i>n</i> (%), based on total <i>n</i> ]	
	Male ( <i>n</i> = 178)	Female ( <i>n</i> = 30)	Male ( <i>n</i> = 30)	Female ( <i>n</i> = 30)	Male ( <i>n</i> = 30)	Female ( <i>n</i> = 30)	Male ( <i>n</i> = 30)	Female ( <i>n</i> = 30)
Horse race betting	47 (22.6)	14 (6.7)	31 (14.9)	10 (4.8)	44 (21.2)	5 (2.4)	56 (26.9)	1 (0.5)
Sports betting	38 (18.3)	18 (8.7)	38 (18.3)	1 (0.5)	52 (25.0)	4 (1.9)	50 (24.0)	0 (0.0)
Dog racing	133 (63.9)	24 (11.5)	28 (13.5)	4 (1.9)	5 (2.4)	1 (0.5)	12 (5.8)	1 (0.5)
Roulette	145 (69.7)	26 (12.5)	19 (9.1)	1 (0.5)	6 (2.9)	1 (0.5)	8 (3.8)	1 (0.5)
Lottery	81 (38.9)	9 (4.3)	46 (22.1)	10 (4.8)	44 (21.2)	9 (4.3)	7 (3.4)	2 (1.0)
Poker	112 (53.8)	25 (12.0)	39 (18.8)	2 (1.0)	20 (9.6)	2 (1.0)	7 (3.4)	1 (0.5)
Spread betting	153 (73.6)	29 (13.9)	13 (6.3)	1 (0.5)	6 (2.9)	0 (0.0)	6 (2.9)	0 (0.0)
Fruit machines	161 (77.4)	23 (11.1)	9 (4.3)	3 (1.4)	4 (1.9)	1 (0.5)	4 (1.9)	2 (1.0)
Blackjack	141 (67.8)	26 (12.5)	28 (13.5)	1 (0.5)	5 (2.4)	1 (0.5)	4 (1.9)	1 (0.5)
Instant Win scratch cards	128 (61.5)	18 (8.7)	34 (16.3)	6 (2.9)	12 (5.8)	4 (1.9)	4 (1.9)	1 (0.5)
Bingo	169 (81.3)	24 (11.5)	5 (2.4)	4 (1.9)	3 (1.4)	0 (0.0)	1 (0.5)	1 (0.5)

of 7 years. Female participants had spent less years gambling online, with an average duration of 3.6 years (s.d. 4.4) and a median duration of 2 years. The total average years spent gambling was 7.3 years (s.d. 5.2) and a total median duration of 6 years.

#### *Emotions when gambling online*

Participants were asked to select the emotions they feel when they gamble online. The most experienced emotion during online gambling according to the survey was Excitement (60.6% – 126 participants), followed by Happy (36.5% – 76 participants) and No difference (31.7% – 66 participants). The least experienced emotions were feeling Lonely (13.0% – 27 participants), Empty (13.5% – 28 participants) and Ashamed (14.4% – 30 participants). The other responses were as follows: Frustrated (27.4% – 57 participants), Irritable (24.5% – 51 participants), Relaxed (22.6% – 47 participants), Euphoria (21.6% – 45 participants), Escape (19.2% – 40 participants), Anger (18.8% – 39 participants) and Other (9.6% – 20 participants).

#### *Severity of gambling addiction*

Participants were asked to select whether or not the following statements applied to them as a gauge of the severity of their online gambling over the past 12 months. 75.0% (156 participants) of participants had to borrow money or sell to fund their online gambling participation and 74.5% (155 participants) had experienced financial problems in their household as a result of their online gambling. 67.3% (140 participants) also reported health problems including stress and anxiety as a result of their online gambling. Trying to win back

money lost the next day was the least selected with 53.4% (111) of the surveyed group. At least 50% of the participants surveyed identified with at least one of the statements. The responses to all the statements are listed in Table 4.

#### *Reasons for selecting website/gambling app*

Participants were asked to select one or more reasons why they would choose a gambling app or website. The most important reason cited by the participants for choosing a website was Ease of use (64.4% – 134 participants). Other important reasons were Free offers (31.3% – 65 participants) and Brand name (28.4% – 59 participants) with Celebrity endorsement (1.9% – 4 participants) being the least important reason for choosing a gambling app or website from the options listed. The other responses were as follows: Graphics (13.5% – 28 participants), Friends use it (13.0% – 27 participants), Recommendations (11.1% – 23 participants), Variety of games (9.1% – 19 participants) and Advertisements (7.2% – 15 participants).

#### *Reasons for ending gambling sessions*

Participants were asked to select one or more reasons why they end their gambling sessions. The most common reason for ending a gambling session is 'Had something else to do' (67.3% – 140 participants). The other main reasons for ending a gambling session were 'Lost too much money' (41.3% – 86 participants) and 'Reached a target' (38.0% – 79 participants). Boredom (26.0% – 54 participants), Frustration (27.9% – 58 participants) and Tiredness (28.8% – 60 participants) were the least common reasons for ending a gambling session. The other responses were Run out of money

**Table 3.** Responses to the question – ‘Which of the following aspects of the gambling experience are important to you?’

	Gambling experience [ <i>n</i> (% based on a total <i>n</i> )]		
	Male ( <i>n</i> = 178)	Female ( <i>n</i> = 30)	Total ( <i>n</i> = 208)
To win money	153 (73.6)	23 (11.1)	176 (84.6)
Enjoyment	138 (66.3)	20 (9.6)	158 (76.0)
Access	131 (63.0)	18 (8.7)	149 (71.6)
Convenience	129 (62.0)	19 (9.1)	148 (71.2)
Availability	123 (59.1)	13 (6.3)	136 (65.4)
Challenge	115 (55.3)	12 (5.8)	127 (61.1)
Bet at own pace	104 (50.0)	11 (5.3)	115 (55.3)
Better value	106 (51.0)	6 (2.9)	112 (53.8)
Comfort	93 (44.7)	12 (5.8)	105 (50.5)
Bet in play	85 (40.9)	8 (3.8)	93 (44.7)
Stimulation	70 (33.7)	11 (5.3)	81 (38.9)
Anonymity	66 (31.7)	12 (5.8)	78 (37.5)
Competition	67 (32.2)	9 (4.3)	76 (36.5)
Greater flexibility in stake size	64 (30.8)	12 (5.8)	76 (36.5)
Free bets	63 (30.3)	10 (4.8)	73 (35.1)
Dislike atmosphere in offline venues	55 (26.4)	7 (3.4)	62 (29.8)
High speed of play online	46 (22.1)	10 (4.8)	56 (26.9)
Safer	49 (23.6)	7 (3.4)	56 (26.9)
Escape	46 (22.1)	8 (3.8)	54 (26.0)
Offline venues too far away	44 (21.2)	8 (3.8)	52 (25.0)
Spend less online	33 (15.9)	9 (4.3)	42 (20.2)
Multiple games	24 (11.5)	9 (4.3)	33 (15.9)
Influenced by others	19 (9.1)	7 (3.4)	26 (12.5)
Others	20 (9.6)	6 (2.9)	26 (12.5)
Adverts	18 (8.7)	7 (3.4)	25 (12.0)
Free practice games	14 (6.7)	5 (2.4)	19 (9.1)

(37.5% – 78 participants) and Won a lot of money (36.1% – 75 participants).

### Treatment of gambling behaviour

Participants were asked to choose which treatment option they had received for gambling behaviour in the past or if they had never received treatment. In total, six participants were excluded as they answered both ‘Never’ and a treatment option; 22 participants did not complete this question in the survey.

The majority of participants surveyed reported that they had never received treatment for gambling behaviour (79.2% – 153 participants). Gamblers Anonymous was the most accessed treatment option (10.3% – 20 participants), followed by Counselling (8.8% – 17 participants) and Medication (1.6% – 3 participants). Two (1.0%) participants had tried all three listed treatments, 8 (4.1%) participants had tried two treatments and 18 (9.3%) participants had tried just one treatment.

### Attitude statements

Participants were asked to comment on a number of statements about online gambling, rating each on a 5-point Likert scale ranging from ‘agree strongly’ to ‘disagree strongly’. The responses to each of the statements are included in Table 5.

The statement that participants agreed most strongly with was ‘The potential dangers of gambling should be advertised’ with 39.9% (83 participants) stating that they ‘Agree Strongly’. This is followed by ‘Some gambling websites are more trustworthy than others’ (27.9% – 58 participants) and ‘I would prefer to gamble on websites that regularly tell me how much I’ve lost’ (26.0% – 54 participants). The statements that participants least agreed with (selected Disagree Strongly)

**Table 4.** Responses to the question – ‘Thinking about the last 12 months...’

	Yes responses [ <i>n</i> (% based on a total <i>n</i> )]		
	Male ( <i>n</i> = 178)	Female ( <i>n</i> = 30)	Total ( <i>n</i> = 208)
Have you borrowed money or sold anything to get money to gamble?	135 (64.9)	21 (10.1)	156 (75.0)
Has gambling caused any financial problems for you and your household?	134 (64.4)	21 (10.1)	155 (74.5)
Has gambling caused you any health problems including stress and anxiety?	120 (57.7)	20 (9.6)	140 (67.3)
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?	116 (55.8)	21 (10.1)	137 (65.9)
Have you felt that you might have a problem with gambling?	113 (54.3)	21 (10.1)	134 (64.4)
Have you bet more than you could really afford to lose?	110 (52.9)	19 (9.1)	129 (62.0)
Have people criticised your betting or told you that you had a gambling problem regardless of whether or not you thought it was true?	109 (52.4)	17 (8.2)	128 (61.5)
Have you felt guilty about the way you gamble or what happens when you gamble?	103 (49.5)	20 (9.6)	123 (59.1)
When you gambled, did you go back another day to try and win the money you lost?	94 (45.2)	17 (8.2)	111 (53.4)

**Table 5.** Responses to the question – 'How do you feel about the following statements?'

	Agree strongly [n (%)]	Agree [n (%)]	Neither agree nor disagree [n (%)]	Disagree [n (%)]	Disagree strongly [n (%)]
The potential dangers of gambling should be advertised	83 (39.9)	75 (36.1)	20 (9.6)	3 (1.4)	5 (2.4)
Some gambling websites are more trustworthy than others	58 (27.9)	59 (28.4)	50 (24.0)	12 (5.8)	16 (7.7)
I would prefer to gamble on websites that regularly tell me how much I've lost	54 (26.0)	69 (33.2)	47 (22.6)	12 (5.8)	15 (7.2)
Online gambling is more addictive than offline gambling	50 (24.0)	59 (28.4)	52 (25.0)	19 (9.1)	8 (3.8)
I would prefer to gamble on websites that regularly tell me how long I have been playing	40 (19.2)	50 (24.0)	69 (33.2)	17 (8.2)	18 (8.7)
It is easy for children to gamble online	40 (19.2)	56 (26.9)	47 (22.6)	29 (13.9)	16 (7.7)
Gambling advertisements do not influence my gambling behaviour	40 (19.2)	51 (24.5)	57 (27.4)	25 (12.0)	14 (6.7)
I would prefer to gamble on websites that have information about responsible gambling	38 (18.3)	42 (20.2)	86 (41.3)	16 (7.7)	21 (10.1)
I prefer online games with some element of skill	33 (15.9)	42 (20.2)	59 (28.4)	21 (10.1)	31 (14.9)
I tend to spend more gambling using virtual money (online) than gambling using real money	31 (14.9)	29 (13.9)	43 (20.7)	38 (18.3)	46 (22.1)
I prefer gambling activities that are quick	28 (13.5)	40 (19.2)	62 (29.8)	28 (13.5)	34 (16.3)
I prefer online games that are easy to learn	20 (9.6)	22 (10.6)	74 (35.6)	28 (13.5)	47 (22.6)
If I nearly win in an online game, then I am more likely to play again	20 (9.6)	49 (23.6)	55 (26.4)	32 (15.4)	30 (14.4)
Online gambling is safe	17 (8.2)	43 (20.7)	41 (19.7)	48 (23.1)	45 (21.6)
I like to gamble against other people online	17 (8.2)	33 (15.9)	48 (23.1)	46 (22.1)	46 (22.1)
I prefer online games with large jackpots	16 (7.7)	26 (12.5)	67 (32.2)	35 (16.8)	48 (23.1)
I am attracted by the graphics on gambling websites	15 (7.2)	31 (14.9)	51 (24.5)	41 (19.7)	57 (27.4)
I am attracted by the sound effects on gambling websites	7 (3.4)	8 (3.8)	47 (22.6)	48 (23.1)	84 (40.4)

were 'I am attracted by the sound effects on gambling websites' (40.4% – 84 participants), 'I am attracted by the graphics on gambling websites' (27.4% – 57 participants) and 'I prefer online games with large jackpots' (23.1% – 48 participants).

## Discussion

The aim of this study was to examine online gambling from an Irish perspective; to examine what online activities people are engaging with, their reasons for choosing to gamble online, their attitudes to online gambling and the consequences of their online gambling from both a financial and mental health perspective. As stated previously, this study was adapted from a previous study conducted by McCormack *et al.* (2014), with the aim of replicating this study in an Irish population. The majority of the respondents were male (85.6%) which is largely similar to other studies conducted on this topic (Wardle *et al.* 2011; Wood & Williams, 2009).

Females tended to spend more time on average in a typical gambling session compared with males, which is surprising given that previous studies have shown that females tend to spend less time per session (McCormack *et al.* 2014) than males. However, if we look at the median hours spent gambling, females are spending 1 hour per session compared with males spending 3 hours per session. This would correlate with other studies suggesting that females were significantly more likely to gamble for less than 1 hour per session compared with males (McCormack *et al.* 2014). The difference in the average values for females may be reflected in the small sample size obtained. Females were also noted to have been gambling online for a much shorter duration of time than males (females median 2 years *v.* males median 7 years). This would correlate with previous studies which show that females generally start gambling at a later stage than their male counterparts, which would lead to a shorter duration of years gambling overall (Slutske *et al.* 2015).

There was a tendency towards activities with a live action component. Examples such as horse racing, sports betting and dog racing were the most popular among regular (most days) and non-regular gamblers (1–4 times per month and <1 per month), which suggests the live action component may contribute to the enjoyment of these activities. This is in line with previous studies (McCormack *et al.* 2014; Hing *et al.* 2016) which identified these activities as the main gambling activities engaged in by males.

Females tended to be non-regular gamblers compared with male gamblers and engage in more socially acceptable forms of gambling, such as playing the lottery or using instant win scratch cards. Females have been shown to engage more in these activities compared with their male counterparts (McCormack *et al.* 2014; Hing *et al.* 2016) and, interestingly, use of instant win scratch cards in females is associated with an increased risk of problem gambling (Hing *et al.* 2016).

Accessibility appears to play a key role in the use of online gambling amongst the participants surveyed. There is evidence from previous studies that there is a relationship between the availability of gambling opportunities online and increased levels of related problems (Gainsbury, 2015). When asked about what aspects of the gambling experience were most important to them, most participants (both male and female) stated that the main aspect of the gambling experience that was important for them was winning money. However, both males and females tended to highly value similar aspects of the gambling experience related to accessibility, namely enjoyment, access and convenience. This is also reflected in the findings related to choosing a website where ease of use was noted as the most important factor when choosing a gambling app or website for both males and females in our survey. It is interesting to note that mobile apps were also the most commonly used device, which would intuitively be the easiest to access compared with computers or tablets.

As stated before, participants valued the enjoyment of the experience as one of the most important aspects of the gambling experience, with 76.0% of our study participants citing it as a reason to gamble online. Enjoyment has also been noted as a frequently cited reason for gambling online in other studies, with other studies citing figures between 48.7% (McCormack *et al.* 2014) and 59.9% (Goldstein *et al.* 2016) of all participants. Following on from this, participants were asked about the emotions they experience when gambling online. The results were mainly positive emotions, with the majority of participants stating that they feel excitement and happiness while gambling. Interestingly, the next most common emotion experienced was that participants felt no difference when gambling

online, followed then by primarily negative emotions such as frustration and irritability. We know from previous studies that gambling to relieve negative mood states increases the likelihood of problem gambling (Blaszczynski & Nower, 2002; Matthews *et al.* 2009; Nower & Blaszczynski, 2010), which may indicate problem gamblers identifying with these emotions in our study.

The main reason for ending a gambling session was that the participant had something else to do, with the majority (67.3%) of participants stating this as the main reason. This finding would correlate with previous studies (McCormack *et al.* 2014). However, boredom is frequently cited in other studies as a main reason to end gambling sessions (McCormack *et al.* 2014; Goldstein *et al.* 2016) and was cited as one of the least common reasons in this study. Problem gamblers have been shown to use gambling as a means to escape boredom (Lloyd *et al.* 2010a) and the alternative finding in these studies may reflect the higher number of regular gamblers (>4 times per month) in these studies compared with our survey.

As mentioned earlier, the majority of participants stated that ease of use was the most important factor when choosing a gambling website. The other factors people identified were free offers advertised and the brand name gambling websites. The participants in the study also stated that they find some gambling websites more trustworthy than others, and this may be a large factor into deciding to choose the brand name websites over other websites. Females were also more likely to use a website if their friends recommended it, which has also been found in previous studies (McCormack *et al.* 2014).

This survey also looked at the severity and impact of online gambling in their lives. The questions listed in the survey were taken from the Problem Gambling Severity Index (PGSI), a widely used nine item scale for measuring the severity of gambling problems in the general population (Currie *et al.* 2013). The majority of people surveyed identified with at least one of the statements listed. The most common impact that gambling had on the participants lives was financial, followed by significant mental health difficulties, indicating the presence of problem gambling. This is also reflected internationally as only 24.3% of patients in a recent study by McCormack *et al.* were identified as non-problem gamblers, according to the PGSI (McCormack *et al.* 2014).

Most of the participants surveyed have never taken part in any treatment for their gambling behaviours. We know from previous studies that land based gamblers are more likely to acknowledge the need for treatment for gambling addiction (Blaszczynski *et al.* 2016) compared with online users. Around 80% of all

participants have never sought any treatment for a gambling problem. This contrasts with the 64.4% of participants that felt that they may have a problem with gambling. This would suggest that, while the majority of participants can recognise they have a problem, few are seeking help and treatment for this.

The participants in this survey were also asked about their attitudes and beliefs in relation to online gambling. Most participants agreed with statements that would help minimise the harmful effect of online gambling, such as wanting the potential dangers of online gambling advertised and websites to state how long someone has been playing or how much they have lost. The participants also stated that they felt that online gambling was more addictive than offline gambling and that some gambling websites are more trustworthy than others. This level of agreement would suggest that online gamblers would welcome certain restrictions and warning on gambling websites in order to minimise the impact they can potentially have.

The participants tended to disagree that they were attracted to websites by the sound effects or graphics. This would support the suggestion that online gamblers generally are not attracted to the physical appearance of the site or other commonly used methods to entice people to a website including celebrity endorsement. This finding would be in line with other previous studies (McCormack *et al.* 2014).

There are some limitations identified in this study. Given that this is a self-report online study, it may be difficult to interpret the results as problem gamblers have been shown to have difficulty estimating their gambling experiences, especially the gamblers with higher losses (Auer & Griffiths, 2016). Ideally this study would also look for significant differences between genders. However, given the low overall number of female participants, the study would not yield accurate statistical differences. Further, large-scale studies would be needed to identify gender differences in relation to online gambling. There is also a risk of selection bias with this online survey, given that it is more likely to attract online gamblers with some strong opinions around online gambling, as well as some insight into their gambling difficulties.

In conclusion, this survey has shown that online gamblers in Ireland share similar behavioural profiles to online gamblers in the United Kingdom and worldwide. There are many people in Ireland suffering from financial and mental health difficulties related to online gambling and there is a desire amongst this cohort to have the dangers of online gambling advertised on these websites in order to limit the damage they can cause. We have identified different factors that contribute to problems with online gambling such as the emotions experienced during online gambling and the reasons for starting and ending online gambling

sessions. Further studies are needed to explore these findings and their usefulness as possible targets for intervention to reduce levels of problem gambling.

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### Conflicts of Interest

The authors declare that there are no conflicts of interest.

### Ethical Standards

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation with the Helsinki Declaration of 1975, as revised in 2008. The study protocol was approved by the ethic committee of UCD Office of Research Ethics, Roebuck Castle, University College Dublin, Belfield, Dublin 4.

### Supplementary material

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