ROUTES IN AND OUT OF PROBLEM INTERNET GAMBLING BY GENDER AND BY GAMBLING ACTIVITY: A MIXED-METHOD STUDY BASED ON PERSONAL ACCOUNTS OF INTERNET GAMBLERS

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DECLARATION

I certify that this work has not been accepted in substance for any degree, and is not concurrently being submitted for any degree other than that of Doctor of Philosophy being studied at the University of Greenwich. I also declare that this work is the result of my own investigations except where otherwise identified by references and that I have not plagiarised the work of others.

Student……………………………………….Date…………………

Supervisor…………………………………….Date…………………

ACKNOWLEDGEMENTS

ABSTRACT

In the last two decades, Internet gambling (IG) has emerged as a medium in which to gamble. This research aimed to increase understanding of IG by examining routes in and out of problem IG, and also investigating similarities and differences between men and women, players of different IG activities (betting, poker, casino, lottery), and problem and non-problem gamblers (PGs, NPGs). A mixed-method approach was used. Initially, 62 UK Internet gamblers (31 male, 31 female; 32 NPG, 30 PG) participated in semi-structured interviews analysed using the Grounded Theory Method (Strauss & Corbin, 1998). Key findings were translated into hypotheses which were tested in a bespoke online survey, completed by 266 UK Internet gamblers (204 male, 62 female; 182 NPG, 58 PG).

Qualitative findings indicated multiple influences for initiating IG, and factor analysis of the quantitative data indicated six initiating factors; *utility of IG, value for money, social introduction, alternative social environment, competitiveness* and *needing something to do*. Men were more influenced than women by value for money and utility of IG. Bettors were more influenced by utility than players from other gambling domains, casino players by the attraction of an alternative social environment online, and poker players, by competitiveness and needing something to do. PGs were more influenced than NPGs by an alternative social environment, competitiveness and needing something to do. A 'vulnerability-compensation effect' was noted, where vulnerabilities in daily life could be compensated for by engagement with Internet gambling.

Continuing, increasing and decreasing IG involvement was influenced by seven categories of events and motivations; *financial interests and concerns, enjoyable leisure activity, skill development, life events, emotions and escape, social influence, utility of IG features* and *time*. Convenience had the biggest impact on increasing IG involvement across all gamblers. Men were more influenced than women to increase IG by skill development, women were more influenced by life events, emotions and escape. Poker players were influenced more than players in other domains by skill development. PGs were more influenced than NPGs to increase due to finances, and life events, emotions and escape.

Motivations for starting, continuing, escalating and reducing gambling involvement included two new behavioural drivers for IG not specifically captured in existing gambling motivation research; *the utility of IG features*, and *time*, as in the opportunities and constraints on available time. Motivations were different across key gambler variables, and their effects changed over a gambler's journey. Participants indicated that life events, emotions and escape had a strong impact on gambling behaviour, and also suggested safe play and resilience to harm could be developed as protective factors. Both of these issues, along with the impact on time as a possiblel problem IG marker, have potential to influence social responsibility strategies.

From qualitative and quantitative findings, an integrated IG model was created, which suggests problem IG results from a series of escalations influenced by the seven categories of continuation events. The model potentially offers a vehicle for systematic testing and comparison of factors influencing stability and change of IG involvement.

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CHAPTER 1

INTRODUCTION

1.1   My interest in gambling: A personal reflection

As a child, like many other children in the UK, I experienced gambling at a young age in seaside arcades when on holiday. I watched my parents enjoy traditional UK racing days; the Grand National in particular was a favourite race, followed every year without fail, with a bet on the day and plenty of noise in front of the TV. Sometimes we put a pound or two in the fruit machine in the chip shop when we were waiting for our fish and chips on a Friday night. I watched my father play on fruit machines with large jackpots in private clubs, sometimes putting in amounts of money larger than I had ever come across, convinced there was a system he could play to win; convinced that a payout was due at any moment. I went with the flow; everyone seemed to go with the flow; gambling was a bit of fun for all of us, with perhaps the potential to win a bit of money if it was played right. In my twenties, I spent three months in hotels when I was training for a new job. There was not much to do in the evening, so a group of us ended up in the local casino, with a few drinks and a few pounds, trying to work out a system to be successful at roulette. We had a bit of fun; sometimes we won a bit, sometimes we lost a bit; whatever we had in our pockets at the time. It was of no real consequence and was an enjoyable night out. However, I did seem to have a system that worked quite a lot of the time, especially on tables that were busy and the croupier seemed more attentive to people who were gambling with bigger stakes than me. One evening was a bit different. Just two of us went to the casino, and we went early. I took my cheque book, and when I had lost what was in my pocket, I wrote a cheque. Then another one, then a few more. I thought if I played steadily over time, or doubled up a bit I would get my money back as I had a system that worked. By the end of the evening I had discovered that systems did not always work, that gambling was not always fun and that it made me feel physically sick when I lost more money that I could afford. I never went to the casino again, and in fact, apart from the occasional game of cards with friends or trips to the dog track, gambling was not something I did or was involved in to any real degree until I met my husband a few years later.

My husband's East End family background in the Old Kent Road was different to mine. His Grandad was a street bookie in the 1940's and 50's and then there was Uncle Charlie who ran a chain of amusement arcades. There were lots of gambling tales in the family, regaled and laughed about at various family events. Gambling was part of my husband's family history. My husband and his brother had a savings account where they saved up all year so when it came to the summer they could go racing every day. They, along with the other men in the family, placed bets over the phone long before online gambling was available, and they had holidays in Ireland going gambling every day at the Irish racetracks. They gambled most weekends, often mulling over their successes in the pub long after the last horse had run. We all went together to the racetrack, it was a laugh and an enjoyable day out. I played my £3 a race, they played much more, but that was done quietly amongst the boys although sometimes someone would let me know there was a big bet on. I didn't care about my horse winning; I just wanted them to win.

After my husband and I were married and we had our first child, my husband still gambled at the weekend and sometimes during the week. He often disappeared to the bookies on a Saturday when the racing was on, or watched racing on the TV all afternoon while I did the weekend domestics. Was this a problem? Well, he thought it was normal and OK. I wasn't so sure I agreed, as I tackled the weekend housework and childcare on my own. He always told me how he was slightly up or breaking even so it was no cause for concern. He sometimes came home with extra money and we had treats and holidays. I asked him to keep a record of his spending, wins and losses. Quietly and without any fuss he did so, and a few months later, again quietly and without any fuss, he stopped gambling.

At present, we still go to the racetrack occasionally as a special occasion, or may go for a night out at the dogs. I still hear stories about family members' gambling, although they are becoming less frequent and less dramatic, as trips to the races and the bookies are less frequent and family dynamics have changed over time. Sometimes, more quietly, I hear how convenient Internet gambling is now.

My experience of gambling is only modest. However, whilst I found it enjoyable entertainment and it added fun and enjoyment to social occasions; I also found from

personal experience it can become unpleasant for a gambler and disrupting for a gambler's family, even if gambling is at a modest level. It is deeply embedded in parts of society and is accepted as normal behaviour despite the negative impact it can have at times, when it slips out of control or is prioritised over other responsibilities. I feel fortunate that I found gambling aversive the first time I lost a significant amount of money. I also feel fortunate that my husband took note of my suggestion to check his spending, and immediately changed his gambling behaviour. Knowledge and understanding of gambling, self-awareness, and awareness of its impact on others, seem to me to be key to deciding to maintain sensible control.   And from what I have seen, avoiding gambling and drinking at the same time also seems pretty sensible too. My interest in studying gambling for my doctoral thesis in part stems from these personal experiences, and my modest insight into the world of gambling has provided the interest and enthusiasm to complete my doctoral studies.

1.2 Introduction to this PhD

This PhD formally stemmed from a research project into women's Internet gambling, funded by the Responsibility in Gambling Trust (changed to the Responsible Gambling Fund and now the Responsible Gambling Trust). The lead researcher for the women's Internet gambling project was Professor Roslyn Corney, with the author of this PhD being a researcher on the project. It comprised a qualitative study of 25 females who gambled on the Internet frequently from home. It aimed to understand the motivations and experiences of women who undertook Internet gambling and the impact that such Internet gambling had on their life.

As the research was underway, the emerging qualitative findings indicated that women's Internet gambling experiences appeared to have some differences to land-based gambling experiences. Internet gambling, for example, was more accessible than traditional gambling, there were more choices and new ways to gamble, poker appeared to be more popular, and women had taken it up as a leisure activity they could undertake at home (Corney & Davis, 2010a, 2010b). This led to a number of questions, for example, whether this was an entirely female experience or whether men's experiences were the same, whether there were different experiences for people gambling on different modes on the Internet, and whether problem gambling on the Internet was the same or different to problem gambling with traditional land-based gambling. Also, from a slightly different perspective, how did Internet gamblers start gambling online and progress, and how was this similar or different to land-based gambling? An initial literature search was undertaken and it appeared there were no real answers to these questions as yet. There was little research that compared gender, much of the research was aimed at male gamblers or problem gamblers, and comparisons between players of different games were rarely made. Additionally, there was little research on Internet gambling. To extend the original research project into a wider project to answer some of these questions, funding for the continuation of the original project was gained and the project was completed in the form of a PhD.

The full scope of the available research relevant to the research questions being posed is described and evaluated in Chapter 2. This starts with defining Internet gambling in the UK as it is currently defined in law. Gambling is after all a regulated industry and

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without consideration of what is and what is not allowed to happen in the UK with regard to gambling, it would be impossible to put this piece of research into context. The prevalence of gambling, Internet gambling and different gambling activities are then considered. This initial review, covering legal, industry and prevalence issues, places gambling in a current context, particularly in terms of its social and cultural position in the UK. This enabled a more contextual and applied perspective to the research.

Existing academic research is then explored, including research on explanations for gambling behaviour, problem gambling, non-problem gambling, gender differences, specific gambling modes and Internet gambling. The research found was varied, although the majority research was focused on three topics; land-based gambling in male problem gamblers, gamblers undergoing treatment and gambling in student populations. More recent research, in the last five years, has included a small but increasing amount of research into Internet gambling with some participants recruited from international Internet gambling populations via Internet gambling websites.

The literature review resulted in the following research aims;

1. To examine the pathways in and out of Internet gambling.

2. To identify similarities and differences between male and female Internet gamblers, between players of different Internet gambling games and between problem and non-problem Internet gamblers.

3. To compare findings with land-based gambling research to consider how existing land-based gambling theory is applicable to Internet gambling.

The methodology and research methods selected for the research are fully explained in Chapter 3. As Internet gambling is a relatively new area of research, initially a qualitative method was used. As little research specifically on Internet gambling existed at the time this project was initiated, it seemed important to gain some understanding of Internet gambling from people who undertook it. It would have been easy to assume that existing research on land-based gambling equally applied to Internet gambling, but at the time this project began, no research existed that could show that this was indeed the case. A qualitative inductive emergent approach seemed a pragmatic way to gain

insight and understanding of the way that people used the Internet to gamble. The Grounded Theory Method was selected as this would provide a 'theoretical' outcome that would have a structure or framework capturing and organising all the data in a systematic way. This structure of core categories and sub-categories could then be used to enable comparisons between different participant groups of interest and different theories. Data from the interviews were analysed as it was being collected. This was for two key reasons. Firstly this analysis provided insight into the areas of interest that could be focussed on in subsequent interviews, a key feature of Grounded Theory Method. Secondly, the analysis provided an insight into potential hypotheses for testing in a survey. These hypotheses were operationalised into questions within a quantitative online survey, and results of the survey were used to gain quantitative support of the qualitative findings. To keep the project within a reasonable time frame, the early analysis enabled the questionnaire to be designed and administered alongside the final interviews and analysis. Participants undertaking the survey were asked to participate in the final interviews to enable selection of remaining participants required for the qualitative research to be recruited in line with the sampling framework. The use of mixed methods resulting in a qualitative-quantitative design is explored in the methodology chapter.

Details of the qualitative method are included in Chapter 4. The chapter includes detail about the 62 UK gamblers who participated in the research and how they were recruited and interviewed. The qualitative findings from these interviews are presented in a hierarchy of four core categories, along with their sub-categories and minor categories. These findings are presented in three chapters, with Chapter 5 presenting categories related to initiating Internet gambling, Chapter 6 presenting data categories relating to stability and change in Internet gambling involvement, and Chapter 7 presenting categories related to problem gambling . In each of these chapters, categories and sub-categories are described, and extracts from interviews are presented to support the interpretation of the data. The findings are reviewed in preliminary discussions, with key findings stated and from these key findings, hypotheses arising from the data are stated. These hypotheses were operationalised into questions that were taken forward into the quantitative online survey. The core categories and sub-categories are arranged into a provisional framework linking them together. This is explained in terms

of a case study, presented in Chapter 7, highlighting the categories and how they are linked together.

Chapter 8 summarises the quantitative method used, and the recruitment of the 266 UK participants, along with quantitative procedures and ethics. The demographics of the sample are presented. The hypothesis-related results are presented in Chapter 9. Findings that were considered relevant and novel that were not hypothesised from the qualitative sample are also included here. A preliminary discussion here, summarises key findings and integrates findings from the qualitative and quantitative results. A copy of the survey used and the full quantitative data analysis of the survey are included in the appendices.

The discussion is contained in Chapter 10. This presents the final integrated model of Internet gambling, explaining its elements and connections, and summarising support from the qualitative and quantitative research. Comparisons between the model and existing land-based gambling models and theory are explored. The applications of the findings are discussed in terms of the current position of Internet gambling in the UK. Lastly, limitations of the research and conclusions are presented.

The appendices include additional relevant materials used to support the research including ethical approval, recruitment materials, interview schedules, qualitative questionnaire, Problem Gambling Severity Index, and full quantitative results.

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CHAPTER 2

LITERATURE REVIEW

2.1   Introduction to literature review

This literature review has been undertaken to provide a current picture of UK Internet gambling, and to highlight conflicts and limits of existing knowledge on Internet gambling. It thus highlights and justifies where further research is required, and provides a conceptual context to this thesis. It establishes the purpose and research aims for this project, firmly embedding them in existing and relevant research and literature, while defining and conceptualising the key constructs that will be used throughout this project.

The review includes literature from a range of sources and countries, mainly academic, but also gambling industry literature, covering knowledge, research and theory relating to gambling. Whilst this thesis is based on the current UK online gambling population, if the review were only related to UK literature, it would be limited and ignore many features of gambling which appear to be reflected universally across different cultures. The majority of the literature in this review is based on UK, Canadian and Australian populations, as this is where a large amount of the gambling research has taken place. For the purposes of this research it is assumed to reflect the UK population unless specifically stated otherwise. The literature review also covers topics including UK gambling law, gambling prevalence, different gambling games, male and female gamblers, motivations for gambling, addiction and problem/pathological gambling. All of these are relevant in building the current picture of Internet gambling in the UK and defining the research aims of this project.

There is a long history of gambling within the UK and Internet gambling is undertaken in the cultural context of this history, also being bound by the UK gambling law permissions and restrictions under the 2005 Gambling Act.   Whilst this project is a psychological piece of research and this is primarily a psychological literature review, the cultural context of UK gambling does need some exploration to provide a full picture of UK Internet gambling. The prevalence rates of gambling in the UK are included in

the literature review to give a picture of who is gambling in the UK and how they are gambling. It also provides a picture of how UK gambling is evolving as Internet gambling has been introduced and is becoming established as a societal norm.

Much existing gambling-related research has been concentrated on land-based gambling, i.e. gambling that takes place in a physical gambling establishment or venue. This review will include literature which is concentrated on land-based gambling, as to exclude it would be to ignore a large part of the pre-existing and established knowledge base. The review will clarify where possible whether the literature included is applicable to land-based or Internet gambling, or both. As it is yet to be clearly established where the parallels between land-based and Internet gambling converge and diverge, this literature will be revisited during the course of the project to explore and compare land-based and Internet gambling phenomena.

Apart from these general themes addressed throughout the literature review, there are three key strands of research areas that the literature review will cover. Firstly, the review will bring together research which identifies differences and similarities between men and women who gamble. This will be both in terms of prevalence and Internet gambling behaviours. Secondly, the review will highlight literature that explores similarities and differences between people undertaking different types of gambling. Whilst the term 'gambling' encompasses many modes of gambling including poker, betting, horse racing, bingo, casino games and lotteries, gamblers themselves appear to choose and play particular modes of gambling for particular reasons. To ignore this would enforce a commonality on gambling which does not necessarily exist across all gambling modes, and ignore the relative attractions and effects of engaging in different types of games. Thirdly and finally, problem gambling is an issue highly relevant to gambling research. Since the Gambling Act (2005), the UK gambling industry has a duty to consider socially responsible gambling in their establishments and also online, in order to minimise harm to gamblers. However there are issues surrounding how to define and measure those who are, or who are likely to be harmed and there are issues about how harm is related to constructs such as addiction, impulse disorder, problem gambling, pathological gambling and gamblers who are 'at risk'. The review will include literature related to these constructs and establish how these terms and constructs will be used throughout this project.

2.2   What is 'gambling'? A summary of the law and the UK gambling Industry

Gambling, as defined by the Gambling Act (2005), consists of three elements, gaming, betting and participating in a lottery. Gaming is defined within the Act as "playing a game of chance for a prize" (Gambling Act, 2005, 1.6.1). This includes games that involve an element of skill as well as chance, whether or not the player risks losing anything. Gaming includes bingo, casino games such as black jack, poker and roulette, and gaming machines, such as fruit/slot machines and fixed-odds betting terminals (FOBTs) (Gambling Commission, 2010a). FOBTs are touch screen multi-mode betting machines with a choice of fixed odds games including roulette, bingo, simulated racing and slots.

Betting is defined as making or accepting a bet on "the outcome of a race, competition or other event or process, the likelihood of anything occurring or not occurring, or whether anything is or is not true" (Gambling Act, 2005, 1.9.1). Betting includes for example, general betting with a bookmaker or at a racetrack, pool betting, betting exchange, and spread betting. General betting can be described as betting on the outcome of an event, usually directly against a bookmaker. Pool betting incorporates a collective type of bet, such as the tote at a racetrack, the football pools, or fantasy football games. Betting exchange involves the setting up and buying and selling of bets with other people via an intermediary, usually via the Internet, rather than betting directly against the bookmaker. Spread betting involves betting not just on the outcome of an event e.g. winning or losing a football match, but betting on a particular numerical outcome, e.g. the time of the first goal or the number of corners in a match. Losses and returns in this type of betting are not fixed. The level of the win or loss depends, for example, on when the first goal is scored and how many minutes it is over or under the 'spread' time offered by the bookmaker for the first goal. Financial spread betting involves betting, for example, on the prices of certain shares increasing or decreasing, or the share index increasing or decreasing by a certain number points in a certain time frame. Financial spread betting is regulated by the Financial Services Authority rather than the Gambling Commission (Gambling Commission, 2010a)

A lottery is defined as an arrangement where people pay to participate in the opportunity to win one or more prizes, which are allocated to participants by chance, or

at least the first step of the process relies on chance (Gambling Act, 2005). Lotteries included raffles, tombolas and sweepstakes and none can be run for private or commercial gain. Certain types of lottery, such as society lotteries, can be used to raise funds for good causes, and others are limited to certain populations do not need to be licensed, for example, private work lotteries restricted to colleagues in a certain workplace. The National Lottery is regulated by the National Lottery Act (2006) and the National Lottery Commission rather than by the Gambling Act (2005) and the Gambling Commission.

The Gambling Act incorporates both traditional terrestrial gambling as well as the newer forms of remote gambling which have emerged in recent years, including the Internet, telephone, television, radio, or "any other kind of electronic or other technology for facilitating communication" (Gambling Act, 2005, 1.4.2). Remote gambling regulations, based on the Gambling Act, only extend to companies who offer remote gambling and have any part of their remote gambling equipment based in the UK. If the equipment is based abroad, the companies can operate in the UK if they are from a permitted country, but they do not come under UK regulation. Permitted countries currently include European Economic Area countries, Alderney, Antigua and Barbuda, Gibraltar, Malta, Isle of Man and Tasmania.

In January 2014 there were approximately 2850 Internet gambling websites listed on an Internet site that evaluated the popularity of different gambling sites (www.online.casinocity.com). Of the sites listed, 2200 were offering Internet gambling in the UK. These companies offered a variety of games including 5417 slots games, 835 casino games, 280 poker games, 385 bingo games, 338 sports books, 83 lotteries, eight betting exchanges and 40 skill games, including for example, mah-jong and backgammon (Casino City, 2014). From 2011 to 2014, Casino City suggested there was a 10% increase in the number of sites available to the UK, with a 220% increase in the number of slot games available, a 22% increase in casino games and a 60% decrease in poker games. Additionally, 167 financial spread betting options were available.

At March 2013, there were 291 licensed remote gambling operators in the UK (Gambling Commission, 2013c). The majority of licences, 161, related to remote betting,

including general betting, pool betting and betting exchanges. Remote casinos were granted 25 licences and remote bingo, 9. The remaining 96 licences were issued for gambling software. This was a slight decrease in the number of licences at March 2009, totalling 306.

For 2012, the Gambling Commission (2013c) estimated the gross gambling yield (GGY – takings less payouts) of the global internet gambling industry was £21.1 billion. The UK registered remote operators had an approximate 4% share of the global market. This represented 13% of the total UK gambling industry for the financial year ending March 2013.

The Gambling Commission (2013c) confirmed that the majority of gambling sites that UK citizens use were regulated overseas. The gambling operator could be based in the UK for land-based activities, but remote gambling operations could be licensed, and therefore regulated, overseas. This was for "fiscal and other operational reasons" (p 14, Gambling Commission, 2009). However, more recent UK policy shifted towards requiring all remote gambling operators who provide services to UK consumers to be licensed in the UK. This new approach would ensure that regulatory standards are the same across all gambling websites, levelling the playing field for providers, for example in terms of advertising, and establishing consistent protection to consumers across all gambling websites. An amendment to the Gambling Act (2005), the Gambling (Licensing and Advertising) Bill (2014), received royal assent in May 2014, reflecting this new policy. The concept of social responsibility to protect young and vulnerable persons from gambling-related harm is addressed by a code of practice which all licensed operators must adhere to. This includes a number of specific and new social responsible undertakings, such as providing responsible gambling information on a gambling website, rules for self-exclusion, undertaking interactions with customers if their gambling behaviour indicates a problem and restrictions on the use of credit cards (Gambling Commission, 2014), Thus, if the bill works as planned, from 1 October 2014, Internet gambling in the UK will for the first time being entirely provided by UK licensed operators who are all under the regulation of UK law, and required to operate in a clearly defined socially responsible way.

2.3 Gambling and Internet gambling prevalence in the UK

The British Gambling Prevalence Survey (BGPS) is a large-scale gambling prevalence survey undertaken by the National Centre for Social Research in collaboration with leading gambling academics. It was completed in 1999, 2007 and 2010. Since 2010, gambling prevalence has been surveyed within the Health Survey for England and the Scottish Health Survey. The first of these surveys was conducted in 2012.

The BGPS in 2010 was completed by 7756 participants. It indicated that gambling was undertaken by 73% of the UK population, compared with 68% in 2007 and 72% in 1999 (Wardle et al., 2007; 2010). In 2010, 75% of men gambled, compared to 71% in 2007 and 76% in 1999, and 71% of women gambled compared to 65% in 2007 and 68% in 1999. Women had increased their participation in gambling by playing more scratch cards, slot machines, other lotteries and online gambling on bingo, casino and slots. The participation in different gambling activities in 2010 is shown by gender in Figure 2.1. Each activity includes participants who gambled both in person and online on the activity.

Figure 2.1   BGPS (2010) - Percentage of participants undertaking each gambling activity in the past year
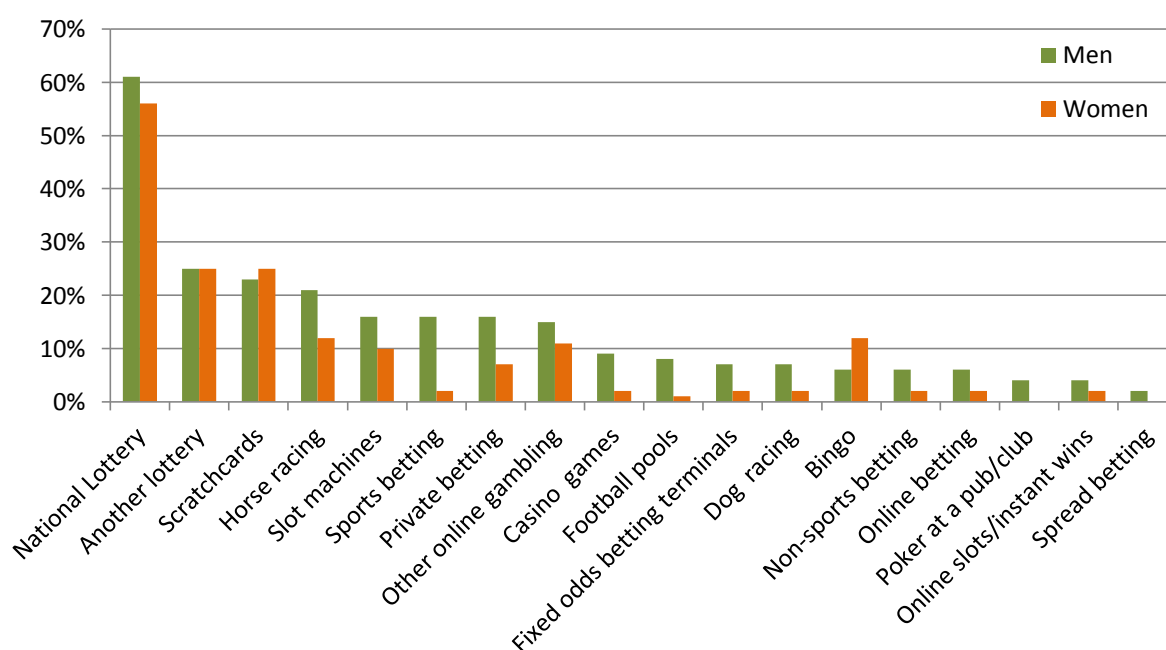
In 2012, the Health Survey for England (HSE) found 68% of men and 61% of women undertook gambling in the last year, suggesting there was a decrease in gambling activity since the BGPS in 2010 (Health & Social Care Information Centre, HSCIC, 2012). The 2012 data for the HSE were combined with the Heath Survey for Scotland into a single report (Wardle, Seabury, Ahmed, Payne, Byron, Corbett, et al., 2014). This indicated 68% of men and 62% women undertook gambling in the past year. However, as a 'health' survey may draw on a different population to a 'gambling' survey, it is not possible to confidently make comparisons between the BGPS and the HSE, and no firm conclusions can be reached about whether there has been and increase or decrease in gambling prevalence in the last two years.

In 2010, online betting, including betting with an online bookmaker or betting exchange on horse and dog races, other sports and non-sports events, was undertaken by 6% of men and 2% of women. Other online gambling, including using the Internet for the National Lottery, other lotteries, bingo, football pools, casino games and slots was undertaken by 15% of men and 11% of women.

The 2010 BGPS measured online gambling differently to the 2007 survey, and the 1999 survey did not measure online gambling as all. However comparisons between 2007 and 2010 can be made using the 2007 definition of online gambling by including only online betting, bingo, casino games and slots. This more conservative estimate identified that in 2007, 6% of the population gambled online, 9% men and 3% women. By 2010, this has increased to 7%, 10% men and 5% women. Women's online gambling had almost doubled (Wardle et al., 2010). The HSE (2012) suggested 10% of men and 4% of women in England gambled online, though the combined Health Survey covering England and Scotland did not report online gambling as a comparable separate figure (Wardle at al., 2012; 2014).

Concerns expressed by the public and in the media that Internet gambling has been increasing over recent years can be confirmed somewhat by the BGPS, 2007 and 2010 (Wardle et al., 2007; 2010; Orford, Sproston, Erens, White & Mitchell, 2003). By way of comparison, the Gambling Commission has been conducting smaller scale prevalence survey research on a quarterly basis from 2006, with approximately 2000 respondents per quarter. This research indicates that between 2007 and 2010 Internet gambling

activities (including via mobile phone and interactive TV) increased by 2.3% (Gambling Commission, 2010b). However, much of this appears due to an increase in Internet lottery activity and if this lottery activity is excluded, all other Internet gambling activity has increased by just 0.5%. The full online gambling data from the Gambling Commission surveys is shown in Figure 2.2 (Gambling Commission, 2010b, 2011, 2012, 2013a, 2013b)

Figure 2.2   *Gambling Commission Gambling Participation Survey (2006-2013) - Proportion of respondents participating in at least one form of online gambling*
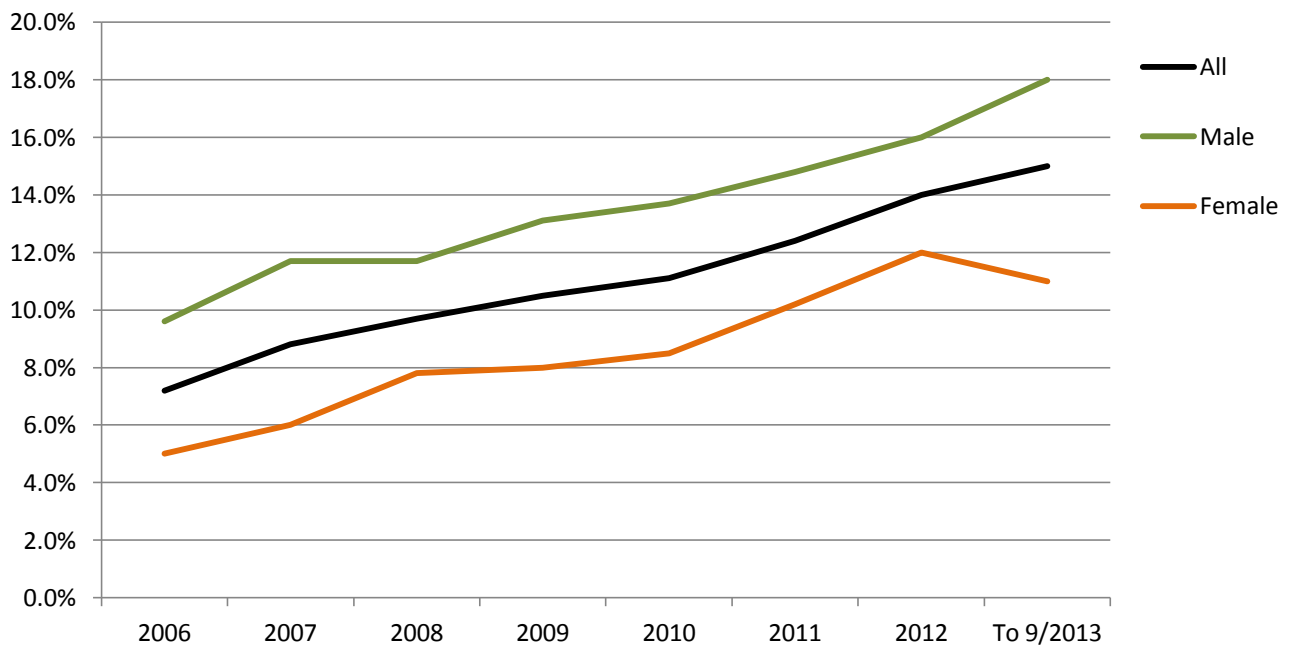
The survey data from the Gambling Commission suggests a slight increase in Internet gambling activity in terms of participation in different online activities. However, other data such as the frequency of play or the spend involved may also provide a picture of Internet gambling activity. The BGPS (2010) indicates that 20% of past year gamblers who gamble in person at physical sites only, participate two or more days per week. This compares to 25% of past year gamblers who gamble online only and 32% who participate 'in person and online'. This indicates that those gambling online only play more frequently than those gambling in person only. However as the split between gambling in person and online for each gambling activity has not been included n the report, a full picture of high frequency online and in person play cannot be assessed. The only direct comparisons that can be made about high frequency from BGPS (2010)

are for bingo and casino games. For bingo, 15% past year gamblers play in person two days a week or more, compared to 7% online, (14%, 2% for men, 16%, 10% women). For casino games, 5% play in person compared to 17% online (6%, 17% for men, estimates not shown for women). At present, all that can be concluded regarding frequency of online play is that casino games are played more frequently by men online than in person.

The Gambling Commission (2013b) Participation Survey provides an indication of how different activities are undertaken, as land-based gambling, online gambling or as a mix of land-based and online gambling. Figure 2.3 shows this data for twelve gambling activity types. In total, for those participants who had undertaken gambling activity in the last four weeks, 73% had undertaken it in person, 12% online, and 15% online and in person. Lotteries, bingo and dog racing appeared to be activities most likely to be undertaken in person, whereas spread betting, sports and other betting and casino games appear to be the activities most likely to be undertaken online.

Figure 2.3   Gambling Commission Gambling Participation Survey (2013) - Mode of participation in each activity in the past four weeks
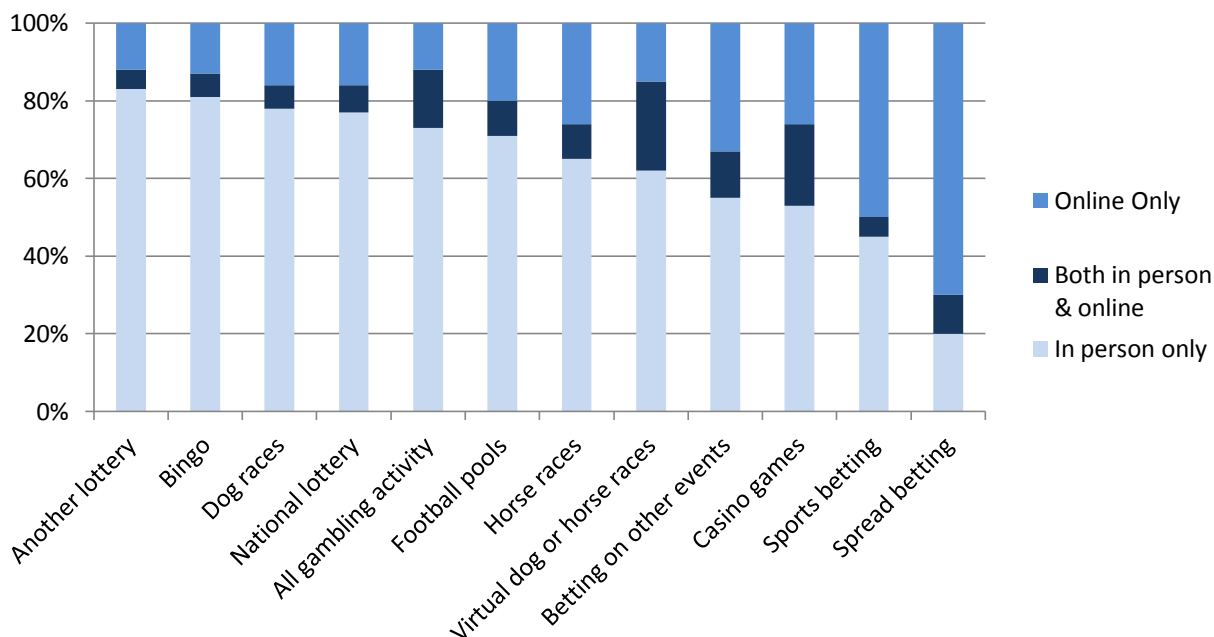
2.4   Problem gambling prevalence in the UK: Rising or falling?

The BGPS (2010) indicates the prevalence of problem gambling in Great Britain to be 0.7%. In men the rate is 1.3% and highest in men aged 25-34 at 2.2%. In women the rate is 0.2% and highest in women aged 16-24, at 0.8%. This compares to a population rate of 0.5% in 2007, 1.0% in men and 0.1% in women. All prevalence rates given were measured using the Canadian Problem Gambling Index, Problem Gambling Severity Index (PGSI), a population non-diagnostic measure of problem gambling (Ferris & Wynne, 2001). A DSM-IV diagnostic criteria measure was also used to measure prevalence and problem gambling characteristics (APA, 2000). The DSM-IV prevalence rates were similar to PGSI, 1.0% in the population, 1.5% in men, and 0.3% in women. It was used in both 2007 and 1999 surveys which made it useful, however, it did not identify the same problematic population as the PGSI (Wardle et al., 2010).

In 2012, the Health Survey for England (HSE) also measured population prevalence rates for problem gambling, with the PGSI rate for men at 0.6% and women 0.1%, and the DSM-IV rate at 0.8% and 0.2% respectively (Health & Social Care Information Centre, 2012). The HSE (2012) appears to indicate a decrease in problem gambling compared to the 2010 BGPS. The combined Health Surveys for England and Scotland also suggest a decrease since 2010. It reports problem gambling prevalence according to the PGSI at 0.7% for men and 0.1% for women, and for the DSM-IV rate at 0.8% and 0.1% respectively. However, the HSE survey is for England, and the combined Health Survey is for England and Scotland, whereas the BGPS covered England, Scotland and Wales. Direct comparisons between surveys should be tentative for this reason, and as mentioned earlier in the chapter, a 'health' survey may draw on a different sampling population to a 'gambling' survey. The details of these surveys are shown in Figure 2.4, and more about the PGSI and DSM IV diagnostic measure can be found in Section 2.8.3.

Figure 2.4   Problem gambling population prevalence surveys 1999-2012
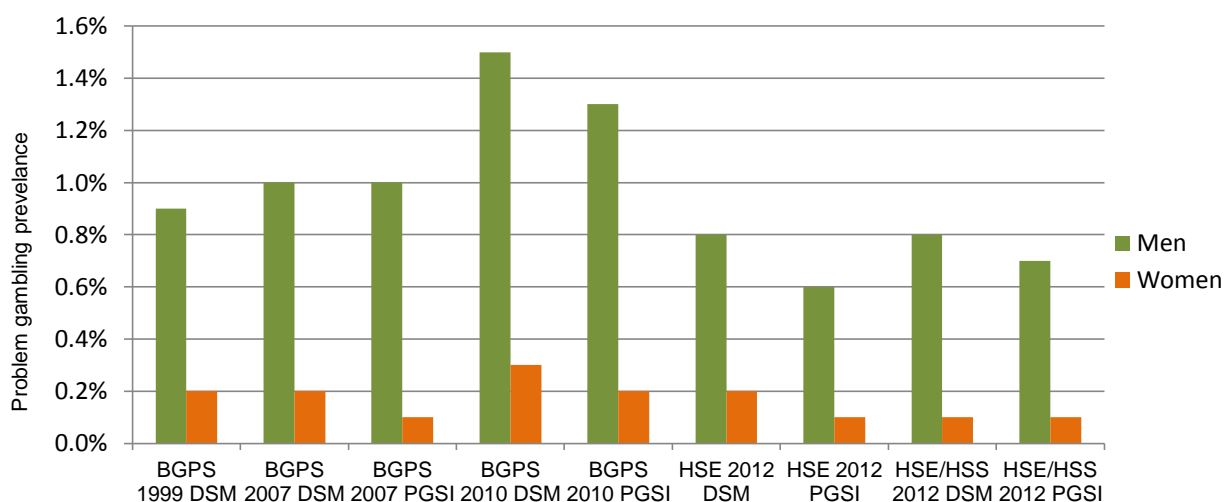
When gambling activities are considered in terms of the prevalence of problem gambling, measured on DSM-IV criteria gambling screen (based on the Diagnostic and Statistical Manual of Mental Disorders: Version IV, APA, 1994), the online activities appear to have higher rates of problem gambling than many land-based activities. Wardle et al. (BGPS, 2007) reported that 9.8% of problem gamblers had gambled using online betting exchange in the last year, 7.4% using online gambling and 6% online betting (see Figure 2.5). Whilst these online gambling modes were not used as much by problem gamblers as some relatively new land-based modes of gambling, such as spread betting (14.7%) and fixed odds betting terminals (11.2%), they were used more than traditional forms of gambling such as dog racing (5.2%), horse racing (1.7%), other land-based betting (3.9%), bingo (3.1%) and slot machines (2.6%). This suggests that online gambling is used by more problem gamblers when compared with traditional land-based gambling modes. However, direct comparison between activities is not possible as the online activities are grouped in a different way to the land-based activities.

According to DSM-IV measures in BGPS (2010), the highest rates of problem gambling were found amongst those playing poker in pubs/clubs (12.8%), online slot machines (9.1%) and fixed odds betting terminals (8.8%). This compares to a problem gambling rate amongst all past year gamblers of 1.3%. Problem gambling rates for any online gambling (excluding the National Lottery) were 5.3%. These are all gambling activities that are relatively new or novel and have had increasing popularity since 1999 (Wardle

et al., 2010). However, the BGPS (2010) survey does not allow for direct comparison between activities carried out online or in person, as land-based and online activities have been combined to reflect overall activity in one domain e.g. bingo, and online gambling is grouped as betting and other gambling rather than separated into individual activities. It is not therefore possible from the BGPS 2010 to establish if PG is more prevalent in land-based or online gambling activities.

Figure 2.5   BGPS (2007) - Prevalence of problem gambling by gambling activity
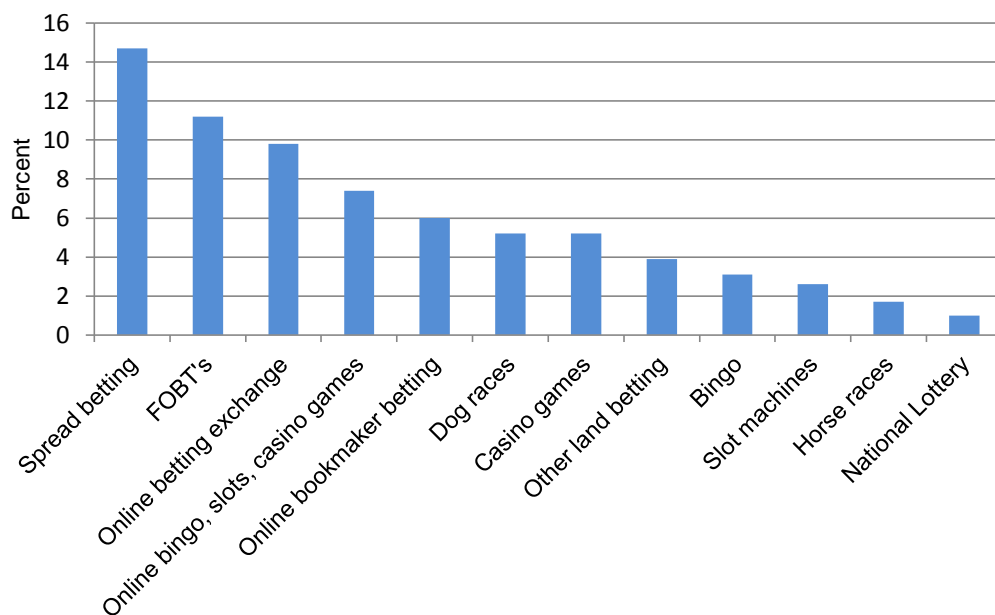
Other research that addresses this issue can be found in the further analysis of the Internet gambling data from BGPS (2007), which found 5% of Internet gamblers were categorized as problem gamblers, compared to 0.5% of non-Internet gamblers (Griffiths, Wardle, Orford, Sproston, & Erens, 2008). Griffiths and Barnes (2008) additionally found that Internet gamblers were significantly more likely to be problem gamblers than non-Internet gamblers. Prevalence of problem gambling using DSM-IV criteria in Lloyd et al. (2010a) survey of Internet gambling was given as between 12% and 82% for five different subcategories of Internet gamblers and the Internet poker-playing sample in Wood et al. (2007b) had a problem gambling rate of 18%. Research therefore suggests that Internet gambling has higher prevalence rates of problem gamblers than non-Internet gambling.

In terms of demographics, prevalence for gambling is highest in those in younger age groups, in those who are married, separated or divorced, in white/white British ethnicities, in those with lower educational qualifications and in those in paid work (Wardle et al., BGPS, 2010). This compares to problem gambling, where highest rates are found in men, in those age 16-24, in those who are single, in Asian/Asian British ethnicities and in those who are unemployed. Higher rates of problem gambling were also found in those whose parents gambled regularly and in smokers. Whilst accepting that online and offline gamblers are not mutually exclusive, some research is underway to see if and how online and offline gamblers are different. Findings from Gainsbury, Hing, Blaszczynski, and Wood (2011) suggested that Australian Internet gamblers were more likely than non-Internet gamblers to have higher incomes, work full time or be students, be married or living with a partner. They also participated in more gambling activities, more frequently. This was supported by Jiminez-Murcia et al. (2011) who found problem Internet gamblers were more likely to have higher educational levels, socioeconomic status, spends on gambling and debts than non-problem Internet gamblers. Jiminez-Murcia et al. found no differences between the two groups of problem gamblers in clinical, psychopathological and personality measures.

The comparative prevalence of problem gambling online and/or offline has been explored in some recent studies. Wardle, Moody, Griffiths, Orford and Volberg (2011) provided a starting point for understanding this relationship. In a review of online gambling prevalence, Wardle et al. points out that much research undertaken indicated problem gambling prevalence is higher in online gamblers than non-online gamblers. However this does not take into account the fact that these two modes of access are not mutually exclusive and are not necessarily distinct and different gambling populations. Wardle et al., undertaking further analysis of the BGPS (2010) data, identified 4 groups of gamblers; offline-only gamblers (80.5% of sample), online-only gamblers (2.1%), mixed-mode different activity gamblers (6.8%) and mixed-mode same activity gamblers (10.6%). Online-only gamblers were more likely to be female (53.8%) whereas mixed-mode gamblers were more likely to be male (same activity, 56.6%, different activity, 64.4%). In terms of DSM-IV measured problem gambling, offline-only gamblers had a rate of 0.9%, online-only gamblers, 0.0%, mixed-mode different activity gamblers, 4.3% and mixed-mode same activity gamblers 2.4%. Problem gambling prevalence is highest in those gamblers who undertake both online and offline activities. Wardle et al points

out that due to substantive importance should not be placed on the findings of no problem gamblers in the online only sample, due to the low base size of this group and low prevalence PG rates in the British population.

Whilst it appears that online gambling is on the increase, it is not clear how problem gambling is being affected due to the difficulty in comparing prevalence estimates over time. The main sources of UK prevalence information have collected data on Internet gambling in different ways each time. Comparison between the surveys is not straightforward, and the clustering of data within each survey does not readily allow for PG data for online and land-based gambling activities to be compared. Wardle et al. (2011) suggests that different combinations of online and land-based activities have an impact on problem gambling rates and this needs to be taken into account. The Gambling Commission quarterly report does now cover some of the BGPS questions and covers land-based and offline activities, though it does not address problem gambling. The Health Survey covers other BGPS questions including problem gambling, but does not fully address online and land-based activities, and covers England only, though it has recently been combined with the Scottish survey to broaden results (Wardle et al., 2014). Wardle, Griffiths, Orford, Moody and Volberg (2012) explain that if increases in the National Lottery are taken out of BGPS figures, there is a clear increase in gambling on other activities. Also they explain that the increased rates of DSM mean scores between the BGPS surveys indicate the population is experiencing greater levels of gambling-related harm. Orford (2012) explains that in the UK, restraints on gambling are slowly being dismantled and attitudes towards gambling are becoming less negative. Orford suggests that restraints and negative attitudes have kept the prevalence of British problem gambling low, and as they are being eroded, the prevalence of problem gambling may well increase.

2.5   Motivations for gambling

Gambling is a popular leisure activity for many people in the UK and has been for a considerable time. It has been part of the tradition and culture of the UK for hundreds of years, most likely starting with private wagers and sports bets, going through times of being considered immoral and being legally restricted, and moving on to the complex, largely legitimate and regulated activity it is today (Orford et al., 2003). The fact that gambling is inherent in UK traditions and cultures, and is currently publically accepted and legitimised in the form of the National Lottery and current widespread advertising, gives an indication that cultural norms and social acceptability has some influence on gambling availability and prevalence. Acceptability of gambling is supported by figures from the Office for National Statistics (2004) showing the spend on bingo, casinos and lotteries in the UK increased by £10.5 billion between 1992/93 and 2002/03, with £ 9.1 billion being due to the National Lottery and its related products.

Research shows that introducing a casino into a new environment can result in an increase in the number of gamblers and problem gamblers in the area around the casino (Room, Turner & Ialomiteanu, 1999, Orford et al., 2003). Room et al. found that prior to a casino being opened in Niagara, gambling was undertaken by 11% of the local population and the problem gambling rate was 0.7%; after the opening, rates rose to 43% and 2.3% respectively. In Australia, rates of gambling and problem gambling were much higher in states where there is legal access to electronic gaming machines than those where this access does not exist (Productivity Commission, 1999). Advertising is also widespread, and research suggests that advertising increased knowledge of gambling options available, and was more likely to influence increased gambling involvement in problem gamblers than non-problem gamblers (Hanss, Mentzoni, Griffiths & Pallesen, 2015).   Whatever reasons each individual has for initiating gambling, it seems that social and environmental factors, in the form of the acceptability, availability and access to gambling, should not be underestimated as key factors explaining why people gamble. Walker, Schellink and Anjoul (2008) weighed up the historical and cultural evidence and state that "gambling is a learned phenomenon that is heavily influenced by the values inherent in different cultures", (p. 16). Reith (2007) also explained that "gamblers do not play in a vacuum, but act out a behaviour that is embedded in wider socioeconomic contexts" (p. 25).

Recent land-based gambling research has indicated that the main motivator for land-based gambling is monetary (Clarke, Tse, Abbott, Rownsend, Kingi & Manaia, 2007). The BGPS (2010) also supported monetary reasons for gambling, in terms of it offering the chance of winning big money. It also identified excitement as a reason for gambling (Wardle et al., 2010). Walker et al. (2008) agreed with this monetary motivation. Also, where evidence exists that excitement or diversion are more important, Walker et al. argued that historically gambling did not start until money was invented, gambling is more popular in materialistic and individualistic societies and is also more popular in less wealthy sections of society. However, Wulfert, Franco, Williams, Roland and Maxson (2008) suggested that excitement while gambling is linked to the possibility of winning money, suggesting money alone may not be the only driver. Additionally, Wood and Griffiths (2007b) conducted interviews with a sample of 50 problem gamblers, finding mood regulation in terms of 'gambling to escape' was the central motivation given by participants for their continued gambling. Other research suggests that a variety of other motivational factors come into play. In land-based gambling research these include excitement, social interaction, escape from problems or stress, self-esteem enhancement, learning, challenge, amusement, perception of luck and personality factors (e.g. a sensation seeking trait) (Cole, Barrett & Griffiths, 2011; Pantalon, Maciejewski, Desai & Potenza, 2008; Clarke et al., 2007; Lee, Chae, Lee & Kim, 2007; Rockloff & Dyer, 2007).

To capture many of these motivations in a more systematic way, Stewart and Zack (2008) designed a Gambling Motives Questionnaire (GMQ) based on previous research into drinking alcohol and the Drinking Motives Questionnaire. The GMQ captured motives for gambling in three domains; coping, enhancement and social. *Coping* included motives that reduced or avoided negative emotions, *enhancement* motives were those that increased positive emotions and *social* motives were based on the reward of increased social affiliation via gambling. The GMQ found that probable pathological gamblers (PPG) scored higher on each scale than non-pathological gamblers (NPG). PPG women scored higher than PPG men on the coping and social scales, whereas PPG men scored higher than PPG women on the enhancement scale. The GMQ findings supported the view that men and women have different motives for gambling and that prediction of probable pathological gambling can be made without reference to a monetary motive. However, Dechant and Ellery (2011) added a

monetary motive item to the scale, which fitted with the enhancement factor, and strengthened the independence of the other factors. Based on the work of Stewart and Zack, the BGPS (2010) included a 15-item Reasons for Gambling Questionnaire (RGQ) (Wardle et al., 2010).   This questionnaire was factor analysed, resulting in five motivational factors; enhancement, recreation, social, coping and money (Canale, Santinello & Griffiths, 2015; Wardle et al., 2010).   Whilst the GMQ and RGQ are promising research tools, it is not possible yet from the research that has used them to identify which motives for gambling are most important at particular points in a gamblers' 'career', i.e. how the motives for 'gambling' appear when initiating or escalating gambling, and, if and how the motives change over time.

On a more individual level, there is not much research on what motivates people to *initiate* gambling. The focus in research is more likely to lie with either why and how people 'are gambling', i.e. why they participate or why they are currently gambling, or why and how they start problem gambling. However some research, albeit only a few papers, looks at motivations at different times in a person's gambling journey. Clarke et al. (2007) suggested the motivations for initiating gambling and for continuing gambling were different and categorised gambling motivations at these different points in a gambler's career. In a sample of gamblers from New Zealand, Clarke et al. found that 'hoping to win some big money' was a prime reason for initiating gambling, and 'wanting big wins' was a prime motivator for continuing gambling, supporting monetary reasons as being a prime motivator both in initiation and continuance. However, female non-problem gamblers' prime reason for continuing gambling was 'I have easy access to money machines'. Another study on gambling initiation motivation by Reith et al. (2010) found that gamblers were often introduced to gambling in a social way by family or friends, many when at a relatively young age, and this way, their gambling just continued gambling into adulthood.

The research by Clarke et al. (2007) and Reith et al. (2010) did not distinguish between Internet and non-Internet gambling. With Internet gambling, due to its more recent introduction, gamblers have made a choice to undertake IG as a new activity, or an old activity in a new way. Valentine and Hughes (2008) in a sample of 600 UK Internet gamblers, 92% of whom were male, found that 5% primarily undertook Internet gambling due to being introduced by a family member and 26% were introduced by

friends or colleagues. Additionally, 27% said they started in response advertising, 12% because of a specific sporting event and, of the remaining others, the majority transferred their normal land-based activities onto the Internet. Valentine and Hughes (2008) thus provided some idea of how Internet gambling starts, but as the sample was skewed towards male gamblers, and participants appear to have selected only one response from a limited number of choices, this may not provide a complete picture. In this sample, the most common reasons for gambling on the Internet were the 'opportunity to make money' and the 'challenge of playing', both selected by 64% of the sample, suggesting, in this sample, a monetary motive was not the sole main driver for Internet gambling.

Specifically looking at motivation for Internet gambling, Griffiths and Barnes (2008) identified reasons for Internet gambling amongst a student population. The main reasons were ease of access (84%), flexibility (75%), 24-hour availability (66%), because friends do (67%), choice (57%), advertising (40%), anonymity (25%), demo games (21%) and because family members do (14%). McCormack, Shorter and Griffiths (2014), in a survey of 975 Internet gamblers, found the three strongest motivators for gambling online were convenience, access and comfort. Lloyd et al. (2010b) conducted an online survey of over 4000 Internet gamblers via European registered websites. They found three motivational factors underpinned Internet gambling behaviour; 'mood regulation', 'for money'; and 'for enjoyment'. McCormack and Griffiths (2012a) undertook qualitative research to establish motivations to gamble online. The central theme of their findings was 'greater opportunity to gamble', along with four sub-themes: convenience, value for money, greater variety of games and anonymity. However, of the 39 participants interviewed, 14 only gambled offline and 11 were non-gamblers, so the research contained elements of participants' perceptions of Internet gambling motivations rather than participants' real and personal experience.

Motivation for gambling has also been found to vary across game types and genders. For example, McCormack et al. (2014) found men were more likely to gamble online than women due to availability, challenge and access, and women were more likely to gamble online than men due to boredom, advertising and free practice games. Lloyd et al. (2010b) found women were more motivated to gamble for mood regulation whereas men were more motivated by monetary objectives and for enjoyment. Canale et al.

(2015) found men were more likely to gamble for enhancement and recreation reasons than women. They also found that players of different games had different motivations for gambling, for example, professional Internet poker players were more motivated to play due to their ability to win money, whereas casual players were more motivated by the enjoyment of the experience of play (Wood & Griffiths, 2008).

Clarke et al. (2007) and Lloyd et al. both found that motivations for gambling amongst problem gamblers were not necessarily different to non-problem gamblers, just that problem gamblers' motivations were usually stronger; a quantitative rather than qualitative difference. However, in a qualitative study of problem gamblers, gambling for escape was found to be the prime motivator for gambling (Wood & Griffiths, 2007). The BGPS 2010 also reported that problem gamblers were more likely to gamble for coping reasons, to promote positive mood, than non-problem gamblers (Wardle et, al., 2010). Griffiths and Barnes, and McCormack and Griffiths' motivators were described in terms of the features of Internet gambling that were intrinsic to the mode of access to gambling, whereas Clarke et al. and Lloyd et al. motivators were more intrinsic to the individual. Wardle et al, (BGPS 2010) reported that problem gamblers were more likely to gamble due to intrinsic motivations than extrinsic motivations, which may account for some of the different findings reported.

Motivations for gambling on the Internet as presented in this section are summarised in Table 2. The table conveys that motivations for gambling are plural, can be measured on a variety of levels, at a variety of points in a gambler's 'career' and are dependent on individual factors. Land-based gambling and Internet gambling research indicates that societal factors, access mode factors and individual factors can all offer some explanation of why people gamble. Currently there is little work that focuses both on how gamblers initiate gambling and why they continue, particularly considering Internet gambling as a separate entity from land-based gambling. Additionally, little research has specifically considered how gender or activity undertaken may interact with these motivations. The diversity of motivational factors that can be found in the literature gives strength to gambling models and theory which suggest that multiple levels of motivators are responsible for gambling behaviour, that motivators influence problem and non-problem gamblers differently and that gambling it is not simply an individual condition,

for example, West (2006), Orford, Sproston, Erens, White and Mitchell (2003), Griffiths and Delfabbro (2002), Blaszczynski and Nower (2002).

Table 2   Summary of motivations for gambling

Population	Key Motivators and Factors	
All gamblers	Availability, acceptability	(Walker et al., 2008; Reith, 2007; Orford et al., 2003; Room et al., 1999)
All gamblers	Monetary - opportunity to win money	(Wardle et al., 2010; Walker et al., 2008; Wulfurt et al., 2008; Valentine & Hughes, 2008; Clarke et al., 2007)
All gamblers	Excitement	(Wardle et al., 2010; Wulfurt et al., 2008)
All gamblers	Social	(Reith et al., 2010; Valentine & Hughes, 2008)
Internet gamblers	Accessibility, flexibility, availability	(Griffiths & Barnes, 2008)
Internet gamblers	Greater opportunity to gamble - convenience, value, variety, anonymity	(McCormack & Griffiths, 2012a)
Internet gamblers	Challenge of play	(Valentine & Hughes, 2008)
Internet gamblers IG Men>IG Women IG Women>IG Men	Convenience, access comfort Availability, challenge, access Boredom, adverts, free practice	(McCormack, Shorter & Griffiths, 2014)
Internet Poker players	Money/Income, entertainment, lack of jobs, enhanced self-esteem	(Recher & Griffiths, 2012; Wood & Griffiths, 2008)
PGs NPGs	Modifying mood states Fun, entertainment, winning	(Wood & Griffiths, 2014)
PGs	Escape from stress and problems	(Wood & Griffiths, 2009)
PGs	Excitement	(Pantalon et al., 2008; Clarke et al., 2007)
All gamblers PG Women PG Men	*Factors: Coping, Enhancement, Social* Coping, Social Enhancement	(Stewart & Zack , 2008)
All gamblers PGs Internet gamblers> Non-Internet gamblers Men>Women	*Factors: Coping, Enhancement, Social, Money, Recreation* Coping Enhancement, Recreation, Money Enhancement, Recreation	(Wardle et al., 2010; Canale et al., 2015)
Internet gamblers IG Women IG Men	*Factors: Mood regulation, Money, Enjoyment* Mood regulation Money, Enjoyment	(Lloyd et al., 2010b)

2.6 Different gambling modes and activities

Gambling activities can broadly be classified by route of access as terrestrial activities and remote activities. 'Terrestrial' or 'land-based' activities are those that take place in a gambling establishment or venue, such as a bingo hall, at a race track or in a casino. In some cases these may also be referred to as 'live' games, involving face-to-face interaction with real people to undertake the gambling activity. 'Remote' or 'online' gambling activities typically include gambling via a phone, the Internet or the television.

Different gambling activities are available as both land-based and Internet activities. These include, for example, odds betting, spread betting, betting exchange, bingo, slots/fruit machines, poker, blackjack, roulette, National Lottery, other lotteries, scratch cards and instant win games. Some gambling modes can be quite similar in the way they are structured across land-based gambling and Internet gambling, e.g. classic horse race betting, but others modes are quite different e.g. betting exchange. Using Internet technology allows for the different activities to be played in different ways. For example Internet betting exchanges offers bettors the chance to bet against each other and to buy and sell their bets with other players. This is most easily conducted as an Internet activity. Spread betting, usually based on sports or financial markets, predicts an outcome where winning is based on the accuracy of the outcome (e.g. winning by three goals), rather than just winning or losing, and the person does not know beforehand how much they may win or lose. Slot machines on the Internet allow players to choose how much they wish to gamble per line and per spin, and they can be played alongside other games which perhaps demand more attention, whereas land-based machines tend to have pre-set cost and structure, and are generally only one machine is played at a time. Poker games on the Internet allow players to play multiple hands at the same time and some have the option of using a poker robot to play hands in a pre-determined pattern (Griffiths, 2009a). Games can be in the form of tournaments or cash games. In a tournament a player plays a fixed fee at the beginning of the game and the game ends when the player is either knocked out, or knocks out all or nearly all of the other players to win. In cash games, individual hands can be played with other players and the player can leave the game at any point they choose. On the Internet, all forms of betting, poker, slots, casino games, bingo and other card games can be played at different levels of complexity, with different competitors, different

stakes, different speeds, different odds of winning and different prizes. The gambler has access 24/7 to an ever-expanding range of choices.

When looking at research into land-based gambling from the UK, Europe, US, Australia and Canada, it seems that different types of player are attracted to different types of game and different types of game have different effects on player's gambling experience. Shaffer (2002) theorised that the relationship between gambling mode used and gambling disorder provides an understanding of the nature of addiction. He suggested different gambling modes attract different types of individual, just as different drugs are differentially addictive, with different risks and effects being attractive to different individuals. Existing land-based gambling research supports this, sometimes separating games that can primarily be influenced by skill and those that are primarily games of luck or chance. However, this distinction is not always agreed. Skill games often include horserace and sports betting; chance games include bingo, slots, and lotteries; and poker may be categorised with other card games, as a 'chance' casino game alongside bingo and slots, or it may be classed as a game of skill (Myrseth, Brunborg & Eidem, 2010; Stevens & Young, 2010; Shead, Hodgins & Scharf, 2008; Wardle et al., 2007; Chantal & Vallerand, 1996). However, this divide, as well as not being universally agreed, also has a degree of overlap, for example, chance-based games can appear to involve a higher degree of skill by the way they are designed, and also knowledge of how a game is played and the odds involved, e.g. in roulette, can increase a gamblers odds of winning (Stevens & Young, 2010; Johansson, Grant, Kim, Odlaug & Gunnar, 2009).

Research has found that poker players are more likely to be younger males with more severe gambling problems than non-poker playing gamblers, and that playing gambling games of skill is associated with higher risk of developing problem gambling than playing games of chance (Shead et al., 2008; Sullivan Kerber, 2005). However, other research indicates games of chance, in particular in the form of FOBTs, and spread betting are the most problematic (Wardle et al., 2007). Bingo players tend to be older females participating in sedentary social recreation without many gambling problems (O'Brien Cousins & Witcher, 2007). Horse and dog race gamblers tend to be less well educated older males, whereas sports gamblers are younger males with high rates of substance abuse, and slots gamblers tend to be female with high rates of bankruptcy

and mental health problems (Petry, 2003). Research suggests men are more likely to participate in and report problem gambling associated with games of skill than with games of chance, whereas women's gambling involvement tends to be with games of chance (Wardle et al., 2007, 2010; Potenza et al., 2001).

Considering this type of research, it seems players of different activities and modes can be profiled in terms of various characteristics, and also in terms of the potential levels of problem gambling. Abbot, Volberg, Bellringer and Reith (2004) in a review of UK gambling and risk factors for problem gambling, point out that forms of gambling that can be played continuously, and involve an element of real or perceived skill, have the strongest association with problem gambling. These would include electronic gaming machines and casino table games. Griffiths, Parke, Wood and Parke (2006) suggest that each gambling activity and mode is associated with a set of situational characteristics and structural characteristics which influence how people gamble. Situational characteristics are primarily characteristics external to the game itself, reflecting environmental factors in such as terms of the location and number of available outlets for the activity, influencing availability and accessibility. Also associated with each gambling mode, Griffiths et al. suggest, are structural characteristics. These are characteristics of the game itself and influence continued play. They include, for example, schedules of reinforcement in terms of event frequency (how often the game can be played in a certain period of time), event duration, bet frequency (how often bets can be placed in a certain period of time), intervals between wins and size of wins, along with light, sound and colour effects associated with the games or the venue (Griffiths & Auer, 2013; McCormack & Griffiths, 2013; Griffiths, 2009b, Griffiths et al., 2006, Griffiths & Parke, 2003).

Griffiths and Auer (2013) suggest that with the advent of Internet gambling, and other new gambling features such as in-play betting and fixed-odds betting terminals, there are numerous choices of events and bet frequencies within different gambling activities and modes, and thus no single activity could be considered more problematic than any other. How the activity is structured and played is more relevant for problem gambling development than which activity is played. Whilst this is theoretically sound, the reality is that certain gambling activities are set up in particular and specific ways, not just in terms of structural characteristics, such as event frequency, but also in terms of

situational characteristics. The National Lottery, slot machines and card games in casinos, for example, are set up in pre-prescribed situational and structural ways to meet legal and administrative requirements. However, these examples are largely relevant for land-based gambling and the Internet not only offers more choices, but is only just becoming fully and systematically regulated in the UK.

Taking a closer look at Internet gambling, it seems relevant to consider whether the similarities and differences between activities and their relative attractiveness to different populations and to problem gamblers in land-based gambling environments is the same for the games when they are on the Internet. Little research has specifically been done which makes these types of comparisons. Griffiths and Barnes (2008) conducted on online survey of gamblers in the UK, which included a focus on Internet gamblers' activities. Findings from the Internet gambling sample, consisting of 105 student participants (89 male, 16 female) found the most popular forms of Internet gambling were sports betting, undertaken by 68% of the sample, poker (48%), casino gambling (47%), horseracing (36%), lotteries (32%), scratch cards (15%) and slot machines (14%). Griffiths and Barnes point out that given the general lack of research in the Internet gambling field in 2008, the sample is one of the largest that examines UK Internet gambling in this way. However, due to the limitations of the sample it was not possible to make statistically valid comparisons between the players of different Internet games.

International studies tend to be larger, with online recruitment across a number of online sites, providing access to a larger number of potential participants. The International Gaming Research Unit (IGRU, 2007) conducted a survey of over 10,000 gamblers from 96 countries, undertaking Internet gambling casino and poker activities. Typical Internet casino players were likely to be female (54.8%), aged 46-55 (29.5%), play 2-3 times per week (37%) have played for 2-3 years (22.4%) and play for 1-2 hours per session (26.5%). By comparison, typical Internet poker players were likely to be male (73.8%), aged 26-35 (26.9%), play 2-3 times per week (26.8%), have played for 2-3 years (23.6%) and play for 1-2 hours per session (33.3%). A more recent study by Lloyd et al. (2010b) surveyed an international sample of over 4,000 Internet gamblers, 80% male, 69% UK residents. The participants were not necessarily viewed in terms of their 'main game' so direct comparisons with land-based gambling findings were not entirely

possible. However, five clusters of Internet gamblers emerged from the analysis: 1) 'non-to-minimal gamblers', who undertook one activity, usually poker; 2) 'sports bettors', who bet with bookmakers and/or betting exchanges; 3) 'casino and sports bettors', sports bettors who additionally participated in slots, bingo and/or poker; 4) 'lottery players', who just participated in the lottery; and 5) 'multi-activity gamblers' who played all six forms of gambling. Groups 1 and 4 represented the largest proportion of the sample (46%), spent the least amount of time gambling on the Internet and had the lowest rates of problem gambling, 12% and 15% respectively. Group 4 contained the highest proportion of female participants in comparison with the other groups. Group 2 were most likely to be male, had been gambling longer than participants in other clusters and has lower levels of problem gambling (20%) than group 3 (41%). Group 5, 1.5% of the sample and over 75% male, had the highest levels of problem gambling at 82%, were the most likely to be unemployed, had below average income, have parents who gambled problematically and report substance abuse disorders. Groups 3 represented 15% of the sample, and were similar to Group 5 in terms of having parents with problematic gambling and reporting substance disorders, however demographically they were most likely to be employed with above average income. These types of study begins the process in identifying some of the differences between players of different Internet games. Findings are largely based on demographics, although there is some inclusion of co-morbid disorders associated with each subgroup. As yet it has not provided an explanation for the differences either in terms of the structural characteristics of the games or causation. More work is needed to understand the role of different Internet games more completely.

In terms of what is less known about Internet gambling activities, Internet poker has come under the spotlight for research as it has been rising in popularity in recent years (Wood, Griffiths & Parke, 2007). Wood et al, (2007) found in a sample of 422 student Internet poker players that 29% played twice a week or more, and 18% were problem gamblers. The majority of players, 62%, were introduced to poker by friends, and the two main reasons for playing were given as 'to win money' and 'for excitement'. Players viewed poker as a game of skill, or of equal skill and chance, rather than just being a game of chance. Griffiths, Parke, Wood and Rigbye (2010) furthered the work on student Internet poker. They found the longer a poker player had been playing, the more often they played, the longer their games were, and the more likely their financial

success. Those players who were successful played high stakes and were disciplined, staying within their budget. They did not over-estimate the skill involved, yet perceived themselves as being personally skilful.   Mihayolova, Kairouz and Nadeau (2012) investigated online poker in 366 students in Canada, finding that engaging in online poker was associated with problem gambling, over-spending, debt, problems with studies, relationship difficulties and illicit drug use.

The role of skill and professional gambling has been explored as a new phenomena of Internet poker. McCormack and Griffiths' (2012b) grounded theory study of nine online poker players, found that professional poker playing was typified by discipline, viewing poker playing as work, taking less risks, not chasing losses, and generally being patient, unemotional and controlled. Professional Internet poker players were motivated to play due to their ability to win money, whereas casual players were more motivated by the enjoyment of the experience of play (Wood & Griffiths, 2008). Bouju, Grall-Bronnec, Quistrebert-Davanne, Hardouin and Vanisse (2013), in a study of French poker players, considered three types of skills are required to be successful at poker; technical skills (rules and strategies), psychological skills (self-regulation and assessment of others) and financial skills (financial risk assessment).

Whilst there are books and courses on poker and players could develop skills from experience, Parke and Griffiths (2011a) found that knowledge and skills were also developed through online poker-playing communities using online forums. Use of these forums involved sharing knowledge and experience and receiving a degree of feedback about play from members. As such, Parke and Griffiths theorised that whilst poker skill development may result in increased gambling activities, it may also reduce the risk of problematic gambling behaviour. Smith, Rousu and Dion (2012) found, in a sample recruited from gambling forums, that problems from Internet poker play were most linked with the neuroticism personality trait, youth and the number of hours spent playing.   Whilst it seems skilled poker players may be successful in roles as professional gamblers and 'grinders', who have slow wins over time by playing the odds, Radburn and Horsley (2011), in a small qualitative study, also identified poker 'gamblers' who played poker without the required control, and 'mavericks' who played poker with control, but had problems with gambling in other gambling modes.

The findings thus far from poker research reflect the popularity of poker amongst the student population. Internet poker emerges as being a socially connecting, and socially acceptable game, and the fact that it is perceived to require skill, commitment and perseverance perhaps indicates that Internet poker has a new status, different to the 'game of chance' that is reflected in previous land-based gambling research. However, that is not to say that Internet poker has no associations with problem gambling, with Wood et al. finding 18% of their sample were identified on the DSM IV as probable pathological gamblers, with a further 30% indicating they had sub-clinical problems with gambling.

Another gambling mode that has relatively recently emerged on the Internet is financial spread betting. This involves predicting the value of shares or financial indices over a period of time, winning money if the value goes in the direction predicted, and losing if it goes the opposite way. Gambling sites are now offering this form of gambling which is regulated by the Financial Services Authority rather than the Gambling Commission. This form of Internet gambling is barely researched, with most research considering how to conduct financial betting successfully rather than its psychological aspects. Granero, Tarrega, Fernandez-Aranda, Aymani, Gomez-Pena, Moragas et al. (2012) points out that problem gamblers presenting with financial betting as their primary problem mode of gambling are rare, but nevertheless undertook some research in Spain comparing 18 gamblers with financial betting as their primary problem mode, 76 with it as their secondary problem mode and 1376 with problem gambling in a variety of other modes, but not including financial betting. The three groups were found to be comparable in clinical gambling characteristics, psychopathology and personality, regardless of the problem gambling type. Whilst financial betting is considered technically and legally to be different to other forms of gambling, it seems that clinically it is in fact very similar.

In summary, research on gambling modes suggests that in land-based gambling, different types of people play different types of games. This may be due to social stereotypes associated with the games, along with situational characteristics such as availability and accessibility. Different land-based gambling activities offer different experiences which may be due to established and regulated structural characteristics of the games. However, the Internet has opened up new ways of gambling, the structural

characteristics of which are more flexible than ever before. Thus past research findings about different modes may not be entirely applicable to Internet gambling modes.

2.7   Gambling in men and women

Most land-based gambling research has tended to focus on men's gambling, and when research does focus on women's gambling, it may not always be directly compared with men's gambling (Boughton & Falenchuk, 2007*;* Dowling, Smith & Thomas, 2006; Potenza, Steinberg, McLaughlin, Wu, Rounsaville & O'Malley, 2001). This imbalance is hardly surprising as far more men undertake gambling than women, as shown in Figure 2.2 (Wardle et al., 2010). Research which has compared male and female land-based gambling indicates that men and women have different gambling motivations and preferences for different types of games. For example, with land-based gambling, it has been suggested that women are more motivated than men to gamble due to boredom, loneliness, isolation, and escape from problems, and hence they prefer games that maximize playing time (Grant & Kim, 2002; Potenza et al., 2001; Trevorrow & Moore, 1998).   On the other hand men are more motivated to gamble in response to advertising, for excitement, risk and to make money (Heater & Patton, 2006; Grant & Kim, 2002; Potenza et al., 2001). Men have also appeared more likely than women to gamble due to high levels of risk taking and low levels of impulsive coping, and problem gambler men also appeared to take more risks and be more socially anxious than problem gambler women (Wong, Zane, Saw & Chan, 2013). Men appear to prefer strategic/skills types of gambling such as cards and betting, and engage in multiple gambling activities, whereas women prefer non-skill/non-strategic games such as bingo and slots (Toneatto & Nguyen, 2007; Wardle et al., 2007; Grant & Kim, 2002). When considering Internet gambling, in a study of over 10,000 international Internet gamblers, Internet poker players were more likely to me male (73.8%) whereas casino players were more likely to be female (54%) (International Gaming Research Unit (IGRU), 2007). However, casino players reporting winning more or losing less were more likely to be male, whereas players reporting losing more or winning less were more likely to be female. Thus it does appear that there is evidence to support the view that gambling is undertaken differently by men and women.

Considering the pathway into problem gambling, Donati, Cheisi and Primi (2013) found that risk for problem gambling in Italian adolescent boys was predicted by low probabilistic reasoning ability, positive perception of profitability of gambling and increased peer gambling behaviour, whereas adolescent girls at risk of problem

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gambling were predicted by higher parental gambling. Both adolescent boys and girls were equally influenced by sensation seeking and superstitious thinking. This research indicated that gender differences and similarities were apparent from a young age, early in a gamblers' career. Nelson, LaPlante, LaBrie and Shaffer (2006) suggested that the most common pathway for both men and women is to begin gambling as a 'young adult' under the age of 40 years, and still being a 'young adult' when problems develop and when treatment is sought. However, considering gender differences in the pathway of gambling, men are more likely to begin gambling at a younger age than women and develop problems with gambling over a longer time period than women, whereas women tend to begin gambling later in life and develop problems relatively quickly (Nelson, LaPlante, LaBrie & Shaffer, 2006; Grant & Kim, 2002). Women in Australia who sought help via a helpline were been found to be older than men who sought help, and in Canada, women helpline users sought help at the same rates as men, but were likely to experience problems for a shorter length of time before they sought help (Heater & Patton, 2006; Crisp et al., 2004). In a study undertaken in Spain, women seeking treatment were more likely to be dependent on bingo and men on slots. Women had higher anxiety and depression, and lower self-esteem than men, while men had higher impulsivity, sensation seeking and drug/alcohol abuse than women (Echeburua, Gonzalez-Ortega, de Corral & Polo-Lopez, 2011). These studies suggest that there are differences in men and women's gambling pathways, however, Nelson et al. also point out that men who begin gambling later in life develop problems as quickly as women, and equally, women who begin gambling at a younger age develop problems as slowly as men. Thus Nelson et al. consider that whilst gender is a significant predictor of problem gambling, by virtue of influencing the age of gambling initiation, the actual individual trajectory of the gambling behaviour is not influenced by gender to a great degree, but more by a complex interaction of psychosocial variables that are relevant to both men and women. However, whatever the explanation, the fact remains that research has shown gender differences in motivation for gambling and preferences for type of game (Lloyd et al., 2010b; Clarke et al., 2007; Potenza et al., 2001; Trevorrow & Moore, 1998).

When it comes to Internet gambling it is possible that many of these similarities and differences between genders still exist. Research has shown, for example, that in a population of Internet casino and poker players, mens' motivations for gambling online

were higher for financial reasons and for excitement, whereas womens' motivations were higher for social reasons or avoidance (IGRU, 2007). This research supports the view that some differences between men and women are the same online and offline. However, the Internet provides a different gambling experience to traditional forms of gambling, and the similarities and differences are not always clear cut. For example, in a population of self-identified problem gamblers, both men and women similarly talked about using the Internet for escape and indicated that boredom, social isolation and accessibility were key factors in their Internet gambling, factors not so apparent in men and women in land-based problem gambling research (Valentine & Hughes, 2008).

There are certain features of the Internet that can encourage participation in gambling in different ways. For example, the anonymity Internet can provide can encourage women to feel more at ease participating in games of skill such as Internet poker as there is no face-to-face confrontation with male poker players. Women are able to swap gender when they play, giving them a feeling that they will be taken seriously and providing a greater sense of security (Wood et al., 2007; Parke, Griffiths & Parke, 2005; Griffiths, 2001). Men may also swap gender when they play as they feel it gives them a psychological advantage (Wood et al., 2007).

It may well be that women are more likely to be socially isolated being at home with young children. They may initiate Internet gambling and develop problem gambling just in an Internet form, whereas men are more likely to already be problem gamblers and just transfer their problem gambling from land-based modes to the Internet. Recent research on these Internet gender differences appears to support this suggestion. Valentine and Hughes (2008) found that amongst a predominantly male sample, Internet gambling mirrored offline gambling activity, whereas Corney and Davis (2008) found that some women gambling on the Internet to problem levels had gambled very little prior to gambling on the Internet. However, this could be an age effect, where women begin gambling later in life and develop problems faster than men, as suggested by Nelson et al., 2006, rather than an Internet effect, where the Internet becomes addictive faster than land-based activities. Additionally some women who had participated in land-based gambling (e.g. bingo) used a different mode for their Internet gambling (e.g. poker). This transfer from land-based to Internet gambling is largely missing from Internet gambling research and may reflect gender differences, and

potentially different pathways into problem Internet gambling. McCormack, Shorter and Griffiths (2014) found in an international internet gambling sample, that similar to land-based gambling, women had Internet preferences for bingo and slots, whereas men's preferences were for betting and poker. Women were more likely to gamble on the Internet due to advertising and boredom, whereas men were more likely to gamble due to accessibility, choice and value for money.

Other research related to Internet gambling has found gender-related differences despite that not being an aim of the research. For example, the large Internet gambling survey by Lloyd et al. (2010b) found that higher percentages of women were likely to be classed as lottery players than any other category, whereas higher percentages of men were categorised and 'sports bettors' or 'casino and sport bettors', supporting land-based gambling findings. Lloyd et al. (2010a) examined motivation factors for Internet gambling and found women were more motivated to gamble for mood regulation, whereas men were more motivated by monetary objectives and for enjoyment. This also appears to support findings from land-based gambling research. The research by Wood et al. (2007) into Internet poker noted that female players were more likely to swap gender when playing than male players, and also that swapping gender was one of the variables that predicted problem gambling. However, as predictive variables were not specifically analysed by gender, the exact interaction of these two findings is unclear.

In general, there are gaps in the knowledge base about gender differences in gambling, and gender differences with respect to Internet gambling are, as yet, largely under-researched (APS Gambling Working Group, 2010). It is currently unclear if and how findings from land-based gambling research reflecting gender differences, apply and manifest themselves in Internet gambling. Closer examination of the role of gender in Internet gambling and the pathway into problem Internet gambling appears to be warranted.

2.8   **Problem gambling**

2.8.1 Problem gambling definitions

'Pathological Gambling' is the term used to define clinical levels of problem gambling as defined by DSM-IV, whereas 'Gambling disorder' is the term used to define clinical levels of problem gambling as defined by DSM-5.   These terms are associated with DSM clinical assessment or criteria measures.   The term 'probable pathological gambler' may be used with a DSM criteria measure, with a score of five or more, and the term indicates a full clinical assessment has not occurred.

In terms of current research, 'problem gambling' is most usually used to encompass both 'problem' and 'pathological' gambling as categorised by the cut-off points defined on various measures. Typically this would include those who had scored three or more on a DSM-IV criteria measure, or, for example, those scoring eight or more on the Problem Gambling Severity Index.

The term 'problematic gambling' may be used to refer to those who have not been measured on a scale, but indicate they are having some gambling related problems, which may or may not be sufficient to classify them as a 'problem gambler' on a measure. The gap between defining gambling as problem or non-problem gambling is only a one point on a scale, so there are some gamblers who throughout their gambling career may technically flit between problem and non-problem gambling.   The term 'problematic gambling' may also be used here, indicating a non-problem gambler also has episodes of problem gambling.   The new DSM-V criteria resolves this to some extent by the use of 'episodic' and 'persistent' disordered gambling, and 'early' and 'sustained' remission. However, research under this new definition and measure is still in its early stages.

'At risk' gambling, either low or moderate, refers to those who have levels of gambling that may have some adverse consequences, but are not sufficient to be classified in the 'problem gambling' category. However, as the 'at risk' gambling level is not 'problem gambling', it may also be referred to as 'non-problem' gambling. The 'at risk' terms are mostly associated with the PGSI measure.

For this research, the terms 'problem gambling', 'at risk gambling' and 'non-problem gambling' will be used to in conjunction with the PGSI measure (see Section 3.45 for methodological rationale). The term 'problematic' gambling will be used to refer to those whose problem gambling has not been measured on a scale, but they indicate they are having or have had some gambling related problems.

2.8.2   Diagnosis of problem and pathological gambling

Problem gambling is defined and measured in a number of different ways. The Diagnostic and Statistical Manual of Mental Disorders, version 4 and version 4 (Text Revised) were used from 1994 to 2013, when they were replaced by DSM version 5. The DSM-IV versions defined problem gambling in terms of 'pathological gambling' (DSM IV, APA, 1994; DSM-IV-TR, APA 2000). Pathological gambling was classified under 'Impulse-Control Disorders Not Elsewhere Classified', and described as a "failure to resist an impulse, drive or temptation to perform an act that is harmful to the person or others", which is characterised by "recurrent and persistent maladaptive gambling behaviour", p.663 (APA 2000). Indications were given in terms of 10 criteria, as shown in Figure 2.6, with five or more resulting in a diagnosis of pathological gambling:

However, whilst this was the clinical criteria used for diagnosing 'pathological gambling', other definitions of gambling existed in terms of 'problem gambling'. Ferris and Wynne (2001) suggested "problem gambling is gambling behaviour that creates negative consequences for the gambler, others in his or her social network, or for the community" (p. 7). Orford et al. (2003) offered a considerably broader generic definition of problem gambling in terms of "people [who] get into trouble with their gambling" (p.51).

When considering the DSM-IV criteria for pathological gambling, Orford et al. (2003) stated the criteria were not robustly constructed and that pathological or problem gambling may be better classified as an addiction. Orford et al. pointed out that similarities between gambling and other addictions could be made in terms of 'tolerance', where increasing levels of the addictive substance or behaviour are needed to maintain the same effect, and 'withdrawal', where physical or mood disturbances occur on ceasing the addictive substance or behaviour. Additionally, Orford et al. questioned the concept of diagnosis in terms of the seemingly arbitrary cut off between

Figure 2.6   DSM-IV-TR Diagnostic Criteria: Pathological Gambling, APA (2000)

A. Persistent and recurrent maladaptive gambling behaviour leading as indicated by five (or more) of the following:

- Is preoccupied with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble)

- Needs to gamble with increasing amounts of money in order to achieve the desired excitement

- Has repeated unsuccessful efforts to control, cut back, or stop gambling

- Is restless or irritable when attempting to cut down or stop gambling

- Gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)

- After losing money gambling, often returns another day to get even ("chasing" one's losses)

- Lies to family members, therapist, or others to conceal the extent of involvement with gambling

- Has committed illegal acts such as forgery, fraud, theft, or embezzlement to finance gambling

- Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling

- Relies on others to provide money to relieve a desperate financial situation caused by gambling

B. The gambling behaviour is not better explained by a manic episode.

(DSM, IV, p. 674, APA, 2000)

pathological and non-pathological gambling. They recognised the benefits of a continuum of gambling, with 'pathological gambling' representing those people with significant gambling problems, and 'problem gambling' being less serious.

Blaszczyniski and Nower (2002) argued that 'gambling problems' are difficulties or frictions in a person's life that result from gambling behaviour, whereas a 'problem gambler' does not only suffer negative consequences as a result of gambling behaviour but also exhibits impaired control. Impaired control was defined as "repeated, unsuccessful attempts to resist the urge in the context of a genuine desire to cease" (Blaszczyniski and Nower, 2002, p. 488). This was more in accordance with the DSM-IV impulsivity classification, reflecting an "inability to resist impulsive drives and a general loss of control over behaviour", (p. 17, Reith, 2007). West (2006) and Griffiths (2005) supported the view that problem gambling was better placed as an addictive disorder rather than an impulse disorder, however a precise definition of problem gambling or a problem gambler was elusive in their work. This reflected the position that gambling as an addiction consists of biological, psychological and social components, which all influence this addiction. In many respects they suggest it is of little consequence what the object of the addiction may be, more that a combination of

components are present and they define that an addiction to any object exists. Thus problem gambling would not necessarily require a specific definition in its own right.

In 2013, a new version of DSM was constructed, DSM-5. This included a new classification of 'substance-related and addictive disorders', within which was included 'non-substance-related disorder'. The sole condition defined in this category was 'gambling disorder', replacing the previous 'pathological gambling' term. This new classification reflected research that has found increasing similarity between gambling and substance-related disorders in clinical expression, brain origin, co-morbidity, physiology, and treatment (APA, 2013a). Evidence suggested that gambling activated similar reward systems that were activated by drugs of abuse, and behavioural symptoms produced were similar. See Figure 2.7 for DSM-5 gambling disorder criteria.

As well as reclassifying 'pathological gambling', an impulse disorder, to 'gambling disorder', an addiction disorder, DSM-5 removed the criteria relating to illegal acts and the number of criteria needing to be met for diagnosis was reduced from five to four. Additionally, symptoms needed to be present for a 12-month period. Research confirmed that changing the criteria in this way had no effect on prevalence rates or diagnosis, these remained congruent with DSM-IV, and the new criteria appeared to provide better discrimination between those who do and do not have a gambling disorder (Petry, Blanco, Stinchfield & Volberg, 2012; Mitzner, Whelan, & Meyers, 2011).

The current definition of 'problem gambling' therefore now includes a new clinical definition of 'gambling disorder'. 'Gambling disorder' is, conceptually different from the 'pathological gambling' used previously for diagnosis of clinical levels of 'problem gambling', in that the class of the disorder has been changed. The term 'problem gambling' remains in use, to indicate people who have problems with gambling that are disrupting their lives, this includes people with sub-clinical and clinical levels of 'problem gambling'. This term is more arbitrary and is often used to categorise gamblers who's gambling behaviours and levels has been assessed by use of a gambling screen and they have scored above the problem gambling cut off point designated by that particular measure. The definition of 'problem gambling' is therefore variable and inextricably linked with different assessment measures.

Figure 2.7   DSM-5 Diagnostic Criteria: Gambling Disorder, APA (2013b)

A   Persistent and recurrent problematic gambling behaviour leading to clinically significant impairment or distress, as indicated by the individual exhibiting four (or more) of the following in a 12-month period:

- Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
- Is restless or irritable when attempting to cut down or stop gambling.
- Has made repeated unsuccessful efforts to control, cut back, or stop gambling.
- Is often preoccupied with gambling (e.g., having persistent thoughts of reliving past gambling experiences, handicapping or planning the next venture, thinking of ways to get money with which to gamble).
- Often gambles when feeling distressed (e.g., helpless, guilty, anxious, depressed).
- After losing money gambling, often returns another day to get even ("chasing" one's losses).
- Lies to conceal the extent of involvement with gambling.
- Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling.
- Relies on others to provide money to relieve desperate financial situations caused by gambling.

B   The gambling behaviour is not better explained by a manic episode.

Specify if*:*

Episodic: Meeting diagnostic criteria at more than one time point, with symptoms subsiding between periods of gambling disorder for at least several months.

Persistent: Experiencing continuous symptoms, to meet diagnostic criteria for multiple years.

Specify if*:*

In early remission: After full criteria for gambling disorder were previously met, none of the criteria for gambling disorder have been met for at least 3 months but for less than 12 months.

In sustained remission: After full criteria for gambling disorder were previously met, none of the criteria for gambling disorder have been met during a period of 12 months or longer.

Specify *current severity*:

Mild: 4–5 criteria met.

Moderate: 6–7 criteria met.

Severe: 8–9 criteria met.

(DSM 5 section 312.31, APA, 2013b).

In summary a wide variety of behaviours can help to diagnose a pathological level of gambling, including preoccupation, theft, deceit, chasing losses. Some behaviours reflect impulsivity, such as lack of success in controlling behaviours, whereas others reflect addiction, including increasing stakes to experience the same levels of arousal and being irritable when cutting down. Behaviours may result in some kind of harm for the individual themselves or the people surrounding the individual e.g. financial

problems, relationship breakdown. However, many of these indicators are subjective, for example, financial harm is relative to disposable income; is someone who has lost their savings different to someone who has lost their house, or cannot pay their rent? Where that point lies between 'normal' gambling, 'problem' gambling and 'pathological' gambling has been under much debate in the gambling research field.

2.8.3 Measuring problem gambling

There are three main measures that have been widely used to assess 'problem gambling' in national surveys. These are the aforementioned DSM-IV criteria, the South Oaks Gambling Screen and the Canadian Problem Gambling Index, with its subscale, the Problem Gambling Severity Index (DSM-IV, APA, 1994; SOGS, Lesieur & Blume, 1987; CPGI, PGSI, Ferris & Wynne, 2001).

The DSM-IV criteria are part of a diagnostic tool to measure pathological gambling, and measurement using the criteria should be conducted by a suitably qualified clinician. However, the DSM-IV criteria have been operationalised into a validated questionnaire, the SOGS. SOGS includes various measures of gambling activity along with assessment of the DSM-IV criteria, resulting in a 20 item scale, with a yes/no response against each item. Scores of one to four indicate 'some problems with gambling', and five or more, 'pathological gambling' (Lesieur & Blume, 1987). DSM-IV criteria alone have not yet been operationalised into a validated questionnaire format, however the criteria have been operationalised for use in various pieces of research as needed (Wardle et al., BGPS, 2010; Sprotson, Erens & Orford, 2000). DSM-IV criteria measures tend to score the 10 criteria items, using a yes/no response, with scores of one and two indicating 'at risk' gambling, three or more indicating 'problem gambling' and five or more indicating 'probable pathological gambling'. Both SOGS and the DSM IV criteria are designed for a clinical population, whereas the third measure, the CGPI, is designed and validated for the general population (Ferris & Wynne, 2001). The CPGI measures a number of gambling criteria, including gambling prevalence, gambling activity, frequency of play, spending on gambling and correlates. Within the full questionnaire is the Problem Gambling Severity Index (PGSI), a nine statement stand-alone subscale, measuring problem gambling. The PGSI measures both gambling behaviour and the adverse consequences of gambling, based both on SOGS and DSM-IV, along with other validated items relating to gambling behaviours and adverse

consequences. Each of the nine items has a 4-point scale, resulting in a maximum score of 27. Respondents are categorised as 0, non-gambler/non-problem gambler, 1-2, low risk gambler, 3-7, moderate risk gambler, or 8 and more problem gambler (Ferris & Wynne, 2001). Currently, amongst the three most popular measures, SOGS is slipping out of favour as it does not fully reflect DSM-IV-TR criteria, and has been found to overestimate problem gambling prevalence (Wardle et al., 2007; Sprotson et al, 2000). Additionally, there is no current standardised measure reflecting the DSM-5 criteria, although, as with the DSM-IV, criteria could be operationalised for use in research.

In 2010, the British Gambling Prevalence Survey measured problem gambling prevalence in the UK. For past year gamblers, PGSI problem gambling was measured at 0.7%, compared to DSM-IV criteria measure at 0.9% (Wardle et al., BGPS, 2010). Problem gambling as captured by either DSM-IV or PGSI, indicated that adult problem gamblers were more likely than non-problem gamblers to be male, single, aged between 16 and 24, have A-levels or below and have parents who had problem gambling (Wardle et al., BGPS, 2010). Thus, through these measures problem gamblers have been given a demographic profile. However, DSM-IV was also able to measure 'probable pathological' gambling at 0.4%, whereas PGSI, whilst having no sensitivity for this category of gamblers, was able to identify 5.6% low risk gamblers and 1.9% moderate risk gamblers.

It appears from these measures that 'problem gambling' incorporates both 'problem' and 'pathological' gambling, with the distinction between the two being somewhat blurred conceptually, but still remaining distinct by use of assessment against DSM-IV criteria and measurement by DSM-IV criteria questionnaires. However, slight modifications of categories of gamblers are emerging with the addition of 'at risk' gamblers, being 'low risk' and 'moderate risk' identified on the PGSI (Wardle et al., BGPS, 2010, Ferris and Wynne, 2001). The precise understanding of 'at risk', 'low risk' and 'moderate risk' in terms of how these different risk levels relate to problem gambling has yet to emerge, as no longitudinal studies have been conducted which address this issue. Additionally, the classification of 'probable pathological gamblers' popular in DSM-IV criteria questionnaires is now apparent in literature, perhaps reflecting a lack of concurrence between DSM-IV diagnostic assessment by clinical interview and

questionnaires based on DSM-IV criteria (Wardle et al., BGPS, 2007; Sprotson et al, 2000).

The DSM-IV measure and PGSI used in the BGPS 2010, while returning similar rates of population and past-year gambler problem gambling prevalence, captured a different set of problem gamblers as they measure a different set of problems. Of those classified as PGs on DSM-IV measure, 53% were also classified as PGs on the PGSI, meaning 47% were not captured by PGSI. Of those classified as PGs on PGSI measure, 66% were also classified as PGs on the DSM-IV, meaning 34% were not captured by DSM-IV. This may be due to the DSM-IV clinical measure being focussed on 'persistent and recurrent maladaptive gambling behaviour' (DSM-IV-TR, APA, 2000), whereas the PGSI population measure is focussed on problem gambling behaviour and adverse consequences of gambling of at-risk and problem gamblers (Ferris & Wynne, 2001). Orford, Wardle, Griffiths, Sprotson & Erens (2010), in further analysis of the BGPS 2007 data, established that both measures have their limitations. The PGSI requires endorsement for some items which rely on a gambler explicitly recognising they have gambling-related harm. These particular forms of harm may be better picked up on the DSM-IV scale and not picking them up on PGSI may result in a lower estimate of problem gambling prevalence, as was indeed the case in the BGPS 2010 (Orford, Wardle, Griffiths, Sprotson & Erens, 2010). DSM-IV includes an item on 'gambling as escapism', whereas the PGSI does not, and women are more likely to endorse this item than men, higher rates of female problem gambling are reported by DSM-IV measures than CGPI. Two items also perform poorly on the DSM-IV scale, with the 'chasing losses' item including too many false positives and the 'crime to fund gambling' item including too many false negatives, when compared to endorsement of other items. Overall, Orford et al. considered the DSM-IV had serious limitations as a population measure, and was less reliable than the CGPI, with internal reliability measured at 0.73 as opposed to 0.9.

2.8.4 Theories and models of problem gambling

Theories of problem gambling can be categorised into a number of analytical levels, including environmental-ecological, social, individual differences, behavioural, cognitive and biological. Various theories and associated constructs at these levels are briefly

reviewed here. At the environmental level, essential to the development of problem gambling, is that the opportunity to gamble to excess needs to be available, and the gambler needs to be aware of where and how to access these opportunities. Situational characteristics of gambling, in terms of availability, accessibility and exposure, along with factors such as advertising, location of gambling venues and availability of on-site cash machines, are necessary factors for gambling involvement to increase (Griffiths, 2011; Abbott, 2007). Evidence to support situational effects on problem gambling acquisition was found by Room, Turner and Ialomiteanu (1999). They found that prior to a casino being opened in Niagara, gambling was undertaken by 11% of the local population and the problem gambling rate was 0.7%. After the opening, rates rose to 43% and 2.3% respectively. In Australia, rates of gambling and problem gambling were found to be higher in states where there was legal access to electronic gaming machines compared to those where this access did not exist (Productivity Commission, 1999). In addition to this societal and cultural level theory, there are a number of models from different psychological theoretical perspectives, such as social psychology, learning or behaviourist theory, individual differences, the biological perspective and cognitive theory. These account for certain and specific features of problem gambling, and offer explanations for the development and maintenance of problem gambling behaviour, as explained below (Blaszczynski & Nower, 2007; West, 2006; Abbot et al., 2004).

At the social level of analysis, explanations of gambling suggest that gambling is learnt via social facilitation. Evidence for this comes from the association between parental gambling behaviours, where problem gambling in an individual is associated with parental problem gambling. For example, surveys have found that problem gambling prevalence is significantly higher amongst those with perceived problem gambling parents (1.4%) compared to those with non-problem gambling parents (0.4%) (Wardle et al, 2007). Additionally, social facilitation may have a role in the uptake of gambling, as it provides social rewards in, for example, social interaction, social support and identifying with others in the social group (Ocean & Smith, 1993). Those who gamble to problem levels may have difficulty with personal relationships, which means the role of other gamblers and gambling social groups becomes more central to meet gamblers needs for esteem, achievement and status. The gambling social environment thus becomes more attractive and rewarding than the environment outside gambling, so it is

sought more frequently and thus gambling involvement is increased (Ocean & Smith, 1993). Whilst in a gambling environment, the presence of other gamblers can result in individuals taking more risks and placing higher bets than when they bet alone (Cole et al, 2011, Rockloff & Dyer, 2007). However, as problem gambling is linked more with gambling in a solitary way, social facilitation may be more involved in the development and maintenance of social gambling, rather than problem gambling per se, with the impact of others diminishing as gambling behaviour becomes more problematic (Czerny et al., 2008; Griffiths, 1990).

From an individual differences perspective, problem gambling is conceptualised as an condition arising as a result of interaction between a disordered individual and gambling activity. Research has been undertaken on features of individuals that are thought to be responsible for the uptake of gambling to problem levels, with focus on correlates of problem gambling and the co-existence of other disorders. From an individual differences perspective, problem gambling has, for example, been linked to individual demographics, such as being in early adulthood or male, individual conditions, such as depression, anxiety, negative mood states, personality disorders, substance abuse, and alcoholism, and individual personality traits, such as impulsivity and sensation-seeking (Lloyd et al., 2010b; Matthews, Farnsworth & Griffiths, 2009; Zangeneh, Grunfeld & Koenig, 2008; Clarke, 2005; Stewart & Kushner, 2005; Abbot, Volberg, Belringer & Reith, 2004; Blaszczynski & Steel, 1998). Johansson, Grant, Kim, Odlaug and Gunnar (2009) pointed out that there is a paucity of good research in this area. They conducted a review of the research in international journals, and only found 33 "well-performed empirically validated studies" (p. 68), which also had conclusive results. These dated from 1953 to 2009. They considered there was sufficient evidence in this quality research to support a number of risk factors for problem gambling. These included being of a younger age, being male, having distorted cognitions about gambling, being influenced by sensory characteristics and reinforcement schedules within the gambling activity, and having co-morbid disorders, particularly stress, anxiety and obsessive compulsive disorder (Johansson et al., 2009). However, much of this research was of a correlational type and as such, it is unable to confirm precisely how these correlates are related to the development of problem gambling. As Stewart and Kushner (2005) explained in their review of the relationship between alcohol use and gambling behaviour; alcohol use could influence gambling behaviour, gambling behaviour could

influence alcohol use, or a third variable could influence gambling behaviour and alcohol use.

At the behavioural level, the learning theory perspective suggests problem gambling is a maladaptive behaviour learnt and maintained by rewards and schedules of reinforcement from gambling (Blaszczynski & Nower, 2007; Orford, 2001). Rewards may initially be financial, but may also be occur via more complex mechanisms, such as excitement and escape from everyday problems. Research by Shao, Read, Behrens and Rogers (2013) has supported learning theory by measuring the blood oxygenation of four regions of the dopaminergic reinforcement system whilst playing slot machines. The research initially showed increased activity on positive reward by participants experiencing a winning outcome, a classical conditioning first-order stimulus-response effect. However, after repeated play, increased activity the dopamine pathways reduced in response to a win, but increased while playing games and watching reel spins in anticipation of a win, a classical conditioning second-order effect. This observed mechanism provided evidence for second order conditioned learning, where the initial stimulus (winning) became associated with a conditioned stimulus (watching reel spins). The research showed that after exposure to gambling over time, merely participating in gambling becomes rewarding by stimulation of the dopaminergic reinforcement system. Additionally, Czerny, Koenig and Turner (2008) point out that operant conditioning can also apply to gambling. Winning money is the most obvious positive reinforcement, but other positive reinforcement comes from day dreaming about the potential positive outcomes from big wins, and negative reinforcement from escape from problems, negative feelings and debts. Classical and operant learning does not apply equally to everyone in terms of acquisition of problem gambling. This can be explained by the fact that financial win schedules are truly random, that shaping does not automatically occur and the salience of the rewards will be different for different individuals. Thus each individual has a different learning experience, and their acquisition of gambling behaviours will differ.

Closely linked to the learning perspective, the biological perspective on gambling has found that gambling, anticipated reward and uncertainty of reward, all activate dopamine neurons in the ventral tegmental area of the brain, increasing the release of dopamine in the nucleus accumbens (Fiorillo, Tobler & Schultz, 2005; Schultz, 2002).

These neurobiological sutbstrates are the same as those activated in illicit drug use, and are believed to underlie feelings of pleasure (Grant et al., 2008). These feelings of pleasure, understood as part of behaviourist theory, reinforce gambling behaviour, and therefore gambling behaviour is repeated and increased   Abbott,et al., (2004) in a review of genetic research, noted that problem gamblers had a higher frequency of a variant on the dopamine receptor gene, associated with drug and alcohol misuse. They highlighted that genes influencing mood and temperament, impulse control disorders and other addictions appeared to be risk factors for problem gambling. They also noted brain structures associated with drug cravings and attention deficit disorders were more active in problem gamblers. Abbott et al. considered that neurobiological and genetic perspectives suggested there were links between biological deficits of neurotransmitters and problem gambling. However, the question remains about whether the biological deficits existed before problem gambling or were a result of problem gambling. As the research by Shao et al. (2013) has shown, neurological activity patterns in the brain change after involvement with gambling over time and gene research is increasing suggesting that genes can be active or inactive depending on environmental interactions (Hernandez & Blazer, 2006).

From another theoretical perspective, cognitive explanations suggest that a gambler's cognitions can become distorted and this leads them to believe they are more likely to win than they actually are, and therefore they continue to gamble despite losing (Czery et al., 2008: Blaszczynski & Nower, 2007; Parke & Griffiths, 2007). Turner, Zangeneh and Littman-Sharp (2006) found that reasoning and understanding about randomness was better in non-problem gamblers than pathological gamblers. Czerny et al. (2008) suggested that faulty heuristics in pathological gamblers leads to these distortions about randomness, and this in turn leads to underestimations of the role of chance in gambling, prolonging gambling behaviour.

Research has found that there are a number of cognitive attributions and biases that maintain gambling behaviour and may encourage the development of problem gambling. For example, erroneous perceptions may result in wins being recalled as happening more frequently and at a higher level than actually occur (Kahnemann & Tversky, 1982; Toneatto, 1999). The 'gambler's fallacy' is a belief that because a win has not happened for some time, a win is due soon. This type of belief can result in

increasing stake sizes and 'chasing losses', one of the key markers of problem gambling (Rogers, 1998, Turner, 1998). A gambler may experience the 'illusion of control', when they over-estimate the role of factors external to the gambling activity, for example, skill, luck or superstitions, and underestimate the role of randomness or chance. Accordingly, they over-estimate the probability of winning (Langer, 1975; Toneatto, 1999). Gamblers may experience a 'near miss', when the outcome of a gamble is seen as nearly being successful. This invokes frustration or cognitive regret at not winning, which in turn encourages a gambler to try again (Reid, 1986). Parke and Griffiths (2007), and Walker, Schellink and Anjoul (2008), both suggest that some structural characteristics of different gambling activities are designed to provoke these types of cognitive experiences and thereby maintain gambling behaviour.

An Integrative Approach

Using individual behavioural, biological and cognitive perspectives in conjunction with research from social and environmental perspectives, provides greater insight into possible mechanisms for the correlational outcomes. This type of integrated theoretical perspective can provide a multi-layered psychosocial perspective with broad explanatory power, with inference of biological mechanisms from learning theory and from biological individual differences. For example, learning theory proposes that gamblers increase their gambling involvement due to finding escape from stresses and problems rewarding, and thus, an individual who suffers from greater anxiety, including experiencing obsessive and neurotic thoughts, would experience greater reward from the relief and escape they experienced whilst gambling, and would therefore have greater susceptibility to problem gambling development (Zangeneh et al., 2008). Learning theory also proposes the correlations between problem gambling and the sensation seeking trait, where novel experiences and situations are sought, results in differences in risk taking and maintenance of arousal level (Zuckerman, 1979). The risks and excitement of a gambling experience can act as a stronger reward for individuals high in the sensation seeking trait, and this can also result in greater susceptibility to problem gambling development. The relationship between impulsivity and gambling has been explored in research where sensation seeking has been combined with gambling motives, and an urgency trait, combined with decision making and delayed reward (Canale, Vieno, Griffiths, Rubaltelli & Santinello, 2015a; 2015b).

These combined correlates explored were useful as predictive indicators of problem gambling. From this type of combined perspective, it becomes possible to develop theoretical models that provide a deeper explanation and understanding of potential causal factors and mechanisms involved in the development of problem gambling.

It is widely accepted amongst a number of leading experts in the gambling field that no single theoretical approach can account for problem gambling and a more integrated approach is needed (Blaszczynski & Nower, 2007; Reith, 2007; West, 2006; Blaszczynski & Nower, 2002; Griffiths & Delfabbro, 2001; Orford; 2001). Research by Turner, Jain, Spence and Zangeneh (2008) supports this. They analysed data from a series of measures administered to 141 gamblers, ranging from non-problem gamblers to severe pathological gamblers. Principal components analysis identified four components; emotional vulnerability, impulsivity, erroneous beliefs and early wins which predicted 53.4% of the variance in pathological gambling scores. This confirms there are a range of risk factors and psychological perspectives that are involved in pathological gambling. From this type of integrated multiple-perspective approach, a number of theoretical models have been developed to explain the development and maintenance of problem gambling. Conceptual models typically emphasize different processes involved in gambling and problem gambling. Some models take a theoretical perspective that considers problem gambling as an addiction, with addiction being defined in terms of a behavioural addiction rather than being a disease or medical model (Upfold, 2015). The models that take a behavioural addiction approach, whilst emphasizing the role of individual differences, social influences and cognitions, appear to provide the broadest explanatory power, explaining the breadth and diversity of the problem gambling experience.

Three current integrated models appear to offer broad explanations of problem gambling, which should also be relevant to problem gambling on the Internet, are now explored further below; Orford's Excessive Appetites model, Blaszczynski and Nower's Pathways Model, and Griffiths' Components Model of Addiction, with situational and structural characteristics (Orford, 2001; Blaszczynski & Nower, 2002; Griffiths & Delfabbro, 2001; Parke & Griffiths, 2007).

i)   Orford's Excessive Appetites Model

Orford considers gambling behaviour is an addiction and can be defined as an 'appetitive behaviour' along with other appetitive behaviours, such as substance and alcohol use, eating and sex. Orford's excessive appetites model of gambling addiction is encompassed in the 'Social-Behavioural-Cognitive-Moral Model' of appetitive behaviour (Orford, 2001). Orford's model brings together research on addiction to different addictive objects, and identifies a number of key concepts that influence the development, maintenance and recovery from any addiction. Central to the model are social learning and cognitive behavioural theoretical perspectives, and these are influenced by the current social and moral context in which the object of addiction exists and appetitive behaviour occurs. Orford considered that appetitive behaviours all have in common the potential to become excessive to the point that they can ruin people's lives. The path of excessive appetite varies, so a longitudinal perspective is needed to understand how problem gambling behaviour develops over time. The degree of involvement with any appetitive object is mediated by multiple interacting determinants of a social and individual nature. These include many entwined and diverse factors such as availability and access to the object, incentives for or against involvement with the object, an individual's personality, social influence, socioeconomic factors etc. These factors serve numerous personal functions for the individual, such as mood modification and enhancing self-identity. Where incentives are great and restraints are weak, attachment to the appetitive behaviour occurs and escalates.

Development of excessive appetite is provided by learning theory, and the effects of engaging in the behaviour result in a secondary set of emotional drives for the behaviour, for example, chasing losses, increasing the incentive to engage in the behaviour. Excessive behaviour results in a risk of incurring costs, which are personal and socially relative, and conflicts of motive, resulting in for example, poor judgement and loss of social status, which amplify the addiction process. As a result of the accumulating costs and conflicts, excessive behaviour may reduce by common fundamental change processes and occur as a natural consequence to conflict. In its simplest form, reduction occurs by making a decision to change and taking action to change.

Orford's model is one where behavioural and cognitive processes are central to the development, maintenance and reduction of all excessive behaviours, although Orford acknowledges that social influence is always present. However it is not a disease or biological model, the argument that Orford (2001) gives being that psychological processes on their own are sufficient to explain how behaviours develop and control is eroded. This may not fit particularly well with other models of addiction which emphasise addiction as having more of a biological and physiological component, though these medical or disease models may be more relevant for substance use disorders, but less so for behavioural addictions.

Orford (1985, 2001) considered his 'excessive appetites' explanation of addiction to be a model rather than a theory. As such, he suggests that it does not offer any specific behavioural predictions, more that the explanative presentation of a series of key concepts underpinning addiction offer understanding of addiction, and these can be used as a basis to construct further theories. Orford's model of addiction provides comprehensive description and explanation of addiction and the broadness of the explanation means it is able to account for the diversity of observed addiction behaviour. However, the lack of specificity also makes the theory less applicable and less pragmatic than other theories and models that are more closely linked to gambling. As it is so broad and does not make specific predictions, it is also difficult to refute.

ii)   Blaszczynski and Nower's Pathways Model

Blaszczynski and Nower (2002), in line with DSM-IV, consider problem gambling largely in terms of an impulse disorder, and this is reflected in their pathways model of pathological gambling. The pathways model is constructed on the basis that a number of different sub-types of pathological gambler can be classified, with each subtype influenced by different factors, yet having similar experiences of gambling and displaying similar problem gambling features. Each sub-type has a discrete pathway into the development of pathological gambling, and this route would have different implications for treatment.

Blaszczynski and Nower (2002) reviewed gambling research and theory from a number of different perspectives. They highlighted learning theory, irrational cognitive schema,

psychodynamic understanding of neuroses and impulse disorders, and biochemical variations, finding that each contributed to the understanding of pathological gambling, with an amount of overlap between the various correlates and theories. Blaszczynski and Nower considered the research suggested at least two types of gambler appeared to exist; those who suffer dysphoria, seeking to raise their arousal state and preferring excitement from high skill gambling, and those who suffer anxiety, seeking to lower their arousal state and preferring narrow focus low skill games which produce dissociation. Additionally, Blaszczynski and Nower pointed out that impulsivity appeared to have a strong role in pathological gambling which could not be overlooked. All of these perspectives and features of gambling were placed into a theoretical framework which proposed three discrete pathways into pathological gambling.

The three pathways have the same route in common, yet the precise factors at play at various points in the pathway differ for each subgroup. Initially, the social context of gambling in terms of accessibility and acceptability is the most important factor. Then, once started, classical and operant conditioning come in to play, distorted schema appear, a habituated pattern develops and a neuronal pathway is built resulting in a 'drive' to complete behaviour (Blaszczynski and Nower, 2002). As the behaviour continues, losing streaks inevitably occur, and chasing losses and other diagnostic behavioural indicators become apparent. The pathways differ between three distinct subgroups. Blaszczynski and Nower (2002) explain that Pathway 1, behaviourally conditioned problem gamblers, have minimal levels of psychopathology prior to starting gambling. They become pathological gamblers due to the effects of conditioning, faulty cognitions about probability of winning and bad judgments, rather than due to impaired control. Pathway 2, emotionally vulnerable problem gamblers, additionally have pre-morbid vulnerabilities such as anxiety, depression, poor coping skills, negative family experiences and negative life events. Gambling for this group provides a means to relieve aversive affective states, and due to their emotional vulnerability, they are too fragile to maintain control over their gambling behaviour. Pathway 3, antisocial impulsivist problem gamblers have similar psychosocial vulnerabilities as the second subgroup. Additionally, they have pre-existing biological impulsive and antisocial traits, resulting in severe maladaptive behaviours affecting psychosocial functioning. They have weak behavioural control in many aspects of their life and are the most severe of all the problem gamblers.

Blaszczynski and Nower's (2002) pathways model is similar in some ways to Orford (2001) as it too takes a longitudinal perspective and considers a number of processes are involved in the development of problem gambling. However, whilst Orford's model is an account of taking up, establishing and giving up appetitive behaviour, ranging from the mild to the severely excessive, Blaszczynski and Nower's model is solely related to the development of problem gambling. Blaszczynski and Nower's central focus is on the attributes of the person that has a gambling problem in terms their impaired behavioural control, which is either learnt, by interaction with the addictive object, pre-existing due to emotional vulnerability or pre-existing due to biological disposition. Again, similarly to Orford, Blaszczynski and Nower acknowledge that gambling behaviour is limited and influenced by the accessibility and acceptability of gambling in a social environment. However they pay more attention to biological factors than Orford, acknowledging the existence of a biological influence on gambling behaviour. The pathways model appears to have a greater utility for classifying different groups and how they have become problem gamblers. This is a more pragmatic theory in terms of developing specific testable hypotheses and therefore developing and applying focussed treatments.

In terms of research supporting the model, Gupta et al. (2013) found evidence for the pathways model in a group of 109 adolescents. They conducted a latent class analysis of various factors including psychopathology, emotional instability and mood disorders, finding three classes in at-risk and problem gamblers that broadly followed the profiles proposed by the Pathways Model. Class 2, like Pathway 1 behaviourally conditioned problem gamblers, were devoid of any significant psychopathology. Class 5, like Pathway 2 the emotionally vulnerable problem gamblers, showed emotional instability, personality disorder, depression and pre-morbid family dysfunction. Class 1, like Pathway 3 the antisocial impulsivist problem gamblers, had a higher impulsive and antisocial nature than the other classes. The two other classes found reflected a depression only subtype, which Gupta et al. suggests may be unique to an adolescent sample, and a subtype with both internalising (e.g. depressive affect) and externalising (e.g. impulsive propensity) disorders. Gupta et al., suggested this final class is reflected somewhat in the Pathways model which hypothesized there may be some overlap in Pathways 2 and 3 in terms of emotional functioning. Milosevic and Ledgerwood (2010) undertook a review of research categorised problem gambler subtypes on the basis of

pathology, personality and gambling motivation. They concluded that all subtypes could be classified as either behaviourally conditioned, emotionally vulnerably or antisocial impulsivist, reflecting the subtypes in the pathways model. However, Milosevic and Ledgerwood acknowledged that whilst there was some research which supports the pathways model, it was primarily cross sectional, meaning that it cannot confirm the existence of a pathway or process, as it is not clear if disorders existed before or after problem gambling behaviour emerged. Additionally, the supporting research validates only elements of the pathway rather than the full model. Legerwood and Petry (2010) undertook a longitudinal study of 229 problem gamblers in Canada, first sub-typing them to the three categories behaviourally conditioned (BC), emotionally vulnerably (EV) or antisocial impulsivist (AI), by use of anxiety, depression and impulsivity measures, and then evaluating if they benefitted differentially from treatment over a 12 month period. The subtypes had differences on a number of dimensions which supported the pathways models and was linked with gambling severity, but Ledgerwood and Petry concluded that the sub-typing did not predict the outcome of treatment as the pathways model suggests.

iii)   Griffiths' Components Model of Addiction

Similarly to Blaszczynski and Nower (2002), Griffiths and Delfabbro (2001) advocate a biopsychosocial approach to problem gambling. They suggest that research indicates that the development of problem gambling behaviour is multifaceted. It can be explained in part by strands of research that consider gambling behaviour in terms of learning theory, cognitive theory, mood states, biochemistry, disposition, and the economics of supply and demand. Griffiths and Delfabbro consider that individually the different strands of research are unable to fully explain problem gambling, but that an integrated biological, sociological and psychological approach will best explain gambling behaviour. Griffiths (2005) conceptualises addiction, including behavioural addiction to gambling, in a 'components model', consisting of six components; salience, mood modification, tolerance, withdrawal, conflict and relapse; each of which must be present for a person to be considered 'addicted' to an object or behaviour. Salience refers to the object being the most important activity in a person's life, dominating thought, feelings and behaviour. For some addictive behaviour, salience is only present when the addictive behaviour cannot be engaged in (reverse salience). The behaviour must

be indulged in to achieve mood modification, with increasing amounts of the activity required to achieve the same effects (tolerance). Withdrawal is experienced if the activity is reduced or stopped. Relapse is likely, in terms of ceasing the behaviour and after sustained periods of control or abstinence, returning rapidly to earlier patterns of addictive behaviour. Conflict also needs to be present, where engaging in the behaviour causes interpersonal and intrapersonal conflict, seemingly reduced by periods of short-term pleasure or relief gained from indulging in the behaviour. Griffiths (2005) explained that the components model can be used as a model of gambling addiction and, as it is designed as present, Griffiths considers that all gambling addicts, categorised as gambling addicts by comparison with the individual components, would be problem gamblers, but not all problem gamblers would be gambling addicts. This has not yet been empirically tested, and an associated gambling measure has not yet been developed.

Whilst the development of problem gambling is positioned within a biopsychosocial framework and gambling in terms of an addiction is encompassed by the components model, the components model and the biopsychosocial framework are not integrated to provide a model of how gambling develops to the problem levels defined by the component model criteria. However, Griffiths (2003), Griffiths, Parke, Wood and Parke (2006), and Parke and Griffiths (2007) all point to the interaction between the individual and the situational and structural characteristics of each gambling activity as being a key element of developing problem gambling. An example of this can be seen qualitative research with gaming machine players, where key themes included personal characteristics (enjoyment, social, mastery, financial), structural characteristics (near miss, speed and simplicity, frequency of payout, familiarity and skill) and situational characteristics (machine density and access, presence of others) (Gambling Commission, 2009a). Personal characteristics had a role in motivating gambling behaviour, and situational and structural characteristics of the gambling activity played a part in motivating gambling play and participation. Together, they influenced the acquisition, development and maintenance of gambling behaviour.

Whilst this model for gaming machine players is testable in other gambling activities, as Parke and Griffiths (2007) point out, research with structural characteristics often favours certain characteristics for research, such as near misses and event frequency,

findings may be inconsistent or inconclusive, and experiments have difficulties in achieving ecological validity in a laboratory environment. Parke and Griffiths' taxonomy of characteristics aims to add structure to research in this area, identifying six factors which can be used to classify game characteristics in terms of the role they play in gambling behaviour. The six factors are payment characteristics, playability characteristics, speed and frequency characteristics, educational characteristics (protective education or information), ambient characteristics (lights, colours sounds) and reward characteristics. Park and Griffiths have aligned existing research to fit with this taxonomy, for example, payment characteristics includes the role of 'real money' versus tokens, smart cards, and e-cash in Internet gambling. Some evidence suggests that people gamble more with real money alternatives than with real money (Griffiths & Parke, 2002). As Parke and Griffiths (2007) suggests, with further research undertaken and structured into this taxonomy, interactions between game characteristics and gambling involvement can be more systematically examined to develop an explanation of how the structure of a gambling activity may influence gambling behaviour, irrespective of the individual's psychological, physiological or socioeconomic status. The current emerging trend in gambling research to use player data from Internet gambling websites may prove useful to facilitate this process.

iv)   Summary of theoretical models

The theoretical models of Orford (2001), Blaszczynski and Nower (2002), and Griffiths (2005) have all been constructed to incorporate many years of research findings in the gambling field and in the general field of addiction. Blaszczynski and Nower (2002) 'pathways model' of problem and pathological gambling is one of the few integrated theoretical models of problem gambling that has focused specifically on gambling behaviour. It is linked to DSM-IV criteria by considering the role of impulsivity is central to the development of problem gambling, yet it also considers the roles of learning theory, cognitive bias and biochemistry. Orford's (2001) 'excessive appetites' theory, considers problem gambling as an addiction, and as such, advocates that problem gambling can be explained by generic theories of addiction incorporating multiple perspectives. The central focus is on learning theory, with biological factors considered not to add additional explanatory power to a psychological explanation alone. Griffiths' (2005) 'components model of addiction' supports the view that problem gambling is best

explained by an addiction model, and, like Blaszczynski and Nower, suggests a biopsychosocial approach is needed to integrate individual problem gambling theories from different research perspectives (Griffiths & Delfabbro, 2002). Addiction models have been most in favour recently and the Australian Psychological Society suggested in 2010 that problem gambling would be reclassified as an addiction disorder in DSM-5, and this indeed has been the case (APS, 2010). However, APS (2010) also pointed out that empirical evidence that supports Blaszczynski and Nower's work is now emerging. It is currently unclear where precisely this new classification as an addiction will leave a model of gambling that leans towards impulsivity rather than addiction.

Across these three theories and models presented, there has been very little research that has emerged directly from hypotheses based on the individual theoretical models. Orford's Excessive Appetites Model does not appear to have been directly tested. Blaszczynski and Nower's Pathways Model appears to have the most supportive research evidence. Parke and Griffiths (2007) taxonomy of structural characteristics lends more structure to the development of an integrated theory of gambling addiction, but as yet, as Parke and Griffiths point out, further research is needed. Griffiths work is ongoing and evidence for the relationships between structural characteristics of games and gambling behaviour is still emerging.

It appears that there is research in a variety of domains offering sufficient evidence to develop a variety of integrated theoretical models which offer explanation of the development of problem gambling. However, these integrated theories thus far lack empirical research in their own right and some appear to be very much in their infancy. The three models do not specifically state if and how Internet gambling is accounted for. Presumably this is because Internet and land-based gambling are considered sufficiently similar that Internet gambling can be satisfactorily accounted for in the current existing models. It is implicit in the addiction models that Internet gambling would be included. Additionally, Griffiths' situational and structural characteristics explicitly include Internet gambling features.

2.8.5 Treating problem gambling

Treatment for problem gambling is available from a number of different national providers in the UK. At present Gamcare is one of the main providers, offering information, self help services and counselling support to gamblers, and families of gamblers, online, over the telephone and face to face in a one-to-one or group environment. The Central and North West London (CNWL) National Problem Gambling Clinic treats problem gamblers over the age of 16 years, with the gambler being able to refer themselves as well as being referred by other organisations or agencies. The Gordon Moody Association offers a 9 month residential programme for recovering gamblers along with an outreach service visiting gamblers at home and online counselling via the Gambling Therapy website. Gamblers Anonymous offers local meetings run and managed by abstaining problem gamblers.

The issue of the use of these services via the NHS was explored with General Practitioners (Corney, 2010). The majority of GPs were unaware of the prevalence and severity of problem gambling, and unfamiliar with treatment agencies other than Gamblers Anonymous. Only one out of 327 NHS Trusts provided specialist problem gambling services and only seven of the trusts indicated they provided information on services outside the NHS (Rigbye & Griffiths, 2011). Referral to NHS mental health services may be made for a co-morbid primary condition (e.g. drug or alcohol addiction), with problem gambling being a secondary marginalised issue.

Hodkins and El-Guebaly (2000) in a study of recovered and active problem gamblers, reported that the majority had not sought treatment for their gambling as they had the desire to handle it themselves. Gamblers with more severe problems were more likely to have sought help than those with less severe problems. Orford (2003) conducted a qualitative study of problem gamblers, and found that over time, they increased and decreased their gambling levels at different points in their 'gambling careers' for a number of different reasons. This included increasing them to problem gambling levels and then 'recovering' without necessarily seeking professional help or treatment. Thus, Orford suggests, problem gambling does not necessarily need treatment for recovery to occur. Gamblers had decided to increase their own levels of self control which had enabled their recovery from problem gambling. Friends and family providing emotional

support, distraction and controlling the gambler's finances were in some cases crucial to a problem gambler's recovery. Moore, Thomas, Kyrios and Bates (2012) supported this view. In their research, problem gamblers rated the use of different self-regulation strategies used to control gambling. The strategies with the highest endorsement were focusing on other hobbies, spending more time with family and friends and thinking about the negative consequences of gambling, endorsed by 90.3%, 85.7% and 82.5% of problem gamblers respectively. Seeking professional help was endorsed by 39.7% of problem gamblers, the 17th most used strategy out of 20. Suurvali, Hodgkins and Cunningaham (2010) in a review of the motivations for help-seeking found that financial problems, relationships issues and negative emotions were the main motivations for seeking help.

Treatment is currently available widely to problem gamblers in the form of self-help. This comes in various forms such as self-help literature, gambler-led meetings, for example, those facilitated by Gamblers Anonymous, and online chat rooms and forums, offered by service providers such as Gambling Therapy and Gamcare. This type of self-help is largely under-researched. Orford (2003) points out that self-help organisations and networks should not be subject to scrutiny and evaluation in the same way as professional treatment. However, with the evolution of services provided by agencies such as Gamcare and Gambling Therapy, where the problem gambler can find information online, speak with other gamblers and also speak with trained advisors online, this line has become somewhat blurred as a multifaceted approach to treatment is offered. In a review of the GamAid service (now Gambling Therapy), providing advice and signposts to treatment provision, Wood and Griffiths (2007a) concluded that of people using this service, 65% indicated they had problems with gambling and had been given the right advice and information that enabled them to consider their options to control their behaviour. Particularly of interest is that amongst the gamblers accessing this service, gambling on the Internet was the most popular form of gambling. Taking on board findings from Hodkins and El-Guebaly (2000), that the vast majority of low severity problem gamblers are keen to deal with problems on their own, this type of service may well be a sufficient 'treatment' for many gamblers.

Anderson et al. (2011a) suggest different psychological treatments for problem gambling are offered in line with different conceptual models representing different

aetiologies of problem gambling. Behavioural interventions and techniques, such as systematic desensitisation, imagined exposure, financial planning and limit setting, may be applied to unlearn the conditioned arousal and excitement reactions that have been associated with gambling behaviour. Cognitive-behavioural interventions would focus on identifying and changing cognitive biases such as those related to luck, skill, probability of winning and recollection of wins over recollection of losses, along with behavioural methods. Motivational interviewing involves understanding and enhancing motivations for behaviour change. All three treatments that Anderson et al. (2011a) define can also be applied in terms of brief interventions with minimal therapist intervention.

Battersby, Oakes, Tolchard, Forbs and Pols (2008) reviewed a number of studies related to the outcome of treatments and concluded that behavioural and cognitive-behavioural interventions were effective treatments for problem gambling, at least in the short term. Gooding and Tarrier (2009) reviewed 25 research studies specifically relating to Cognitive Behavioural Therapy (CBT), finding that research was often poorly conducted in this area. Nevertheless, they concluded that CBT was more effective in reducing gambling behaviour than control groups and was effective over a six month period. Anderson et al. (2011a; 2011b) more recently reviewed the literature available on the outcomes of treatments offered for problem gambling. They concluded that research in this area was poor in a number of areas including low sample sizes, failing to use standardised measuring of problem gambling and defining and measuring treatment outcome. The treatment Cowlishaw et al. (2012) reviewed treatments in four areas; CBT, motivational interviewing, integrative (combined methods) and other therapies, which consisted of one study of the Gamblers Anonymous 12 step programme. Cowlishaw et al. concluded that CBT alone had sufficient evidence to support its effectiveness in reducing gambling behaviour and symptoms of pathological gambling within a few months of therapy, but the durability of this reduction was unknown. There were too few studies and evidence was insufficient to support other therapies.

Anderson et al. (2011b) highlighted pharmacological treatments that can also be used to treat problem gambling. For example they suggested an underactive serotonergic system, which influences impulsive behaviours associated with problem gambling, could

be treated with antidepressant selective serotonin reuptake inhibitors, and reward, pleasure and urge systems can be dampened by inhibiting dopamine using opoid antagonists. Hodgins and Holub (2007) in review of pharmacological treatments noted that whilst opoid antagonists showed promise, they also had high placebo response rates. They considered that pharmacological treatments such as SSRIs and Lithium for mood disorders may be treating co-morbid disorders rather than gambling disorder, or may work directly on the gambling disorder with no change reported for the mood disorder. Additionally, they reported large placebo effects apparent in SSRI trials leading to a change of gambling behaviour by placebo that was no greater than the change by the drug itself. Grant, Kim and Potenza (2008) in their review of pharmacological treatments concluded treatment with antidepressants had mixed results, whereas opoid antagonists effectively reduced both cravings and pleasure associated with gambling and were therefore an effective treatment. However no indications of the long term outcome for any of the treatments were outlined.

2.9   Internet gambling: New approaches and findings

The literature review thus far has included a review of research that provides insights into Internet gambling in terms of overall prevalence, prevalence of problem gambling, gender differences and similarities, gambling activities on the Internet and problem vs. non-problem gambling. There are three newer strands of research that add additional insights into Internet gambling. These are findings from cyberpsychology, findings from research comparing Internet and non-Internet gamblers, and findings from research using real player data from Internet gambling sites.

2.9.1 Cyberpsychology

Cyberpsychology is an evolving discipline that considers the psychological processes, attitudes, motivations, behaviours, and effects that are associated with using and interacting with technology (Attrill, 2015). Research published under the wide umbrella of cyberpsychology can provide specific insight into psychological events and activities experienced as part of undertaking Internet gambling.   It can also shed light on why Internet gambling is attractive. Examples of this can be found in a number of strands of cyberpsychology including, for example, online self-presentation, online social relationships and groups, online support / counselling and technological addiction.

In terms of managing one's sense of self online, research suggests that 4 factors of technology influence interactions online in a different way to interactions offline. These are greater potential for anonymity, less importance on physical appearance, more control over timing of interactions and more potential to find similar others (McKenna, Green & Gleeson, 2002). Fullwood (2015) advocates the additional inclusion of having control over online-self content. Together these five factors allow self-presentation and sense of self online to be managed in a different way to offline.

Evidence of cyberpsychological research on online-self management can be found in Internet gambling research. In general Internet gambling research, anonymity offered by online gambling activities has been found to encourage participation as lack of social judgement can result in a reduction of social stigma and confrontation (Corney & Davis, 2010; Griffiths & Barnes, 2008; Wood et al., 2007; Parke, Griffiths & Parke, 2005;

Griffiths, 2001). Additionally, in more specific Internet gambling research, poker players have been found to manipulate their online identity, perhaps concealing or changing aspects of their identity such as experience level or gender (McCormack & Griffiths, 2012b; Griffiths et al., 2009; Wood et al., 2007). This is driven by the perception that others will play differently due to this information, and this will confer an advantage that will provide more likelihood of a win. This greater control over online-self presentation, along with gambling online in an anonymous way, can add to the attraction of and involvement in Internet gambling.

Social relationships formed online are mediated by the online-self. Relationships purely based online are built on information selected by the individual for presentation to others. Missing from this are involuntary self disclosures which convey aspects of the self, for example, pausing to think, facial expressions, intonation (Myddleton &Attrill, 2015). Thus the influence of online relationships is different to offline relationships, and, like the online-self, can be selective and manipulated online. Internet gamblers have the opportunity to engage with other Internet gamblers via live chat during activities, in gambling chat rooms on a provider's site, by use of social media groups, (such as those on Facebook), gambling forums and by problem gambling support and therapy forums. Again, identity in these groups can be managed and concealed.

Online groups can involve an online disinhibition effect, where individuals feel they can behave in new ways, resulting in openness, support and self-learning. Alternatively online groups can involve toxic inhibition or deception, which is negative and disruptive (Flood, Rooney & Barton, 2015). Amongst poker players, forums were used to share knowledge and experience, give and receive feedback about gambling behaviours and develop skills (Parke & Griffiths, 2011a). Parke and Griffiths theorised that whilst skill development may result in increased gambling activities, it may also facilitate the reduction of risk of problematic gambling behaviour. Whilst in-play chat, chat rooms and forums are available as spaces to participate in online relationships, the impact of these inter-gambler relationships is an area that is currently under-researched. However, research into social facilitation can provide some indication of the impact of the presence of others whilst actually gambling. Cole, Barrett and Griffiths (2011) found gamblers playing online roulette placed larger, more risky bets when playing in the presence of others, than those gambling alone or offline. Research on offline research

supports this social facilitation effect, with research by Rockloff and Dyer (2007) finding gamblers increasing their betting on gambling machines when advised other players were playing alongside and winning more. However, gambling in the presence of non-gamblers reduces this effect (Griffiths & Parke, 2003). How these social facilitation effects, in which gambling is influenced by the mere presence of others, interact with online inter-gambler relationships (whether an active participant or an observer of others' interactions) and influence gambling behaviour, is an area for further study.

Cyberpsychology as an evolving discipline has had a lead role in identifying and understanding technological addictions. These appear in the form of excessive use of technological mediums, such as mobile phones, video games and the Internet, with addiction consisting of six components; salience, mood modification, tolerance, withdrawal symptoms, conflict and relapse (Griffiths, 2015, Griffiths, 2005). The components of Griffiths' operational description of addiction are fully described in 2.8.4iii). The discussion that is central around the concept of technological addiction is to define what the addictive object actually is. Addiction may be to the use of the Internet itself, may be to specific activities undertaken online, such as relationships, social networking, computer game playing, sex addiction and gambling, or may be to the mode of access to the activity, for example, phone, handheld console, personal computer. However, whether these are different and distinct addictions, or can be addressed under one technological addiction umbrella, is not yet fully established.

For those who do have technological addictions, Griffiths (2015) considers that, particularly as there are negative consequences for those who are addicted, there is a need to distinguish between addictions to the Internet and addictions undertaken on the Internet. Specifically considering Internet gambling in the context of Internet addiction, research by Tonioli at al. (2014), investigating differences between Internet addicted and pathological gambling patients, found whilst they had similarities in depression, anxiety and global functioning, Internet addicted patients had stronger social impairment and disengagement than pathological gamblers. These differences suggest different types of harm, and therefore treatment, could be associated with different types of technological addiction. Griffiths suggests the prevalence rates for technological addictions are likely to be different, but there is a need to undertake further research in this area. In the meantime, research on addictions that just happen to be undertaken

on the Internet for convenience of access, will need to be developed further to understand how the offline and online aspects of the same addiction interact.

One area of cyberpsychology that has a more direct influence on gambling behaviour is that of health-related online support. This has been defined in terms of searching for health-related information, taking part in online support communities and direct interaction with healthcare professionals (Cline & Haynes, 2001). The importance of the online support communities has been summarised from a number of research papers. The four themes found include: the importance of communication with others who have has similar experiences; the provision of a safe environment to express feelings; the highlighting of the frustration of misconceptions about the illness; and the shared information, social support and advice which can help individuals develop effective coping strategies to overcome issues (Coulson & Smedley, 2015). The round the clock availability of online support and the anonymity they can provide can make them preferable to offline support groups.

Psychological interventions can also be delivered online. These may be static, non-interactive, information-based interventions, automated therapeutic software with rule-driven systems, or online counselling delivered by a trained professional via email, instant messaging or videoconferencing (Nguyen, 2015). These types of cyberpsychological supports have been developed for problem gamblers and services, in the form of moderated support groups and online counselling, and have been offered by gambling support agencies such as Gamcare and Gambling Therapy (Anderson et al., 2011a, Wood & Griffiths, 2007a, Orford, 2003).

Cyberpsychology relates to the influence of Information Technology (IT) generally on behaviour. In line with this general focus on the IT-behaviour relationship, Parke and Griffiths (2012) conducted a qualitative study into IT and its broad influence on and interaction with gambling behaviour. Analysis of in-depth interviews revealed that gamblers considered that it was possible to use IT for gambling in a controlled way and make a profit. However, consistently making a profit in a controlled way was a slow, onerous process, which took time away from other activities and reduced the pleasure of gambling. Through this lengthy, slow, profit-making gambling experience, gamblers learnt that their motives for gambling online were more than just monetary, and that

'real' or 'authentic' gambling was also about entertainment, excitement and risk. Over time, participants' use of IT in relation to gambling changed. Most had greater access to money and therefore the financial impacts of wins and losses were less important, and hence Internet gambling became less important and it took up less time. The ability to gamble on the Internet at home became important to those who had competing responsibilities as undertaking gambling at home detracted less from responsibilities than gambling at a venue away from home. The research gave an indication of the evolving role that cyberpsychology has in understanding Internet gambling behaviour in that the use of IT over time had changed gamblers' attitudes and behaviours in relation to gambling and also, that gamblers' attitudes and behaviours in relation to gambling over time had changed the use of IT.

2.9.2 Internet and non-Internet gamblers

Research involving comparison between Internet and non-Internet gamblers, in many cases, has emerged from the premise that Internet gamblers are a sub-group of gamblers distinct from non-Internet gamblers. The research usually aims to separate Internet and non-Internet gamblers and compare features of each group. One of the first studies of this nature was a case study comparing two online gamblers with two 'traditional' gamblers (Griffiths & Parke, 2007). The study noted differences between the two gambler types on dimensions including financial stability, motivation, physiological effects, competition, need for acknowledgement and social facilitation. Whilst this study was small and no firm conclusions can be drawn about the wider population, it provided some early insight into the fact that there were apparent differences between the two gambler populations.

An evolving approach to address the differences between Internet and non-Internet gamblers has involved making comparisons between much larger populations by use of online surveys. A secondary analysis of the BGPS 2007) revealed Internet gamblers were more likely than non-Internet gamblers to be single, male, young, well-educated and in professional/managerial occupations (Griffiths, Wardle, Orford, Sprotson & Erens, 2011). Internet gamblers (5%) were also more likely than non-Internet gamblers (0.5%) to be problem gamblers. A study of this nature included over 5000 Australian gamblers, defining Internet gamblers as those who reported gambling online on at least

one activity in the past 12 months (Gainsbury, Hing, Blaszczynski & Wood, 2011; Gainsbury, Wood, Russell, Hing & Blaszczynski, 2012). Findings suggested that Internet gamblers were more likely than non-Internet gamblers to have higher incomes, work full time or be students, be married or living with a partner. They also participated in more gambling activities, more frequently, i.e., had a higher level of gambling involvement. Internet gamblers had a more positive view of gambling. Most (94%) gambled from home using a computer. They saw the advantages over land-based gambling as not having to leave the house, increased availability, convenience and privacy, and the disadvantages as being too convenient and easier to spend money, with 15% finding Internet gambling more addictive than land-based gambling. Using the PGSI scale, Internet gamblers were more likely to be at-risk from gambling, whereas land-based gamblers were more likely to be no problem gamblers or problem gamblers.

Gainsbury et al. (2011, 2012) concluded that Internet gamblers appear to be more involved in gambling than land-based gamblers, although they did not appear to have higher rates of problem gambling. Whilst there were some differences between Internet and land-based gamblers, Internet gamblers were still a heterogeneous group, and Internet gambling appeared to be an additional mode of gambling rather than a replacement for land-based gambling. These findings were supported by Jiminez-Murcia et al. (2011) who found no differences between problem Internet and land-based gamblers in clinical, psychopathological and personality measures.

In a sample of Canadian Internet gamblers, Kairouz, Paradis and Nadeau (2012) found Internet gamblers were more likely than land-based gamblers to be male, young, and students. They also found gambling behaviour was more excessive on the Internet, with Internet gamblers playing more frequently and spending more time and money than land-based gamblers. Additionally, Internet gamblers were more likely than land-based gamblers to engage in alcohol and cannabis use whilst gambling. All of this research has defined Internet gamblers as people who have used the Internet to gamble in the last 12 months. This could mean 100% of their gambling is undertaken on the Internet, or 1%. It may be of value to compare Internet only gamblers with non-Internet only to identify the strength of similarity and difference between these two distinct groups of gamblers, rather than use a more ambiguous group who use both forms of gambling to any degree.

2.9.3 Real player data

The final new strand of research to emerge in recent years relating to Internet gambling is research using real player data. This usually involves the observation and analysis of online behaviours of different gamblers with an aim to identify patterns of play that show risky gambling behaviour and can indicate or predict problem gambling. Some online gambling sites are working with gambling researchers to see if predicting problems gamblers may be possible to facilitate early interventions. Braverman and Shaffer (2010) identified four clusters of early gambling behaviour exhibited by 530 European gamblers (mostly German) over the first 30 days of opening a new account with the Internet betting provider 'Bwin'. Cluster 1 (n=15) were frequent gamblers (mean 19 days), playing with high intensity and high stake variability, and showed an increasing bet trajectory. Cluster 2 (n=22) were gamblers who played rarely (mean 2.2 days). Cluster 3 (n=115), similar to cluster 1, were frequent gamblers (mean 19 days), playing with high intensity, however they had low stake variability and no increasing bet trajectory. Cluster 4 (n=378) were moderate gamblers, playing rarely (mean 7 times), with low intensity and low variability and no increasing bet trajectory. All the players had closed their accounts between 30 days and two years after opening them, with 73% of cluster 1 indicating the closure was due to gambling related problems (self reported), compared to 45% cluster 2, 29% cluster 3 and 32% cluster 4. This gives an indication that certain patterns of Internet gambling can potentially identify risky gambling behaviour and predict problem Internet gambling in the betting domain.

Gray, LaPlante and Shaffer (2012) also accessed data from the Internet betting provider 'Bwin', by examining the betting patterns of 2066 gamblers that had requested a responsible Internet gambling intervention (e.g. account closure, deposit limits). These were compared to 2066 controls from the same site, chosen as they deposited on the same day as a case, but did not trigger a responsible gambling intervention during the year period that the data was collected. Those who experienced at least one 'responsible gambling event' could be distinguished from controls by the intensity of their betting activity in terms of number of active betting days, total bets placed and duration of gambling activity. In monetary terms, they could be distinguished from controls by greater total stakes, greater net loss and larger bet size. Gray et al

suggested these types of behavioural markers may provide the basis for a behaviour-based algorithm for predicting the development Internet gambling related problems.

Real player data has also been used to send behavioural feedback to Internet gamblers. As Internet gamblers undertake gambling online and behavioural tracking data is collected, it is possible to provide individualised feedback and targetted education to the gambler (Auer & Griffiths, 2014). This may include, for example, pop-up messages advising an Internet gambler that they have been online for a number of hours, that they have reached a certain number of gambles, that their spend has reached a certain level or that their spend over time is increasing. These type of behavioural and educational reminders have been shown to be effective in increasing adherence to voluntary monetary limits and time limits, and reducing excessive play (Auer, Malischnig & Griffiths, 2014; Wohl, Gainsbury, Stewart & Sztainert, 2013, Auer & Griffiths, 2013)

This type of research gives an indication that certain patterns of Internet gambling can potentially identify risky gambling behaviour, predict problem Internet gambling and help develop interventions. With the advent of access to large behavioural data sets, the development of new gambling measures is also possible. On analysis of data sets from 100,000 Austrian Internet gamblers, Griffiths and Auer (2014b) propose gambling intensity, as measured by variables such as bet size, number of games played and amount of wins or losses, can be better measured as 'theoretical loss'. This is a product of total bet size and house advantage, and therefore reflects the risks that players are prepared to take. Griffiths and Auer consider the measure is stable over time as it irons out the effects of random wins and losses, it can be used for single of multiple bets, can be used to make comparisons between game types and it is more accurate than other measures used for gamblers undertaking multiple games. Whilst the debate is underway about the added value of theoretical loss as a new metric (see Braverman, Tom & Schaffer, 2015, Auer & Griffiths, 2015), it is clear that there are new opportunities to exploit large Internet gambling datasets and develop new measures, interventions and understanding relating to Internet gambling.

2.10 Purpose and aims of this research

Reflecting on previous sections of the literature review, in the first instance it is clear that Internet gambling is inherently different from land-based gambling in terms of accessibility. For those with a computer Internet connection at home, estimated in 2009 to be 71% of households, and by 2012 to be 80%, Internet gambling is easily accessible (Office for National Statistics, 2010; 2012).   It is available 24 hours a day, it is anonymous and there are a large variety of choices in the way different Internet gambling activities can be undertaken.

The literature review highlights that a different population is gambling online to the population undertaking land-based gambling; they are younger and have a higher education level than land-based gamblers (Griffiths et al., 2009). Other research supports this, for example, Ladd and Petry (2002) note that "access to the Internet is traditionally correlated with populations that have higher income and educational attainment" (p.77). The Office for National Statistics (2010) also notes that 97% of the highest income families have Internet connection as opposed to 30% of the lowest income families, confirming that Internet gambling is not equally accessible to all of the population in the same way as land-based gambling.

Gambling literature suggests Internet gambling is not necessarily undertaken by a large proportion of the population. However, those who do undertake Internet gambling tend to undertake it more frequently than those undertaking land-based gambling, and Internet gambling appears to be associated with higher rates of problem gambling than land-based gambling. Land-based problem gambling estimates in the UK have been between 1% and 11% for different land-based gambling activities, whereas for different Internet gambling activities, problem gambling estimates have ranged between 5% and 82% in different samples of Internet gamblers (Lloyd et al., 2010a, Griffiths, et al, 2009; Wardle et al., 2007; Wood et al., 2007).

In considering the research literature currently available on the subject of Internet gambling, a number of queries and gaps in the literature seem apparent. Motivations 'for gambling' are researched, but with regard to the Internet little research exists to investigate how and why people initiate gambling on the Internet, how and why they

continue and how and why some people may continue until they reach problem gambling levels. Internet gambling has a starting point, and from understanding that point and what happens next, it should be possible to begin to understand how gambling on the Internet becomes problematic, and how it compares and contrasts with problematic land-based gambling. There is little research that examines this experience and has tried to understand it in terms of the different Internet gambling experiences of men and women, and players of different games. These types of comparisons were rare in current literature; however, research that did make these comparisons suggested that differences did exist. Comparative research tended to reflect different features of gamblers, such as age, severity of problems and, associated mental health, rather than the process of engaging with and developing problems with Internet gambling. There are also no theories of gambling or addiction related specifically to Internet gambling. This may well be because theories of addiction, such as Orford (2001), and Griffiths (2005) consider that the theory applies no matter what the object of addiction, and also that theories of problem gambling, such as Blaszczynski and Nower (2002), apply to all gambling modes. This may well be true, but as the literature review points out, Internet gambling is a relatively new phenomenon. Research evidence suggests that Internet gambling has some features that are new and different in some respects to land-based gambling, for example, ease of access and anonymity. Little research exists that has directly confirmed or refuted that Internet gambling is sufficiently similar to other objects of addition to fall under the umbrella of theories of addiction or theories of land-based gambling.

From the literature review, the research questions arose about how and why people become involved in Internet gambling activities, and how, for some, involvement may escalate to problem levels. Further questions arose from the literature, about whether this experience is different for men and women, players of different Internet games, or problem and non-problem Internet gamblers. Additionally, a final question to be considered was whether people who were involved in Internet gambling behaved in similar or different ways to those involved in land-based gambling, and whether this could be sufficiently accounted for in existing land-based gambling and addiction theory.

This aims of this research project were therefore:

1. To examine the routes in and out of problem Internet gambling

2. To identify similarities and differences between male and female Internet gamblers, between players of different Internet gambling games and between problem and non-problem Internet gamblers.

3. To compare findings with land-based gambling research to consider how existing land-based gambling theory is applicable to Internet gambling.

CHAPTER 3

METHODOLOGY

3.1   Research overview

This aims of this research project were to examine the routes in and out of problem Internet gambling, to identify similarities and differences between male and female Internet gamblers, between players of different Internet gambling games and between problem and non-problem Internet gamblers, and to compare findings with land-based gambling research to consider how existing land-based gambling theory is applicable to Internet gambling.

To meet these aims, the project used an integrated mixed-methods approach. It consisted of two elements; an initial inductive qualitative phase, followed by a secondary deductive quantitative phase which tested findings from the qualitative phase.

The inductive qualitative phase was mainly focussed on the first aim of the research. It was to be used to build a sense of the different pathways experienced by Internet gamblers and the processes by which pathways change and fluctuate. This initial phase took an inductive approach using the basic idea that generalisations and conclusions, in terms of common laws, principles and theories, can be inferred by observing particular instances of behaviour (Teddlie & Tashakkori, 2009). Existing research on gambling, as discussed in the literature review, has been largely focused on land-based gambling, with many findings from land-based gambling research and theory being assumed to apply to Internet gambling, however the validity of this generalisation is questionable given the differences between these forms of gambling. Existing research on land-based gambling has also had little focus on making comparisons between men and women and between players of different games. Taking an inductive approach to this research, starting with interviews of a sample of Internet gamblers, provided the opportunity for new data and new theory, *specifically* relating to Internet gambling and grounded in data from Internet gamblers, to emerge. For that reason a grounded theory approach to data collection and analysis was used (Strauss & Corbin, 1988).

Analysis of the qualitative data enabled identification of similarities and differences between men and women, players of different games, and problem and non-problem gamblers in key areas of the pathways in and out of Internet gambling. These similarities and differences could be tested in a deductive way, meaning that hypotheses could be designed based on the emerging findings from the data analysis and tested in a second sample of Internet gamblers (Teddlie & Tashakkori, 2009). These testable hypotheses formed a second quantitative survey phase, designed to meet the second aim of the research.

To meet the third aim of the research, themes emerging from the qualitative research were structured into a model and this model was compared to existing land-based gambling theory. Results from the qualitative survey were also used to support the qualitative model and meet the third aim of the research.

3.2   Epistemological perspective

The research contributing to this thesis employed a combination of inductive and hypothetico-deductive epistemologies, within an over-arching framework of pragmatism.

Prior to the rise of science, deductive reasoning was the dominant mode in philosophy. This involved using rational thought to develop knowledge and theory, and therefore knowledge or theory could come from thought alone, rather than from observations in the real world (Teddlie & Tashakkori, 2009). Over time, inductive reasoning became more dominant in the search for knowledge. This considered that knowledge and theory could come from observations, rather than thought.   Inductive reasoning provided an approach to theory building where particular instances of a phenomenon, event etc. had been observed, and from these observations, a theory could be inferred (Colman, 2003). Inductive approaches have more recently been linked with empiricism and positivism, where there is an emphasis on methodological rigour to remove biases from observations. Deductive approaches have been more recently dominated by a hypothetico-deductive approach. This approach starts with a theory, then hypotheses are developed from theory. The data gathered during research is then systematically tested against hypotheses, with research either supporting or refuting the hypotheses, and in turn, supporting or refuting the theory (Cresswell & Plano Clark, 2011, Gordon-Finlayson, 2010, Teddlie & Tashakkori, 2009).   LeCompte and Preissle (1993) suggested that "deductive researchers hope to find data to match a theory; inductive researchers hope to find a theory that matches their data" (p.42). Some have argued that the inductive method is the method of science; some have argued that the hypothetico-deductive method is the method of science; others have argued that both work as part of an interactive cycle (Teddlie & Tashakkori, 2009).

Frances Bacon (1561-1626) was an advocate for the inductive method, supporting the view that knowledge comes from experience, rather than from *a priori* thought or deductive reasoning.   Such experience could take the form of observations, including personal experience and experiments. Francis Bacon represented an inductive proto-empirical stance, in that induction involved particular observations that could be inferred to be true for a wider population, and that empirical knowledge of this 'truth' comes from experience in the form of unbiased observations (Teddlie & Tashakkori, 2009).   The

empirical philosopher David Hume (1711-76) suggested that the inductive approach has shortfalls because inductive generalisations only apply to the specific, limited group of participants under observation, and that observations of past behaviour would not necessarily predict future behaviour (Teddlie & Tashakkori, 2009) This led to the 'problem of induction', where no matter how many times observations and theories are congruent, theories can never be proved, as all cases can never be observed. However, putting this to one side for the moment, it still seemed that inductive reasoning could be used to build theories, albeit that these theories may have some limitations and biases.   These theories could still be tested using the hypothetico-deductive, empirical/positivist method.   Thus empiricism and rationalism, and deduction and induction could be considered interactive and complementary to each other.

On the subject of empiricism, empiricists considered that knowledge consisted of experience from the senses, rather being deduced by rational thought (rationalism), and thus observations were key to the approach. Empiricists emphasized that observational data collected to test any hypothesis or build theory must be evidence-based, ideally involving systematically controlled observation or experiment, with data most likely to be a numerical nature (Teddlie & Tashakkori, 2009). Empiricism is similar, but less radical, than the approach of positivism advocated by positivists such as Auguste Comte (1798-1857) (Colman, 2003). Positivism assumes reality consists of hard facts, independent of human behaviour and the human mind, and that these hard facts can be translated in to generalisable scientific laws (Crossan, 2003). Positivists aim to test hypothesis, objectively examining relationships between theoretical variables using systematic observations and experiments examining cause and effect. Findings are replicable. Theory constructed is parsimonious, deterministic, generalisable and universal, yet on the other can be narrow, reductionist and lack ecological validity (Charmaz, 2006, Sullivan, 2010).

Karl Popper (1902-1994) was an advocate of deduction and developed the approach of 'critical rationalism', where reality is not based on hard facts, but similar to the relativist approach, it is based on conjecture and is humanly constructed in specific cultural and historical contexts.   He also considered that the problem with induction could be resolved if an inductive theory was critically examined and then tested for falsification rather than for corroboration (Teddlie & Tashakkori, 2009).   Popper's hypothetico-

deductive approach attempted to address the problem of induction by introducing a falsification principle rather than a verification principle, where if a hypothesis was not supported by statistically tested data, it was, in principle, shown to be false. If it was supported, this would provide inductive support only for the hypothesis and theory, but provide no element of 'proof' for a theory, merely support and non-falsification. Use of the hypothetico-deductive approach in science is widespread with use of statistical probability to indicate the probability to which the hypothesis is true.

Charles Peirce (1839–1914) took a different stand to Popper and Bacon, believing there was an interaction between empiricism and rationalism, and deduction and induction. He aimed to integrate inductive and deductive reasoning, by introducing the philosophical stance of pragmatism, and a third form of reasoning called abduction. Pragmatism views reality as indeterminate, fluid and open to interpretation, rather than being a firm reality constructed from evidence based experience or reasoning (Charmaz, 2006). Pragmatism views knowledge as being relativist, where knowledge is based on understanding a socially constructed representation of reality, rather than understanding reality itself (Sullivan, 2010). Truth in pragmatism is defined by its utility and the purpose or function it serves, rather than correspondence to an absolute reality or universal structure. Abduction provides an approach to theory construction that starts by examining and interpreting data to find patterns and connections, and to form multiple hypotheses. The hypotheses are tested, confirmed or refuted, then the most plausible interpretation of the observed data is be used for theory (Charmaz, 2006).

The pragmatic approach advocated by Pierce, and adopted as the philosophical stance through this research, encompasses the idea that science does not exist within a vacuum and is influenced by a variety of factors such as culture and gender. It also emphasises the possibility that some facts and theories that are better or stronger than others, in light of reason and evidence. It has both constructionist and realist elements. Reality is therefore multiple, subjective and constructed by individuals (Crossan, 2003). Inductive, deductive and abductive reasoning are all relevant to the foundation of a theory which can later be tested using the hypothetico-deductive, empirical method. More recently, this integration has been described in terms of an "inductive-deductive research cycle" (Teddlie & Tashakkori, 2009, p.27).

Figure 3.1   Inductive-Deductive Research Cycle
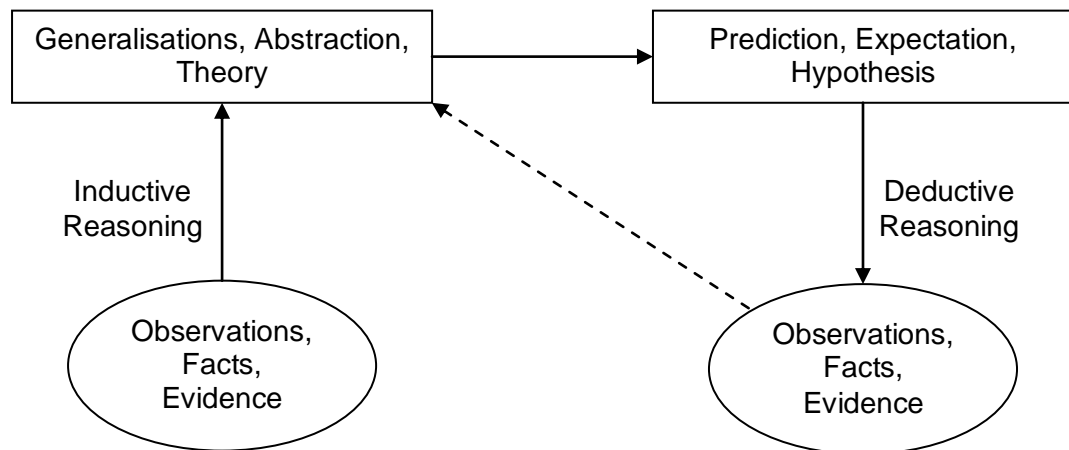
(From Teddlie & Tashakkori, 2009, p27))

In the pragmatist approach, flexible, multiple methods are encouraged to capture the multiple dimensions of reality, so both qualitative and quantitative methods are relevant. The role of criticism and falsification requires that whatever method is used, an emphasis is placed on rigour, precision, logical reasoning and attention to evidence (Crossan, 2003). Research methodology must be transparent so the validity of any findings is open to scrutiny, continuing the commitment to criticism and falsifiability that any good research requires.

3.3 Mixed-method rationale

There were three main issues to take into account, when deciding on the methodological approach required to answer the research questions. Firstly, Internet gambling was a relatively new area of research, particularly when compared to land-based gambling research, and research into addiction. Secondly there was little previous research that provided a clear lead on where hypotheses related to the variables of interest should be placed. Thirdly, in-depth data was needed to meet the research aims. An inductive qualitative method was selected as the initial method to address these issues. Qualitative findings were then tested with a quantitative hypothetico-deductive method. The different approaches and phases of the research were integrated in a pragmatic mixed-method design.

Qualitative methods are well established methods for use in exploratory psychological research (Howitt & Cramer, 2005). They have the benefit of providing understanding of subjective human experience in a naturalistic way, and can provide a valuable route to the development of a quantitative study. In this thesis, qualitative methods provided clear advantages to address the main aims and methodological issues of the research. By maintaining an inductive approach, a semi-structured interview could be used to cover topics in an open way, so that new directions, understandings and ideas had the potential to emerge (Kvale & Brinkmann, 2009). Using questionnaires, an experimental method or structured interviews at an early stage in the research would limit and restrict responses from participants. The risk with these alternative methods was that data collected would merely reinforce existing research and theory, and there would be no room for new data and findings to emerge. However, shortfalls in the open-ended exploratory approach, as recognised by Mays and Pope (1995), include criticisms that it has the potential for researcher bias, as it is highly reliant on researcher interpretation, which in turn makes it more difficult to be reproduced or generalised. It is also more difficult in qualitative findings to make strong comparisons between groups of participants, as the sample size is generally small.

It was anticipated that initial analysis of the qualitative data for this research would primarily involve analysis of emerging psychological and process concepts relating to the development or non-development of problem Internet gambling. It was expected

that this could be used to tentatively identify potential differences between male and female Internet gamblers, players of different games, and problem and non-problem gamblers, with difference identified being tested as hypotheses using a bespoke quantitative online survey. It was anticipated that findings from the survey, tested on a larger Internet gambling population and integrated with the qualitative findings, would strengthen the validity of qualitative findings from the research by increasing generalisability and decreasing some aspects of researcher bias.

Bryman (2006) explored the construction of mixed-method research and drew attention to a number of aspects of multi-strategy research. In his review of over 200 mixed-methods research projects, Bryman particularly focussed on the importance of explicitly stating the reasons for using mixed-methods in a research project. It seemed that what researchers described as their reasons for undertaking mixed-methods, was often different to what happened in practice. Bryman suggests this may be because mixed-method research is not thought through sufficiently at the outset, or, alternatively that the wealth of data resulting for mixed-method research leads to findings being used in a way that was not anticipated at the outset. Bryman concluded that researchers using mixed-methods should be explicit about the rationale for undertaking mixed-method research, whilst also recognising and acknowledging that research outcomes may not be as predictable. Bryman drew up a typology of sixteen reasons for undertaking mixed-method research. For this thesis, three reasons from this typology were identified as reflecting the reasons a mixed-method approach was selected to meet the aims of this research. These were 'triangulation or greater validity', where qualitative and quantitative methods may be combined to corroborate findings, 'credibility', suggesting using both qualitative and quantitative approaches enhances the integrity of findings and 'confirm and discover' where qualitative data is used to generate hypotheses which are tested using quantitative research in a single project. However, as Bryman suggested may happen, in practice a fourth reason for the mixed-method approach became apparent. This was a process reason, as where the qualitative research provided a sense of the processes involved in developing and changing Internet gambling patterns, the quantitative survey was used to confirm the relevance and influence of a number of key process-related variables, themes and concepts in a wider population.

Cresswell and Plano Clark (2011) also explored the construction of mixed-method research. They identified four key decisions central to choosing a mixed-method research design. These were (a) the level of interaction between qualitative and quantitative strands, (b) the priority of each strand, (c) the timing of each strand, and (d) the procedures for mixing the strands. For the current research, qualitative and quantitative strands were integrated at two points. Firstly, integration occurred at the point when the emerging findings from the qualitative analysis led to the formulation of the hypothesis and data collected in the quantitative stage. Secondly, integration continued when findings from the quantitative stage were theoretically and interpretatively integrated with findings from the qualitative stage. The qualitative stage had priority in that it was undertaken first and dictated the focus of the quantitative research focus. The quantitative strand was used in a secondary later role to corroborate and validate aspects of the qualitative findings. The mixing occurred as part of the design and interpretation procedures within the thesis. This is categorised by Cresswell and Plano Clark in their typology of mixed-method designs as an 'exploratory sequential design'.

This research is therefore using the Inductive-Deductive Research Cycle in the form of an integrated mixed-method approach, as shown in Figure 3.2 (Teddlie & Tashakkori, 2009).

Figure 3.2   Inductive-Deductive Research Cycle for this research
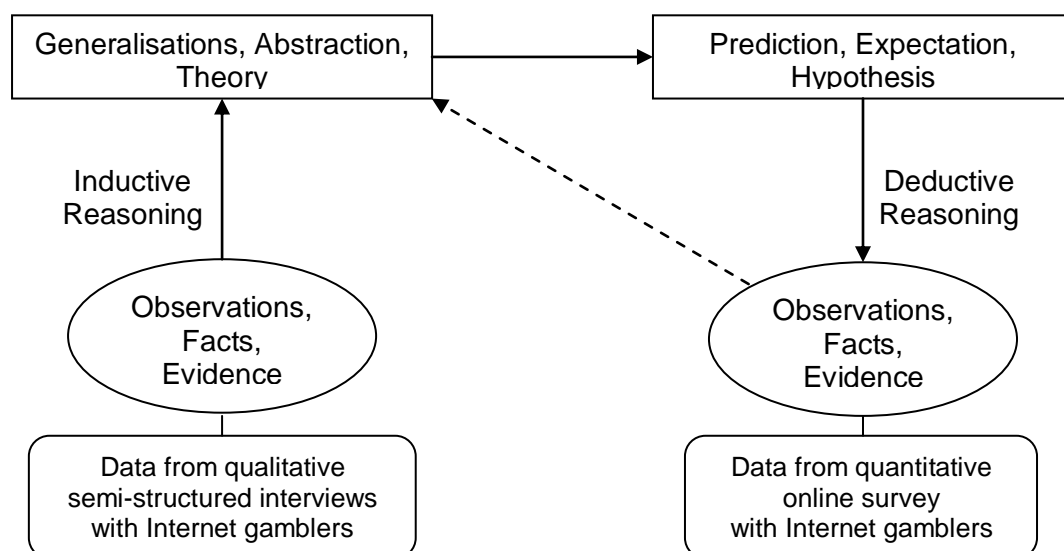
(From Teddlie & Tashakkori, 2009, p27)).

3.4   The qualitative element

3.4.1 Why use Grounded Theory?

At the point that this research began, the bulk of existing gambling research and theory was primarily based on land-based gambling.   Once the decision was made to commence this research with an initial inductive qualitative phase, consideration had to be given to the particular qualitative method that would best suit the research requirements. As well as being inductive, the qualitative methods selected needed to have two key features to work. The method needed to enable comparisons between different groups of participants to be made, as well as linking to theories on land-based gambling and addiction theory.

Grounded Theory has its origins in sociology. It was developed by Glaser and Strauss in 1967, while undertaking qualitative research into the experience of dying in hospitals. They identified a series of systematic methodological processes that could be used to build theory from the analysis of qualitative data, rather than using a deductive approach to develop testable hypotheses from already existing theory (Charmaz, 2006, Strauss & Corbin, 1998).   According to Glaser and Strauss's original formulation, Grounded Theory was inductive, involving constructing categories of data which were based entirely on the observations of the qualitative data.   This was different to a deductive approach where data was collected to fit a priori categories designed to test logically deduced hypotheses based on theory (Charmaz, 2006). The categories constructed in Grounded Theory are transformed from 'category' to 'theoretical concept' by use of memos to define the concept, state what properties and dimensions it has and define relationships with other categories. As the categories were linked and integrated, theory 'emerged' from the data (Corbin & Strauss, 2006, Strauss & Corbin, 1998, Glaser and Strauss, 1967). To avoid bias, the researcher should not involve themselves in reading existing theory or conducting a literature review until after the data analysis was complete (Glaser & Strauss, 1967).

Since then, Glaser and Strauss have developed differences of opinion about Grounded Theory.   Whilst Grounded Theory is based on both pragmatism and inductive positivism, each have a different philosophical stance which sometimes comes into

conflict, as did Glaser and Strauss. Glaser emphasised the systematic, logic and rigorous coding methods of Grounded Theory, a more positivist position, whereas Strauss, was more interested in the capturing the subjective meaning and processes within the data, a more pragmatist position (Charmaz, 2006). Strauss and Corbin (1990, 1998) and Corbin and Strauss (2008) defined a more flexible Grounded Theory that still had positivist and pragmatic underpinnings, but additionally broadened the range of analytic techniques that could be used in the analysis. This included incorporating new coding techniques that reflected process and change. A further development in Grounded Theory involved the social constructivist approach, where the emphasis on Grounded Theory moves from the positivist and pragmatic to also considering how reality is constructed (Charmaz, 2006). This approach gives additional attention to the idea that data is created from shared experiences, and relationships and true meaning is hidden amongst social understanding. This needs interpretation not only of meaning of the participants, but also interpretation of the researcher themselves (Charmaz, 2006). Whilst the constructivist Grounded Theory is the latest development in Grounded Theory, it does not have the desired level of abstraction for this piece of research, whose main focus is on psychological understanding rather than sociological. It is the 'Strauss and Corbin' Grounded Theory method that is of interest in this research.

In comparison with other qualitative methods, Grounded Theory has much to offer this research. It has an emphasis on induction, as well a clear process of extrapolating patterns from individual cases, used for conceptualising, making associations between concepts and theory building. It differs from other qualitative approaches in key ways. Some qualitative approaches are related more to the method of data collection, for example ethnography, whereas others are related more to the method of data analysis, such as thematic analysis (Howitt & Cramer, 2005). The Grounded Theory Method focuses on both data collection and data analysis giving it a broader, more structured process from the start to the finish of the research (Strauss & Corbin, 1998). Alternative methods such as phenomenology, in the form of Interpretative Phenomenological Analysis, focuses on people's perspectives and perceptions related to a phenomenon. Its emphasis is on the description of a phenomenon as experienced by those individuals, rather than on explanations or analysis as in Grounded Theory (Sullivan, 2010, Cresswell, Hanson, Clark Plano & Morales, 2007). It takes an ideographic

approach, meaning it is more focused on an individual level of understanding as opposed to a nomothetic approach, involving explanation at a population level (Shaw, 2010). On the other hand thematic analysis is a flexible method that allows for data to be categorized on any number of levels and has no ties with any particular approach. It can be used inductively or deductively, with a variety of analytic options highlighting different aspects of the data; there is no clear agreement about how it should be completed (Braun & Clarke, 2006). Additionally, analysis is largely descriptive and it has no links with any approach that enable it to explain how to develop higher levels of analysis. Whilst phenomenology and thematic analysis may meet the aims of the research by enabling comparisons between men and women and players of different games to be made on a descriptive level, the process, change and substantive theory that can emerge from using Grounded Theory methods, can also do this.

As an alternative to Grounded Theory, ethnography has an initial attraction as it provides detailed and rich data which is triangulated from a variety of sources so the data appears robust and it can provide a depth of understanding going beyond everyday assumptions (Charmaz, 2006). It is appropriate in many respects when researching a new area. However, ethnography is reliant on intensive observation, which, for the topic of Internet gambling is not appropriate or practical. Ethnography also has an emphasis largely on a social setting and social actions, which is not the main emphasis in this research; the emphasis is more to do with psychological processes of stability and change. After having considered a variety of qualitative approaches that could be relevant to this research, including the phenomenological approach, thematic analysis, ethnography and Grounded Theory, the one that was finally selected for the research was Grounded Theory.

In summary, Grounded Theory will support the research aim of enabling theoretical comparison with land-based gambling and addiction theory, and developing new theory. The analytical tools in the Strauss and Corbin Grounded Theory method are particularly relevant to this research (Strauss & Corbin, 1998, Corbin & Strauss, 2008). The 'process' and 'change' elements will assist in analysis of data reflecting how Internet gambling starts, develops and then becomes problematic for some.

3.4.2 The processes of Grounded Theory

Grounded Theory can be considered as a 'family of methods' and as such, scholars have different approaches, processes and criteria as being essential key features for following the method (Bryant & Charmaz, 2007). For the purposes of clarity and transparency, the Grounded Theory Method (GTM) processes applied in this research are outlined.

According to Strauss and Corbin (1998), Grounded Theory starts with coding. Open coding is the first step, and involves giving a name label to each line of data in the interview ('line by line analysis'). After a number of codes have emerged from the data, some codes will be repeated, whereas others will not be. Focused coding is then used to select those codes that are most useful and relevant, and use them for larger chunks of data (Gordon-Finlayson, 2010). Axial coding is then applied, where codes that are related to each other are grouped or categorized (Strauss & Corbin, 1998). Relationships can be defined between categories, and between categories and subcategories.   A memo about the category is written, defining the category and its characteristics, in terms of 'properties' and 'dimensions' (Strauss & Corbin, 1998). The final stage of coding is selective coding, initially involving the selection of one central category, and then involving the organization of the other categories around this central category (Strauss & Corbin, 1998). This is the coding method that was followed for this research.

As outlined by Corbin and Strauss (2008), this structured coding process also involves a number of key activities that are undertaken as coding is occurring. Firstly, the coding process is one of constant comparison, meaning that cases and categories are compared with each other to see where variations in the data lie (Gordon-Finlayson, 2010, Corbin & Strauss, 2008). Secondly, memo writing is encouraged, where thoughts and ideas about emerging concepts and associations between concepts are recorded. Thirdly, deeper analysis is encouraged by using various analytical techniques that encourage the researcher to be more sensitive to the different layers of the data, for example, focussing on time sequence of events to analyse process or looking for examples of negative cases (Corbin & Strauss, 2008). Fourthly, sampling techniques ideally involve a degree of theoretical sampling, where rather than just focusing on the

sample being representative of the general population, sampling is purposive, focusing on selecting specific participants based on their individual characteristics and the contribution they can make to developing theory (Corbin & Strauss, 2008). Sampling of this nature can be a priori, i.e. in place at the start of the research, gradual, i.e. choosing participants whilst undertaking the analysis, or a mix of a priori and gradual (Gordon-Finlayson, 2010). Also tied in with purposive sampling is the idea of purposive interviewing, where a semi-structured interview schedule used at the start of the interviewing process can be amended as categories of data emerge. Along with purposive sampling, restructured interviews enable data collection to be focused on emerging areas of interest. Data saturation is the final key activity of Grounded Theory. This is where sufficient data has been collected, by purposive sampling and restructured interviews as needed, emerging categories have been explored in depth, and no new subcategories, dimensions or properties emerge from the data (Corbin & Strauss, 2008). At this point, the concept is sufficiently well developed for the purposes of the research. For this research GTM included purposive a priori sampling, purposive interviewing, open and axial coding, constant comparison, memo writing and considering co-occurrence, time sequencing and negative cases.

In terms of the development of a grounded theory, Glaser and Strauss (1967) make some important distinctions between the generation of new theory and the verification of existing theory. They consider that the processes of generation and verification can become confused, suggesting that engaging with documents outside the data collected can unwittingly influence concepts emerging from the data. Thus theory ceases to stay grounded in the data, and theory generated in the grounded theory tradition can be open to criticism. Glaser and Strauss therefore suggested that theoretical review of literature should only take place after data was collected and analysed. Strauss and Corbin (1998) did not take such a purist approach, suggesting that there is more of an interplay between research methods, with the research remaining objective by staying close to and sensitive to the data. They suggest that the researcher should not become steeped in literature prior to undertaking the research as this can be constraining and stifle creativity. Strauss and Corbin advocate finishing data collection and analysis and then using literature for comparison with emergent findings. For this research, open, axial and selective coding was undertaken for the initial sample of 25 women prior to engaging with research and theory in depth, and writing the initial literature review. In-

depth comparisons between emerging theory and existing theory were made when all the data was fully analysed.

3.4.3 Qualitative sampling and recruitment strategy

Whilst conducting the initial literature review it was noted that much gambling research appeared to be focused on men rather than women. Whilst it is accepted that prevalence research, such as British Gambling Prevalence Survey, 2007 and 2010, shows men generally tend to gamble more than women across most gambling modes, this research gender bias nevertheless has the potential to skew gambling research findings and therefore gambling theory in a male direction. As the aim of this research was to enable comparisons between different groups of gamblers and also to investigate emergent theory in generalisable terms, it was important that all relevant categories of participants are represented and therefore, a sampling framework was used. The framework employed guarantees that the sample includes a selection of participants who, based on their individual and gambling characteristics, could contribute best to the development of theory.

In the endeavour to collect data from a representative theoretical sample, recruitment for the qualitative phase initially aimed to follow three basic principles. Firstly, recruitment would employ a variety of sources to gather participants who were currently gambling, as well as those who were seeking help and those who had recently ceased. The aim of this strategy was to ensure inclusion of participants at different levels of gambling, as measured by the Problem Gambling Severity Index (PGSI), used to rate gamblers as either no/low risk, moderate risk or problem gamblers (Ferris & Wynne, 2001, see Section 3.45 for more about the PGSI). Secondly, male and female gamblers would be interviewed in approximately equal numbers so any theory coming from the data would be equally relevant to men and women. Thirdly, data was to be collected from gamblers who play a range of different internet gambling games, so recruitment was aimed to target gambling groups with different Internet gambling interests.

A research project undertaken by Corney and Davis (2008) included qualitative interviews of 25 female gamblers. This was an exploratory piece of research into women's Internet gambling experiences, and represented the starting point of this PhD.

As this data was being collected and analysed, questions were arising about how individuals had developed problem gambling and whether this would be different for man and women. This research was subsequently extended into this PhD, hence the 25 female gamblers have been included as part of the sample for this research. This data was revisited in the initial phase to help (a) develop analytical categories focussed on Internet gambling pathways, (b) consider where sampling should be targeted, and, (c) draw up a semi-structured interview schedule focusing further data collection onto emerging categories. How the female interviews and data analysis fitted in with the additional interviews will be explored and explained at relevant points in the thesis. Corbin and Strauss (2008) point out that it is acceptable practice to use data that has already been collected. However they do caution that gaps may occur when there is no opportunity for further exploration in new data, which is not the case in this research as new data will be collected.

The sampling framework and minimum target sample numbers are shown in Table 3. The existing 25 female gambling participants are shown in rows labelled 'existing female sample'. These consisted of one no/low risk gambler, eight moderate risk gamblers, and 16 problem gamblers as categorized using the PGSI (Ferris & Wynne, 2001).

Sampling targets for further interviews were drawn up, and these are shown in Table 3 as the 'sample sought'. Table 3 also shows the 'total minimum target sample' for each category for the qualitative research, including the female sample already interviewed. The total target sample was 70, a target set by the project funders, though the sampling framework 'total minimum sample' only totalled 56. This minimum sample was set to ensure each relevant category of gambler would be represented the research. Once this minimum sample was reached, there was an option for continued gradual recruitment while data analysis was underway, to address any saturation issues for major concepts.

The Corney and Davis (2008) research specifically recruited active female gamblers, who gambled twice a week or more on the Internet. Approximately half of the Corney and Davis (2008) sample were Internet slots, bingo and casino game players who were gambling at problem levels. Additionally, whilst a number of the women in the Corney

Table 3   Participant sampling framework: including 25 female gamblers interviewed in Corney and Davis (2008) and the additional sample sought

	No/Low Risk Gambling		Moderate Risk Gambling		Problem Gambling		
	Male	Female	Male	Female	Male	Female	TOTAL
Betting							
Existing female sample	-	0	-	0	-	0	**0**
Sample sought	4	1	4	1	4	1	**15**
Total minimum sample	4	1	4	1	4	1	**15**
Slots/Bingo/Casino Games							
Existing female sample	-	0	-	5	-	13	**18**
Sample sought	1	2	1	0	1	-	**5**
Total minimum sample	1	2	1	5	1	13	**23**
Poker							
Existing female sample	-	1	-	3	0	3	**7**
Sample sought	3	2	3	0	3	0	**11**
Total minimum sample	3	3	3	3	3	3	**18**
Total	**8**	**6**	**8**	**9**	**8**	**17**	**56**

and Davis research did undertake betting on the Internet, none indicated it was their main Internet gambling activity. From Wardle et al.'s (2007) prevalence survey, it was considered likely that men undertaking betting as their main activity were the most prevalent of Internet gamblers and the sampling framework reflected this. As the literature review indicated there was a paucity of research of the newer emerging forms of gambling, particularly of poker, the sampling strategy also included a focus on specifically recruiting poker players.

It was accepted at the outset of the current research that recruitment of participants was likely to be difficult and time-consuming due to difficulties accessing the Internet gambling population. The secretive nature of gambler's behaviours and the embarrassment of having a problem with gambling was also expected to inhibit self-selection. It was therefore accepted at the start of the research that whilst an ideal sampling framework did no doubt exist, due to inclusion of the participants from the

Corney and Davis research and anticipated recruitment challenges within the time frame of the research, this may not be achieved and more opportunistic approach to sampling and recruitment may be needed.

Participants were to be placed in the framework according to their main internet gambling activity. The main activity was identified as the activity that participants currently spent the most time undertaking. For sampling purposes, gambling activities were initially categorised into three activity groups, namely betting, casino games and poker, three levels of gambling (no or low-risk, moderate-risk and problem gambling) and men/women. However, these precise numbers in each category could be adjusted as the research progressed when the a priori purposive sampling would most likely be overtaken by gradual theoretical sampling, led by the analysis of emerging data.

Gambling activity categories used in other research have included, for example, Wardle et al. (2007) with three categories: online betting with a bookmaker; online gambling (poker, bingo, slot machines or casino games); and using a betting exchange. These categories were used to represent new forms of Internet gambling. Myrseth, Brunborg and Eidem (2010) suggested activities could be divided into chance and skill categories, with chance games including slots machines, bingo and lotteries, and skill games including, card games and betting. This divide was based on the different ways the activities are undertaken and the different cognitive engagement in skill or chance games. Lloyd et al., (2010), based on factor analysis, suggested division between non-to-minimal gamblers (undertaking one activity, usually poker); sports bettors; casino and sports bettors (including slots, bingo and poker); lottery players and multi-activity gamblers.

For this research, poker was be placed in its own category as it is a relatively new online phenomenon that is under-researched at present. This would be classed as a skill game. The betting category will include all forms of betting on sports or otherwise, including spread betting and betting exchange. This would be a largely male category and a largely a traditional form of gambling but incorporating a small number of new forms of betting. Again, this could be classed as a skill game, however, that does depend on how it is undertaken. The casino games category would be a largely female

category, incorporating a few newer forms of Internet gambling such as instant win games, and is largely luck or chance based.

Lotteries as a main game have not been included as a specific category, as engagement with gambling is usually minimal for players undertaking lotteries as a main activity and it was expected data from this category would not be sufficiently rich to add any depth to the research. Most lottery play (77%) is undertaken in person only and it is the largest in-person gambling activity. Lotteries would not enable comparisons between problem and non-problem gamblers, due to the extremely low prevalence of problem gambling in this mode. It has a prevalence rate of 1.3% in regular past year lottery players, however, the problem may not be with the lottery itself, rather with other activities undertaken alongside (Wardle et al., BGPS, 2010). The main gambling activity categories of interest for sampling, recruitment and analysis were therefore established as betting, casino games and poker.

Corney and Davis (2008) indicated that recruitment of problem gamblers was higher via gambling therapy and exclusion organisations such as Gamcare, Gamblers Anonymous and Count Me Out, whereas recruitment of non-problem gamblers was higher in samples recruited via other routes, for example, social networking sites and University staff and students. It was therefore considered necessary to recruit participants through a variety of different routes, including Gamcare, Gamblers Anonymous, Gambling Therapy forum, gambling related groups on the social networking site Facebook, and a University staff and student population. Ethical approval and permissions from administrators were sought before any recruitment materials are posted. Additionally, if necessary, it was anticipated recruitment to meet the sampling framework could occur via the quantitative survey: the survey was designed as the point where initial analysis of data was underway, and categories of interest were beginning to emerge. The running of the survey at this point enabled identification of survey participants who were willing to take part in further research. This enables further interviewees to be selected to meet the sampling strategy and to meet theoretical sampling needs to develop the Grounded Theory analysis further.

The overall aim for the qualitative phase was to include sufficient male and female gamblers across all variables of interest so each group was represented in the research

and so that saturation was achieved, and the dataset was complete. Saturation is indicated when data from new participants into the study is not adding any new categories; the data is fitting into existing categories and replicating what has been extracted from previous data. Guest, Bunce and Johnson (2006) suggested data saturation could be achieved in 12 interviews. Teddlie and Tashakkori (2009) estimate, with data summarised from a number of sources, that the minimum sample size for grounded theory lies between 20 and 50. Whilst the exact number of interviews required to achieve data saturation depends on the nature of the research. Examples of saturation achieved in gambling research includes Wood & Griffiths (2007), saturation achieved after 24 cases, Parke & Griffiths (2011), saturation achieved after 8 cases. Whilst the exact number of interviews required to achieve data saturation depends on the nature of the research, it seems a minimum sample of 56 set for this research would be considered sufficient to extend the existing female data, and achieve theoretical saturation across all key categories.

The qualitative research has endeavoured to provide research quality primarily by providing transparency and detail about all aspects of the research. In this way, the reader will be able to define and observe quality in the terms they see as being most appropriate (Bowen, 2008).

3.4.4 The qualitative interview

The qualitative interview selected for this research was a semi-structured telephone interview, using a general interview guide approach. A number of factors were considered in choosing the type and form of interview to use in the qualitative phase. The first factor was the type of interview that was required to gather the right type of data to meet research aims. Patton (2002) suggested there are four alternatives. The 'informal conversational interview' is the least structured type of interview, being open ended with no predetermined question topics. Questions are based on the immediate context of the situation, allowing participants to express themselves in whatever way they desire. The 'general interview guide' approach suggests topics and questions may be outlined prior to the interview, but the order of the question and wording are decided as the interviews progress. This is a popular form of interview as it allows a natural feel to the interview, participants can explore their own directions, yet interviewers can bring the interview back to the key areas if they are not spontaneously covered (Howitt &

Cramer, 2010). The 'standardised open-ended interview' is worded and sequenced in advance, with all interviews conducted in the same way. All questions are open-ended using phrases such as 'explain', 'describe', how do you feel about…', allowing rich data collection in a systematic way. The 'closed fixed-response interview' has questions decided in advance, with respondents selecting their answer from a number of pre-defined choices.

Kvale (2009) suggested that in addition to the structure of the data collection element of the interview, a number of other features are essential for interviews. The first stage of the interview should be introduced by a briefing. This will set the scene of the interview, explaining what the interview is for, how it will be carried out, assuring confidentiality and anonymity, and checking it the participant has any questions. Using the appropriate language and terminology for the group under study is useful for setting the scene and rapport building as it adds to comfort levels of interviewees who can speak in their own terms. During the interview broad open questions allow the interviewee to describe and explain their experiences (Howitt & Kramer 2005). These can be explored further by asking for further details and additional levels of explanation can be obtained by asking further questions. Summarising the interviewees' explanations can be helpful at some points to clarify explanations and understanding. After all areas of the interview have been explored, in the final stage of the interview, a debriefing should occur. This closes the interview gradually and carefully. Participants may be feeling tense or vulnerable after having explored, re-experienced and disclosed aspects of their life, or alternatively may be buoyed, relieved and enriched by the interview conversations. Either way, care is needed. Kvale suggests a summary of key points may be useful here or asking participants if they have anything they want to add. This signposts to participants that the interview is ending, and the interview should end on a positive note.

Interviews lasted approximately one hour, and were recorded. Participants were reimbursed for their time with the issue of a £20 voucher. The interviews of the first 25 participants revealed that participants were not keen to meet face-to-face. Given the option, 23 of the 25 wished to undertake the interview by telephone, possibly due to the stigma associated with gambling, but also being due to the convenience to being able to participate from home, at a time when privacy could be ensured (Corney & Davis,

2008). The use of the telephone for interviewing also had the advantage of easily being able to include participants from all over the UK.

The interview schedule for the first 25 women is included in Appendix D. In line with the processes of Grounded Theory, the interview was amended as the research progressed (Strauss & Corbin, 1998). This allowed specific data collection to be targeted so that emerging categories could be explored further and developed into more fully rounded concepts. Examples of amended schedules are also in Appendix D.

3.4.5 The Problem Gambling Severity Index

The Problem Gambling Severity Index (PGSI) was selected as the screening instrument for this research (See Appendix A). This is a 9-item scale which is a shortened version of the Canadian Problem Gambling Index (CPGI) (Ferris and Wynne, 2001). PGSI has been selected over other potential measures such as DSM-IV based on the Diagnostic and Statistical Manual of Mental Disorders – Version IV and the South Oaks Gambling (DSM, American Psychiatric Association, 2000, SOGS, Lesieur & Blume, 1987). The PGSI was specifically designed for use in the general population, as opposed to a clinical population, and distinguishes between gambling subtypes, namely non-problem gambling, low-risk gambling, moderate-risk gambling and problem gambling. Wynne (2002) points out that screening is quite different from diagnosis and that whilst DSM and SOGS are successful when measuring disordered gambling, they lack the sensitivity of PGSI to detect those who are at-risk or who have sub-clinical symptoms. Wardle et al., (2007) considers that the development of these sub-types is an improvement on both SOGS and DSM IV and the PGSI measure outperforms SOGS in terms of validity.   Wardle et al. agree that DSM IV is a diagnostic tool that is not validated for general population use and add that SOGS has gone out of favour internationally due to a number of criticisms, including the registering of false negative problem gamblers. PGSI also has more focus on the harms and consequences associated with gambling than other measures and this is a relevant fit to descriptive elements of problem gambling which may be encountered in the qualitative element of this research.

The PGSI consists of nine questions, four related to problem gambling behaviour and five related to adverse consequences associated with undertaking gambling.

Participants rate each item as occurring never (score 0), sometimes (score 1), most of the time (score 2) or nearly always (score 3). Scores can range from 0 to 27. Ferris and Wynne (2001) categorises the scores as follows. Non-gamblers or non-problem gamblers will have scored 0 on the scale, responding never to all the items. They may not have gambled at all in the last 12 months. Wynne (2002) suggested a 'professional' gambler may fit into this category. Low-risk gamblers score 1-2 on the scale and will probably not have experienced adverse consequences from gambling. Moderate-risk gamblers score 3-7 on the scale, will have problem gambling behaviour but may or may not have experienced adverse consequences and may be at-risk. Problem gamblers score 8 or more on the scale, may have lost control of their behaviour and will have experienced adverse consequences of their gambling.

The PGSI will be used to classify gamblers in both the qualitative and quantitative phases of the research (see Appendix A).

3.5   The quantitative element

3.5.1 Rationale for employing an online survey

As the qualitative data were being analysed and key data categories and concepts were emerging, findings were tested in terms of where similarities and differences exist between men and women, players of different games, and problem and non-problem gamblers. These differences and similarities between the groups of interest were translated into hypotheses that were tested by using an online survey. The survey is therefore the tool that functions as the deductive part of the inductive-deductive research cycle (See Figure 3.2, Teddlie & Tashakkori, 2009).

The data collected by a survey in this research will enable quantitative between-group comparisons to be made to meet the research aims. The survey will be a self-report measure, which will tap in to beliefs, attitudes, behaviour and processes which mediate the path through Internet gambling, as indicated by the qualitative data. Collection of this data can be used to support qualitative findings by testing them in a different, larger population to the qualitative research. Surveys may be somewhat superficial in comparison to in-depth interviews, but nevertheless the interviews and surveys will both be seeking similar information, just by different research routes, strengthening any finding by integrating methods and results (Teddlie & Tashakkori, 2009).

A survey provides a method of collecting data from a large population in a relatively short space of time, which makes it attractive for pragmatic purposes. The fact it can be run online adds to the attraction, as apart from initial set up and advertising, the research needs little administration, is low cost, and once set up in the right way, data collected can be immediately exported to data analysis software, thus minimising data input error. It can also allow ease of access to target groups and is not limited by geographical boundaries (Griffiths, 2010). An online survey can confer advantages in that participants may feel more comfortable answering sensitive questions online and they may lessen the pressure to give social desirable responses as participants can maintain a high degree of anonymity (Griffiths, 2010; Toce-Gerstein & Gerstein, 2007).

One of the key criticisms about online surveys and questionnaires is that they largely represent participants who have computers, who have a different demographic than those who do not, and the sample is skewed, jeopardizing generalisability (Griffiths, 2010; Toce-Gerstein & Gerstein, 2007). However, the target population of interest in this research is the population who use computers to gamble, and as such, an online survey is a positive advantage in sampling.

3.5.2 Survey design

Items in the survey were designed specifically to check, test and explore findings emerging from the qualitative data in this research. There were no plans within this research to design a formal psychometric scale that assessed a disposition or state. It is acknowledged that questionnaires of this nature need to be reliable and valid; reliable in the sense that they measure consistently over time, and valid in that they measure what they purport to measure (Howitt & Cramer, 2005). The survey used in this research is not a psychometric scale, and as such, was not tested for reliability. Validity can be assured in terms of content validity, as the survey aimed to stay close to the qualitative data.

The precise questions used in the survey design were designed as the categories and concepts from the qualitative data emerged. Hypotheses were constructed based on those qualitative findings and apparent differences between the target groups of the research; namely men and women, players of different games, and problem and non-problem gamblers. See Chapter 5, 6 and 7 for the thematic qualitative results and hypotheses, and Chapter 8 which explains how those results have been incorporated into the survey design.

The survey included closed questions, multiple-choice questions and items using a Likert scale, depending on the objective the data was addressing (Teddlie & Tashakkori, 2009). Furthermore, the aim was to design an attractive-looking survey with a variety of styles of question to maintain interest, that was straightforward to understand and not too demanding to complete (Salkind, 2006). Closed questions and multiple-choice questions were useful to collect demographic information and information about the

frequency of different Internet gambling activities. Likert scales, consisting of 5-point agreement scales (e.g. 1 strongly agree, 2 agree, 3 neither agree nor disagree, 4 disagree, 5 strongly disagree), were useful to test participants' level of agreement with statements (Salkind, 2006). The PGSI was included within the survey to assess participants' level of gambling in the past 12 months (Ferris & Wynne, 2001) (see Appendix A). Questions were designed avoiding leading, loaded and double-barrel questions, and jargon. Flesch readability scores were checked for the introduction to the survey and instructions for each section, aiming to be in the recommended range of 60-70. The survey had a maximum completion time of 15-20 minutes to avoid fatigue and boredom effects. Filter questions were designed to exclude certain populations who indicated they did not use the Internet to gamble, they resided outside the UK or were under the age of 18 years. Only one submission per IP address was permitted to exclude multiple completion of the questionnaire from the same computer and discourage multiple submissions from participants. Additionally completion time of the survey was recorded so those completing the survey in under a minimum time, as tested in the piloting of the survey, were also excluded.

An online survey tool called *SurveyGizmo* was used to design and launch the survey. This had a number of useful design features that were incorporated into the survey, for example: selecting questions for compulsory completion; having further questions revealed if certain responses were given; allowing participants to move forward and back through the survey; and enabling participants to save their progress and come back to the survey at a later time, automatically generating email reminders. Similar to other online survey tools, data from *SurveyGizmo* could be transported directly into data analysis software, in this case SPSS.

To assure the quality of the survey, the design was reviewed by two experienced academics, who are familiar with designing survey materials and have experience of using *SurveyGizmo*. It was also reviewed by a statistician. The design was tested by a small number of participants prior to being launched, who were asked to give feedback about the design, the clarity of questions and ease of completion. All materials were passed through the University Research Ethics Committee.

3.5.3 Quantitative sampling and recruitment strategy

Participants required for the quantitative research were adults (over 18 years old), currently resident in the UK, who gambled on the internet on any kind of game (including betting, poker, black jack, roulette, lottery, scratch cards, bingo and slots), anywhere between once a month up to every day. They were currently gambling, or had stopped within the last 12 months from the moment of recruitment. Participants resident in the UK were specifically targeted to exclude cultural bias from residents of other countries where gambling law and social acceptability of different forms of gambling may affect findings.

To enable valid statistical comparisons between the groups of interest, it was estimated a total sample of 200 participants was needed to adequately fill each category, with a minimum of 30 participants in each category used for comparison. This enabled statistical comparisons to have a reasonable power, with power increasing as the number of participants increases (Field, 2009). Categories used for comparison include men and women; bettors, casino game players and poker players; and, no/low risk gamblers, moderate risk gamblers and problem gamblers.

Recruitment occurred via a variety of sources. Advertisements were placed in a variety of places including in the Gambling Therapy Internet forum, in gambling interest magazines, with University poker societies, with gambling related groups on the social networking site, Facebook, and on gambling related forums. A broader sample was recruited by placing advertising with University staff and students. Advertising invited participation and offered incentives for completing the full survey in terms of entry into a draw for an *i-Pod*. Participants were directed to complete the survey via an online link, and were offered the opportunity to complete a paper version of the survey if they wished. Ethical approval and permissions from administrators was sought prior to recruitment materials being posted. (See Chapter 8 for further details.)

CHAPTER 4

QUALITATIVE METHOD AND RESULTS OVERVIEW

4.1   Qualitative Method

4.1.1 Design

The qualitative design involved data collection from Internet gambling participants via a semi-structured interview conducted by telephone, and lasting approximately one hour. Interviews were recorded, transcribed verbatim and analysed using a Grounded Theory approach (Strauss & Corbin, 1998). Interview data was coded and categories formed, with categories being compared by gender, by game played and by gambling level.

4.1.2 Participants

Participants consisted of 62 Internet gamblers, 31 male and 31 female, all over 18 and currently residing in the UK. They had all gambled on the Internet in the last 12 months.

Participants were recruited by placing adverts with gambling support agencies, such as Gamcare, Gordon Moody Association, Gambling Therapy, and Gamblers Anonymous, by contacting gambling related businesses and interest groups on Facebook, by approaching gamblers at bingo halls, and by sending emails to University staff and students (see Appendix B for example recruitment materials). The participants recruited by each route are shown in Table 4.1.

Participants responding to the adverts were asked about the type of Internet gambling they undertook and the frequency with which they played. Respondents not included in the research were those undertook infrequent low level online activities or had not played online in the last 24 months. Twenty five of the female participants included in the sample were recruited and interviewed during a previous research project, Corney and Davis (2008). A variety of recruitment avenues were used firstly to ensure a variety of gamblers were represented in the research, as per the sampling framework, and secondly to overcome the difficulty of recruiting participants.

Table 4.1   *Recruitment sources for interview participants*

	No/Low-risk gambling	Moderate-risk gambling	Problem gambling	Total
University staff and student emails	2 female	2 female	3 female	7 female
	7 male	2 male	2 male	11 male
University poker societies	1 male	1 male		2 male
Gamblers Anonymous			4 female	4 female
Gordon Moody association			3 male	3 male
Gamcare Forum			9 female	9 female
		1 male	3 male	4 male
Other Gambling Forums	1 female			1 female
			1 male	1 male
Facebook		4 female	1 female	5 female
	2 male	4 male	2 male	8 male
Research colleague contact		1 female		1 female
	2 male			2 male
Self-exclusion organisation referrals			2 female	2 female
Bingo hall leaflets	1 female	1 female		2 female
Total	4 female	8 female	19 female	31 female
	12 male	8 male	11 male	31 male

Table 4.2 shows frequencies of the key demographic and gambling variables of the qualitative sample, and provides an indication of the spread of the sample across these variables. Problem gambling levels are measured using the CPGI (Ferris & Wynne, 2001). The sampling framework and recruitment strategy is described in full in Chapter 3, section 3.43.

Table 4.2   Qualitative sample demographics and key variables

Demographics and key variables	N
Gender	
Male	31
Female	31
Age Group	
18-24	5
25-34	24
35-44	18
45-54	5
55-64	7
Work status	
Full time work	23
Part time work	10
Student	15
Not working	11
Marital status	
Single	18
Living as domestic partners	14
Married	17
Separated/Divorced	5
Widowed	1
Gambling Level	
Non-problem gambling	32
Problem gambling	30
Main Current Internet gambling activity	
Betting exchange	2
Odds betting with a bookmaker	10
Financial spread betting	4
Bingo	11
Bingo & Slots	2
Slots	3
Blackjack	3
Roulette	2
Instant win games	1
Casino games – unspecified/multiple	3
Poker	21

Participants were additionally classified into groups by the main Internet gambling mode they currently undertook, either betting, casino games or poker (see Section 3.43). This is shown in Table 4.3. The betting mode included all Internet betting on any event, sports or otherwise, including betting with a bookmaker, financial spread betting and betting exchange. The casino mode included Internet luck based games such as

roulette, blackjack, bingo and slots. It was not possible in the time frame available to recruit non-problem betting women to meet the sampling frame. However, women's non-problem betting is represented to a small degree in that whilst betting was not the current main activity of any of the women in the sample, women included in the sample did bet at low levels, and for some, it had been their main activity in the past. This detail was captured in the qualitative data analysis.

Table 4.3   Interview participants, by gender, current main Internet gambling activity and level of gambling in last 12 months.

		No/Low Risk Gambling	Moderate Risk Gambling	Problem Gambling	Total
Betting	Female			1	1
	Male	7	5	3	15
	Total	7	5	4	**16**
Casino games	Female	2	4	15	21
	Male	1		3	4
	Total	3	4	18	**25**
Poker	Female	2	4	3	9
	Male	4	3	5	12
	Total	6	7	8	**21**
Total	Female	4	8	19	31
	Male	12	8	11	31
Grand total		**16**	**16**	**30**	**62**

4.1.3 Materials

An initial semi-structured interview schedule was used for the first 25 female interviews. Interviews covered participants' gambling history and activities, their motivations for gambling on the Internet, the effects and impact of Internet gambling, whether they saw it as problematic and if so what, if anything, they had done about it (Corney & Davis, 2008). In line with Grounded Theory, the interview schedule was reviewed and revised as the data analysis progressed and categories of data emerged that needed more focus to enrich the data collected (Strauss & Corbin, 1998). As participants talked about different experiences at different times in their gambling history, the schedules

were focussed to cover the experiences of the first time gambling on the Internet, how/why gambling patterns changed, and safe play and resilience (see Appendix D for copies of the Interview schedules). Interviews were conducted over the telephone and recorded on a digital voice recorder linked to the telephone earpiece.

Participants' gambling level was measured using the Problem Gambling Severity Index (PGSI) (Ferris & Wynne, 2001). The PGSI consists of nine questions related to problem gambling behaviour and adverse consequences associated with undertaking gambling. Participants rate each item as occurring never (score 0), sometimes (score 1), most of the time (score 2) or nearly always (score 3). Total questionnaire scores can range from 0 to 27, with a score of 0 indicating a non-gambler or no-risk gambler, 1-2 being a low risk gambler, 3-7 moderate risk gambler, and 8 or more being a problem gambler (see Section 3.45 for more on the PGSI and why it was used for this research, see Appendix A for a copy of PGSI, Ferris & Wynne, 2001).

4.1.4 Procedure

The research design, recruitment procedures, materials and a research risk analysis were completed, and all were approved by the University Research Ethics Committee. Relevant permissions were gained from the various recruitment strands, and advertising and emails were launched. Information provided during advertising included details of the research, but did not mention incentives so initial responses were therefore not incentivised. Qualifying criteria for participation were having participated in internet gambling in last 24 months, being aged over 18 and not being a lottery-only gambler. Participants who responded to advertising or emails were communicated with by email to establish the type and level of Internet gambling they undertook, to confirm their suitability for the research. If they did not respond to engagement at this stage, they were sent a follow-up email and if they did not respond to this, no further contact was made. Those responding who were unsuitable in terms of having a low level of internet gambling activity, were thanked for their interest and their involvement was declined. Suitable participants were then sent a copy of the Participant Information Sheet, which included full details of the research, including the offer of reimbursement of time, in the form of a £20 high street or online voucher or a donation to charity (see Appendix C). Participants were then contacted by email after 1-2 days to confirm they had read the

information, answer any questions, and invite them to participate in an interview. Those who did not respond were sent a follow-up email and if they did not respond to this, no further contact was made. For those who did respond, a suitable time and telephone number for the telephone interview was arranged, taking into account any privacy that was required by the participant for the interview.

Recording commenced at the start of the telephone interview. A general introduction was made in which participants were reminded of the purpose of the interview, that they had the right to withdraw, and that confidentiality and anonymity were assured. Verbal consent was gained. Questions during the interview followed the interview guide (see Appendix D), with participants given time and room to talk about areas that were significant to them. Follow up questions were used to deepen and clarify the information participants provided. Interviews were conducted in a supportive, non-judgmental way, with the interviewer being careful not to probe deeply into areas that participants clearly found upsetting. The interview was closed in a suitably positive way.

At the end of the interview, participants were asked to complete a Problem Gambling Severity Index (Ferris & Wynne, 2001), which was sent and returned by email. A debriefing sheet was also sent to participants (see Appendix E). Participants were then sent a £20 voucher as reimbursement for their time, along with a thank you letter or email (See Appendix E).

 All interviews were recorded and verbatim transcriptions were produced from the recordings. These were anonymised by removing identifying information, then input to *NVivo* software and analysed using the Grounded Theory Method (Strauss & Corbin, 1998) (See Section 3.42 for the Grounded Theory process)

4.1.5 Data Analysis

Qualitative analysis was undertaken using *NVivo* software. This was a pragmatic choice given the emphasis on systematic analysis in Grounded Theory, the requirement to make comparisons between different groups of gamblers and the number of interviews involved in this research.

Open line-by line coding was undertaken for the initial interviews from the women's Internet gambling project. After some initial codes emerged, larger chunks of data were coded to create more holistic and contextual codes. Associations between the codes were considered and axial coding was applied, grouping together and classifying the codes that were related. Initial memo writing began, and as the categories became more enriched with data, they became more defined, including both properties and dimensions. A central category was then defined, and the categories were arranged and associated with this central category. Key activities in the analysis included comparison of cases and categories to identify data variations, memo writing, considering co-occurrence and time sequencing of events and outcomes, considering negative cases and purposive sampling and interviewing. Data saturation was achieved at around 50 interviews due to the evolving coding scheme, and needing to confirm that interviews with a number of gamblers undertaking difference gambling activities were fully represented by the core categories and their sub-categories. Data collection continued to 62 participants to ensure participant variability was fully represented and whilst looking for confirmations and exceptions. In-depth comparisons between emerging theory and existing theory were made when all the data was fully analysed.

4.2   Results Overview: Hierarchy of core categories

The interviews were initially analysed into codes, then axial codes, and then grouped to form categories. These categories have an overarching central category, 'Development and change in Internet gambling behaviour'. This central category is the main concept of the research.   It explains the development, and change of Internet gambling behaviours in terms of factors that contribute to the development of Internet gambling behaviours, factors that contribute to initiating Internet gambling, factors that contribute to continuity and change in Internet gambling behaviour and factors that contribute to the development and control of problem gambling. The central category and its four core categories are apparent in all interviews. The four core categories, their sub-categories and minor categories are set out in Table 4.4.

In later sections of the results chapters, the four core categories are broken down to lower level categories and quotes from transcripts are provided as evidence to support these. Where quotes are provided they identify the gambling level of the participant, categorised as either being NPG - Non-Problem Gambling, level 0-7 on the PGSI or PG - Problem Gambling, level 8+ on the PGSI and they identify which specific gambling mode participants are talking about, betting, casino games or poker. If the quote is not mode specific then the mode identified is the main Internet gambling mode of the participant. Additionally in each core category section, key findings are identified and, where relevant, hypotheses are stated which were carried forward into the quantitative element of the research.

Table 4.4   Development and change in Internet gambling behaviour – Hierarchy of categories

Core category A - Pre-Existing individual factors	
A1 Developmental experiences	
A2 Disposition to gamble	
A3 Circumstances and lifestyle	
A4 Gambling experience prior to Internet gambling	A4.1 None or Minimal
	A4.2 Previous land-based gambling
	A4.3 Playing for points
Core category B - Triggers for Internet gambling initiation	
B1 Advertising, incentives and the media	
B2 Internet utility - Transferring offline activities	
B3 Social introductions	
B4 Thinking about winning	
B5 Counteracting loneliness and boredom	
Core Category C - Stability and change	
C1 Financial interests and concerns	C1.1 Setting, adhering to and breaching monetary limits
	C1.2 Winning and losing
C2 Enjoyable leisure activity	
C3 Skill development	
C4 Life events, emotions and escape	
C5 Social influence	
C6 Utility of Internet gambling features	C6.1 Accessibility and convenience
	C6.2 New opportunities
	C6.3 Internet gambling accounts
	C6.4 Promotions and incentives
C7 Time	
Core category D - Problem Internet gambling	
D1 Risk awareness	
D2 Problem Internet gambling criteria	
D3 Problem Internet gambling and suicidal ideation	
D4 Regaining control	D4.1 The desire for change
	D4.2 Control strategies
D5 Resilience and safe play	

Core Category A and B are included in Chapter 5. Core category C is in Chapter 6, and core category D, along with a provisional model based on all the findings, is in Chapter 7.

CHAPTER 5

QUALITATIVE FINDINGS I:
PRE-EXISTING FACTORS AND TRIGGERS FOR INTERNET GAMBLING

5.1   Core category A – Pre-existing individual factors

Core category A contains descriptions and explanations that participants gave about their life before they began gambling on the Internet. It captures information about the participants' history and gambling experiences prior to initiating Internet gambling. It provides some insight into the background of Internet gamblers before they interact with Internet gambling, and begins to establish some potential aspects of causality, where pre-existing factors had an influence on participants' gambling behaviours.

Where participants indicated that aspects of their life before they began Internet gambling were instrumental in influencing their Internet gambling behaviour, influencing initiation, continuation, escalation, escalation to problem levels, or reduction, this is captured in Core Categories B to D.

Sub-categories for Core Category A are:

> A1 Developmental experiences
> A2 Disposition to gamble
> A3 Circumstances and lifestyle
> A4 Gambling experience prior to Internet gambling

A1 Developmental experiences

Participants were asked about the gambling experiences they had as children and teenagers. This included any experiences of exposure to gambling at a young age/under the age of 18 years. It incorporated gambling which had been observed as well as gambling which had taken place with parents, family or other adults being present. No probing questions were used in order to avoid any discomfort or harm to participants.

Gambling exposure was mostly related to offline gambling as most participants were over 30 years old so Internet gambling did not exist in their childhood. Many participants recalled social events with the family, for example, playing on fruit machines in arcades, going to bingo or going dog or horse racing. These are more traditional ways of gambling in the UK and seem to be accepted by participants as normal developmental experiences; part of everyday life. Underage activities were mostly, at least initially, undertaken at a gambling venue in the presence of and with consent from adults, which seems to suggest this was an opportunity for modelling to take place.

Some non-problem gambler (NPG) participants talked about these initial experiences with their family with gambling being presented as an enjoyable game rather than being about the money, and the experience providing them with an understanding of the consequences of gambling. Parents of some of these participants additionally appeared to have taken a stance about gambling and ensured they presented it in this way to their children, as a fun activity but with consequences if it is not controlled. This suggests that certain early experiences can result in protective gambling attitudes and behaviour in adulthood.

> *It was quite kind of a fun thing, it was a social thing - we used to go to the dog races and I remember we used to go to <holiday centre> a lot and I'd usually end up playing fruit machines … I mean it was quite a hard lesson to learn when you are young, because we'd always spend all our money and then we'd have no money, so it kind of teaches you something about gambling... Mum would turn round to us and say 'Well, that's it now. You haven't got any money.' So we'd have no money for the rest of the holiday… So I think we always had a healthy respect for it. But yeah, so probably like from the beginning… quite young, kind of 10.*
>
> *NPG Anne Poker*

> *…in my family, gambling is kind of viewed on as something that you do for maybe a bit of fun, do sport, that kind of thing, but at the same time it's always going to be recognised as something that you need to become responsible with if that makes sense. So I mean I do consider myself a relatively responsible gambler, and I think that's because I kind of… because in a way I was brought up*

to sort of see gambling, not as a bad thing, but as something that you need to kind of do responsibly and you know, and you gamble what you can afford to lose and all those kind of things.

NPG Kevin Odds betting

Other participants, both NPGs and PGs, talked about their developmental experiences as being more passive or neutral – consequences were not learnt at a young age and there did not appear to be active parenting stance about gambling, it was just that participants' parents did or did not gamble. Whether participants gambled at a non-problem or problem level, and whether parents appear to gamble at a non-problem or problem level, participants indicating they had passive/neutral parents did not directly attribute their current gambling behaviour to their parents' gambling attitudes and behaviours. They considered other factors to be more relevant.

Neither of my parents gamble; they don't disapprove of it, they just… they just don't believe that they would be able to make a profit at it so they don't bother. Like they play the lottery but they don't think that counts. So there was no sort of … there was nothing really in my family that was passed down or anything like that, it was purely something I'd picked up from friends and got interested in.

NPG Edward Odds betting

I started to gamble when I was about 15. Well, as a child I used to use the amusement arcade when we went on holiday, because my mum and dad would do the same, as part of our holiday, because we only ever holidayed in sort of Wales or the British Isles sort of thing. And then at 15 I started going to a local social club with my nanna and my dad, and then bingo once a week. I was 21 when it became a massive sort of issue. I was introduced to the large bingo hall by a friend, and the attraction there was the chance of winning these really large prizes which I had never really sort of come across before

PG Jenny Bingo

Some participants talked about the childhood and teenage gambling experiences they had when they were away from adults. These included two groups; participants who had undertaken problematic gambling in arcades and participants who played poker at

school. Poker players at school tended to have gambled on poker when they were older teenagers; they were all male and were all currently gamblers at a non-problem level.

> *And I, like a lot of teenage kids, got involved with playing fruit machines and I lost what to me at the time, was a very large sum of money in a short space of time, probably about £500/£600 in the space of a couple of months*
>
> *NPG Charles Poker*

> *I started playing poker when I was at school, I guess I was about 15 and a group of us played not for money, in our lunch hour, and then we started playing for money at about 18 when we left school; I mean, you know, at that stage a big win was £2 or something like that, so even allowing for inflation we weren't risking life or limb*
>
> *NPG Sam Betting Exchange*

In addition to talking about developmental experiences of gambling, some participants indicated that their general experiences of childhood were unhappy. This particular subject was not a question in the interview schedule so was only brought up by participants, not the interviewer, to explain some of their gambling history and behaviours. As such, it is unlikely this minor category within this sub-category is fully saturated. All participants who mentioned having unhappy experiences in their childhood were problem gamblers (PGs). They often referred back to their unhappy childhood as they talked about how and why their problem gambling may have developed. They seemed to want to find reasons for their gambling behaviour and also, some were undergoing therapy, which may have triggered this focus on childhood as a possible cause. However, no firm conclusions can be drawn as this was not a thread pursued through all interviews.

A2 Disposition to gamble

This subcategory was developed from participants who indicted they believed they had a pre-existing 'psychological or physiological condition' that pre-disposed them to be vulnerable to be attracted to gambling and/or Internet gambling. Contra indicators are

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also included where mentioned, for example the lack of a 'psychological or physiological condition' which kept participants safe. Participants were not specifically asked about this as part of the semi-structured interview, so data included reflects information some participants volunteered. As such, it is unlikely that this category is fully saturated.

Some participants indicated they had depression or anxiety before they began gambling on the Internet. They were all PGs and most were female. Some had episodes of depression or anxiety that were over before their Internet gambling began. Some highlighted that their depression was related to specific events, such as relationship problems or bereavement. Others had depression or anxiety that existed prior to Internet gambling and continued after they had started gambling on the Internet.

...I did have agoraphobia for years...well, this is before... I am glad they didn't have gambling then because … I never went over front doorstep or back doorstep - I wouldn't even go into the back yard for three years and it took a lot of time. So I have, I am susceptible to anxiety and depression, I do know that...

PG Andrea Bingo

I mean I have terrible anxiety attacks, I've had them for years and I have a game I play on Xbox online and it's consuming and I use it as a distraction when I'm feeling bad and I play it most days. It's a therapy, yeah, I would say definitely

PG Lisa Slots

Some participants talked about having (PGs) or not having (NPGs) an 'addictive personality' or a 'gambler's personality'.

I know from my experiences – I don't really have an addictive personality – I've never really got addicted to anything so I don't really worry about the risks of getting addicted [to Internet gambling].

NPG Lewis Odds betting

I think at the back of my mind I have always known that I am quite an addictive personality.

PG Lucy Slots

A few participants indicated they had compulsions and/or addiction before they began Internet gambling. They were all PGs and all three were female.

Oh well, I did have a drug habit for a while, for a couple of years, I used to take cocaine, which I've stopped doing three years ago...Possibly I was looking for something to replace it.

PG Lisa Slots

...before I started gambling, I mean I think you could almost describe me as a workaholic, insomuch as I was totally committed to my work and what I was doing. I had a whole range of other interests and I mean I just… I suppose there's the same compulsive pattern and really what I did was, I substituted the gambling for the other sort of, you know, being a workaholic and/or, you know, the other things I did.

PG Stephanie Poker

Two female PG participants had other mental health disorders diagnosed, one for Post Traumatic Stress Disorder (PTSD) after bereavement and the other for dissociative disorder after a traumatic childbirth.

A3 Circumstances and lifestyle

This sub-category captures the general environment of the participant prior to and at the point they initiated Internet gambling. Participants talked about a variety of circumstances and lifestyles including their age, relationship status, relationships with partners and children, work life, financial situation, home life, social life and general mood. These were mixed and varied and reflected the general diversity of participants circumstances and lifestyles prior to initiating gambling.

A number of circumstances and lifestyles were described that featured feeling lonely or isolated before initiating Internet gambling. These resulted from relationship problems, separation/divorce, bereavement, being responsible for children, moving away from family and friends or preferring to be alone or at home. Loneliness and social isolation was the strongest node in this section - it was described by both non-problem and

problem gamblers, and mainly by women, who talked about being lonely and isolated in more depth than men.

> *I mean I was a lone parent for seven years which was when the gambling really had an effect on me because I was very very lonely in many ways and then a childhood disability…and I was tied… Apart from work I was pretty much tied to the house.*
>
> *PG Jenny Bingo*

> *I mean he never used to take me out, I think it was about three years since we ever went out; the only friends I had were his friends, that once we split up I never go to see them again...But I mean I don't go out a lot. I have got a few friends but they are married and with children and it's different for girls than what it is for boys. The blokes always seem to go out whereas the girls... I was chatting people up on the internet, you know, just chatting people up on the internet with - you know, the poker, and so I didn't really have any friends and I got to know some really nice people.*
>
> *NPG Maggie Poker*

Some participants described their general physical and mental health difficulties, prior to gambling on the Internet, and how the gambling behaviour compensated for or reduced the effects of having physical or mental health issues. Poor physical health was a factor which put some participants in a situation where they could be at home for lengthy periods of time leading to social isolation, boredom and depression. These participants appeared to be mainly female problem gamblers

> *I had been ill and I had to have an operation and it was just … I had to have bed rest, so I started going on internet a lot and I got an email saying 'Oh, come and try us, get £10 free' and that's how it started…*
>
> *PG Andrea Bingo*

> *I found out I couldn't have children, I had special IVF to have my son which was quite stressful, I had several miscarriages; my mother had cancer – I don't know, I think these are all little things that prompted me on, things I was trying to avoid*

in my mind I suppose and I found that gambling was a way of hiding from all of that.

<div align="right">*PG Lisa Slots*</div>

Participants also talked about circumstances prior to Internet gambling that led them to struggle with life, feel stressed or experience low self-esteem. These sometimes appeared to be persistent factors in a participant's life and seemed to indicate a degree of poor mental health. Those who talked about having poor mental health were mainly, female problem gamblers

I've always been a gambler since I was a child, my dad used to take me to the bookies and… (LAUGHS). It's always been there. I had quite a good control over it for many years, I wouldn't go in shops and I didn't gamble for many years, but certain stresses in my life has made me want to find ways out of … I don't know, mental weariness I think.

<div align="right">*PG Lisa Slots*</div>

I always had this massive thing where I wanted to be accepted and I wanted to be cool and I wanted to be able to do what everyone else did and buy the same clothes and wear this, and have all the material things in life...you know, a lot of my issues are around that and actually just not really knowing who I am and just wanting to please others all the time... I was working for myself and the economy crashed but I couldn't just come clean and say 'I'm struggling here' because that is against everything about me. I wanted to give off the image, even in recession I was super, I was wonderful, I was superhuman and I'm still making lots of money and I was doing so well. When I look back now it sounds absolutely ludicrous and crazy.

<div align="right">*PG Luke Blackjack*</div>

A4 Gambling experience prior to Internet gambling

Participants talked about the gambling that they had undertaken as adults prior to initiating gambling on the Internet. Some had very little experience of offline gambling, whereas others had engaged in offline gambling, some to problem levels. Some

participants had also gambled for points or play (pretend) money prior to initiating play for money on the Internet.

A4.1 None or minimal

This group did not undertake any gambling at all prior to the internet, or undertook occasional gambling activities as part of a social event, such as a day at the races, a bet at a special event such as the Grand National or a trip to a casino. When talking about previous gambling, some participants had occasionally bought a lottery ticket whereas others had bought a lottery ticket more regularly. They did not consider a lottery to be a form of gambling.

> *I have done but nothing major. I used to at odd times go (to) local bingo, I used to take my grandma to a social club and we were playing for pennies. So I have done.. I have never… the only horse races I have ever gambled on was the Grand National once a year. I had never been in a bingo hall; like I say it was just more… I used to go with my grandma before that.*
> **No, so you had done very little gambling before then really?**
> *Yes.*
> **What about the lottery?**
> *I did the lottery every week but …*
>
> <div align="right">PG Andrea Bingo</div>

> *...I have never dabbled in my life before, that's right and I just seen it one day in the [newspaper] and they had a promotion like, say if you put £10 on they would double your money. I don't know what even made me do it because I had never done that before and that's how it kind of started...I never really went to Bingo halls or anything like that. That was how I couldn't understand how it became like aggressive, I mean I never did the lottery or anything like that, I had never really gambled in my life before.*
>
> <div align="right">PG Karen Bingo</div>

A4.2 Previous offline gambling

Most participants had previous experience of land-based gambling before they began Internet gambling. The majority of these undertook a single main activity, for example betting, slot machines, bingo or lottery. Poker was less prevalent and was often undertaken prior to Internet gambling by playing with friends rather than in a formal gambling environment. The main offline activity previously played was often the activity that was first played when initiating Internet gambling, although some participants undertook new main activities (This is explored further in section B1).

Some participants indicated they had gambled to problematic levels before they initiated gambling on the Internet. However as their gambling level at the time was not measured, it is not always clear if they would have been previously classed as an NPG or PG. Participants indicating they had gambled to problematic (unclassified) levels prior to Internet gambling had mostly experienced persistent problematic gambling (unclassified) for some time. They were also classified as PG after initiating Internet gambling, as measured by PGSI (Ferris & Wynne, 2001). For these participants previous land-based gambling problems continued on to Internet gambling.

> *It's always been fruit machines...I was like really into it, so probably by the age of like 10 I probably had the first signs of a problem... well I mean the thing is, with gambling, because I've done it for a long time, I've always known it's a problem. You know, I think since I was quite young I've been quite happy to… well I won't say happy to, but I quite… if someone pushed me on it, I'd quite happily admit that I've got a gambling addiction and that's something that I've always had. So I mean I think as soon as I even played the online fruit machine, I knew that it was going to be a problem straight away. It didn't really take any incidences to think you know, it's sort of opened a can of worms if you like, I think I knew that straight away.*
>
> *PG Adam Poker (PG mode Slots)*

> *Throughout the years – even before internet gambling – I've been betting in … you know, bet money that I should have been using for more important things. I*

can admit to that now because I've sort of … I went back and I've done… I have bet too much at certain times, you know.

<div align="right">

PG Barry Poker (PG mode Roulette)

</div>

For some it appeared that prior to Internet gambling they felt they had experienced a relatively short and mild period of problematic gambling (unclassified). This did not seem persistent and had not recurred with any persistence when they undertook Internet gambling, as they were currently classified as NPGs as measured by PGSI (Ferris & Wynne, 2001).

...the only time when I found out I had any sort of problem with gambling was when I was about 16 or 17 – 17 sorry, and I, like a lot of teenage kids, got involved with playing fruit machines and I lost what to me at the time was a very large sum of money in a short space of time, probably about £500/£600 in the space of a couple of months, and that made me, that sickened me basically and put me off that kind of… you know, that form of gambling for life basically.

<div align="right">

NPG Charles Poker

</div>

I'd done the bookies before for like World Cups and kind of like big football matches and that kind of stuff and then they got these like computerised roulette machines and that kind of stuff, and I got a bit addicted to those which isn't the best thing, especially with a bookies being on everyone's kind of doorstep...I mean I got to the point where I was feeling I was kind of addicted, and I rang up the Gamblers Anonymous thing, basically just to say, look, I feel like I'm going to kind of spend that out of my means and obviously I can't afford to do that, and then they just kind of gave me some like phone support and that kind of stuff, and then I managed just to kind of get myself out of that.

<div align="right">

NPG Reece Poker

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A number of participants indicated they had non-problematic gambling prior to initiating Internet gambling but after initiating Internet gambling, they were currently classified as PGs as measured by PGSI (Ferris & Wynne, 2001). Most of these were women, classified as casino games players.

It was more recreational, I'd be going to the racetracks. I mean when I was a betting shop manager I never gambled, but more recreational, we'd all go, or we'd go to the dogs ...

<div align="right">

PG Lisa Slots

</div>

I never gambled until about maybe four years ago, four and a half ago; I had never gambled in my life before then...I played the bingo for years...It wasn't, that wasn't serious. There is a difference between social gambling and gambling. If you go to bingo and go with £20 and come home with £5 change…

<div align="right">

PG Natalie Bingo & slots

</div>

Other participants indicated that they had non-problematic gambling prior to using the Internet. They had maintained their gambling level after initiating gambling on the Internet, and were currently NPGs

I have always liked fruit machines, you know. I am able to walk away and leave it. I might… you know, occasionally I might put something in it and say put £5 or something … you know, but I can afford £5 and mainly it is the way that I feel, it makes me so annoyed with myself.

<div align="right">

NPG Anne Poker

</div>

A4.3 Playing for points and play money

Some participants undertook gambling activities on the Internet for points or play (pretend) money before committing their own money to Internet gambling. This could be undertaken in most types of Internet gambling, but seemed particularly relevant for poker. Playing poker for play money was popular amongst participants who wanted to try or test out a type of gambling they were unfamiliar with, or were keen to build their skill of the game. Some players considered playing for play money was beneficial as they believed it enabled them to learn a game safely and iron out any reckless play. However, others who had played for play money considered it was less beneficial to have this prior experience of playing as it set up unrealistic expectations. Playing for play money was different to playing for virtual money (money from a bank account placed on the Internet) as, for poker in particular, people played more cautiously and

carefully when real money was involved. One participant suggested Internet betting companies could offer different win rates for the same game when it was played for pretend money and real money.

Just for fun, just play money, not really points, it's all just fun money isn't it? You know, you can play for fun, there are fun tables, and you just try the different games. It was a real account, you know, I didn't put money in to start with until I'd tested everything and worked out how things worked because obviously it's a lot different online to a live atmosphere. It was more a learning curve really before I started playing with any real money.

NPG Olivia Poker

When I was paper betting, I was ridiculously reckless and I was doing several trades… at one stage I was doing several trades a day, but with my own money yes, I've always, always done very few trades...But because I was betting with paper, (a) I wasn't losing money and (b) I was able to correct my course before I started doing it for real

NPG Grant Financial spread betting

I would be playing slots for fun and the points mounted up and mounted up and mounted up but when you started playing for real money, it didn't work like that... you don't look at the small print but obviously as I was chasing this one particular slot machine, um you know you start to look at the small print and then it does tell you that when you are playing for points that the odds are different than when you are playing for real money

PG Pam Bingo & slots

Preliminary Discussion A – Pre-existing individual Factors

Those participants who talked unprompted about their childhood, explained their experiences of gambling in childhood and teenage years. The overall effect of gambling with parents appeared varied, in that participants did not necessarily follow the pattern of significant adults around them. However, all gamblers who attributed their current behaviour to learning from their parents' behaviour and attitudes, were NPGs. These

participants had been presented with gambling as an enjoyable activity, that was to be respected, and that the outcome was their responsibility. For these participants, early learning of attitudes and consequences appeared to have provided some kind of resilience and these participants appeared proud to be able to say they had been taught how to gamble sensibly.

Previous research findings have found that problem gamblers are more likely to report having problem gambler parents than non-problem gamblers, with problem gambling prevalence being significantly higher amongst those with perceived problem gambling parents (1.4%) compared to those with non-problem gambling parents (0.4%) (Donati et al., 2013; Lloyd et al., 2010b; Wardle et al, 2010, 2007). This suggests that problem gambling can be socially influenced from an early age by problem gambling parents.

Problem gamblers in this research were not prepared to confirm that they believed their parents' problem gambling had influenced their own problem gambling behaviour. However, as the interviews accepted only volunteered information from participants about their childhood experiences, it is likely that a more probing interview would reveal more about the influence of problem gambling parents. What was volunteered from some non-problem gamblers was how their childhood experiences had proved protective. This information provided some validation about the types of messages and attitudes that parents, and potentially other significant adults, can be instilled at an early age with children and can survive as protective mechanisms into adulthood.

When talking about childhood gambling away from adults, participants talked about gambling on fruit machines and playing poker in school prior to gambling on the Internet. This was reported mainly during teenage years, and participants who had played teenage poker indicated that this led them into taking up poker on the Internet. This fits with the profile of poker players tending to be younger males with more severe gambling (Shead et al., 2008; Sullivan Kerber, 2005). Poker is described in literature as a game of skill where ability needs to be developed over time. It seems therefore that these younger poker players, enjoying poker playing amongst their friends and transferring poker playing online would be a vulnerable poker population without the necessary skills to be successful. This is supported by research amongst student populations of poker players, 18% of whom have been found to be problem gamblers,

and the longer a poker player had been playing, the more likely their financial success (Griffiths et al., 2010; Wood et al., 2007). It seems this underage population of teenage poker players may be particularly vulnerable to problematic poker Internet gambling.

When participants talked about what was going on in their lives prior to initiating gambling, some participants identified certain dispositions or mental states prior to gambling. These included anxiety and depression, personality traits, compulsions or addiction, PTSD and dissociative disorder. Some of these conditions were diagnosed and treated by doctors or mental health professionals, others were spoken of in lay terms by the participants. Many of these participants reflected on these pre-existing states and, in hindsight, felt that these helped to explain why they gambled.

This supports findings from land-based gambling research where problem gambling has been associated with individual conditions, such as depression, anxiety, negative mood states, personality disorders, substance abuse, and alcoholism, and individual personality traits, such as impulsivity and sensation-seeking (Lloyd et al., 2010b; Matthews, Farnsworth & Griffiths, 2009; Zangeneh, Grunfeld & Koenig, 2008; Clarke, 2005; Stewart & Kushner, 2005; Abbot, Volberg, Belringer & Reith, 2004; Blaszczynski & Steel, 1998).

Many of the participants who referred to mental health difficulties were problem gamblers, attributing their problem gambling, at least in part, to these pre-existing conditions. This potentially suggests these conditions are causal elements in the development of problem gambling. This appeared to be true in some cases where non-gambling events led to a disorder, or where pre-existing diagnoses of disorders existed. This supported the idea that aspects of an individual condition existed prior to gambling, and these interacted with undertaking gambling potentially making it more problematic than it would be for others without a disorder. However, as the research includes retrospective accounts and some of the PGs had undergone counselling for their gambling, it is not possible to conclude with certainty whether this association between pre-existing condition and gambling was genuinely causal or reconstructed 'post hoc'. PGs undergoing treatment may have been looking for explanations for their gambling behaviour and therefore attributed their vulnerability to gambling to a pre-existing condition, whether professionally recognised as a disorder and diagnosed or not. Further longitudinal research would be useful here.

Circumstances and lifestyles prior to initiating Internet gambling were described by all participants. A number of participants described circumstances including loneliness and social isolation, and poor physical health. In the main, these appeared to be more prevalent in female problem gamblers. Many participants indicated that taking up Internet gambling was a way of changing these aspects of their life. Where participants indicated that their pre-existing circumstances and lifestyle were instrumental in influencing a specific aspect of their Internet gambling behaviour and involvement, influencing it to initiate, continue, escalate, escalate to problem levels, decrease or provide resilience, this is further explored in Core Categories B to D.

Some participants had no or minimal experience of gambling prior to initiating gambling on the Internet. Also, some participants indicated they had no problems with offline gambling prior to initiating Internet gambling. After initiating Internet gambling, these participants could be classified as NPGs and also PGs. This indicates that problem gambling can be both developed and escalated through Internet gambling alone. A previous history of use or abuse of offline gambling is not a necessary factor.

Some participants played for play money or for points before they initiated gambling with their own money on the Internet. These were both NPGs and PGs, and were mainly participants with an interest in Internet poker. Pre-existing gambling for points or play money did not ensure future safe play for every player as some were PGs. Some participants suggested that playing for points or play money enabled them to learn how to gamble and they could check out potential pitfalls before they initiated play for money. However, others considered playing for points was too different to playing for money and led to unrealistic expectations of greater success at gambling. The unrealistic nature of these 'free practice games' has been highlighted in other research noting that the odds in these games is often better than the odds in real games (McCormack & Griffiths, 2013).

Core category A, covers gamblers' lives before they started gambling for money on the Internet. It has provided new qualitative findings that have added some further depth and details about aspects of gamblers' development, dispositions, circumstances and prior gambling experience that may impact on their future Internet gambling behaviour. These key findings are summarised below. They were *not* developed into hypotheses to

be taken forward and tested in the quantitative stage of the research,as they did not readily lead into hypotheses that could be tested by survey style questions.   The decision was made to focus the survey on Core Categories B and C.

Key Findings A - Pre-existing individual Factors

1. Introducing a child responsibly to a gambling environment may provide adult resilience to development of problem gambling on the Internet, by instilling the attitude that you should never go into it thinking you are going to win and that you have to be prepared to lose all your money, so only bet what you can afford to lose.

2. Teenagers can develop an interest in playing Internet poker by playing poker with friends at school. This made lead into taking up Internet poker as a young adult and may explain the higher rates of problem gambling in young adult male student populations playing poker.

3. There is no clear evidence for a pre-existing disposition to gamble on the Internet.

4. Pre-existing vulnerability, in terms of loneliness, social isolation, boredom and poor physical or mental health, may make Internet gambling an attractive prospect for compensating for that vulnerability.

5. Undertaking practice Internet gambling for points does not always provide the same gambling experience as when playing for virtual money. This can lead to unrealistic expectations of greater success for new Internet gamblers and additional or different skill development may be needed.

6. A PG prior to Internet gambling initiation is likely to also be a PG after initiating Internet gambling, whereas a non-gambler or NPG prior to Internet gambling initiation may become a PG after starting Internet gambling.

5.2   Core category B – Triggers for Internet gambling initiation

Core category B focuses on the reasons that participant's gave for undertaking Internet gambling for the very first time. For most participants there are a number of reasons given, and these reflect the events and thoughts a participant experienced immediately preceding their first internet gamble for money. These may be spontaneous, short lived events and thoughts for some, for example, a spontaneous reaction ('why not?') to an online advertisement. Alternatively, these may be considerations over a longer period of time, involving a degree of forethought and planning, for example, researching the pros and cons of transferring offline gambling activities onto the Internet.

Sub categories Core Category B are

> B1 Advertising, incentives and the media
> B2 Internet utility - Transfer of offline activities
> B3 Social introductions
> B4 Thinking about winning
> B5 Circumstances and lifestyle

B1 Advertising, incentives and the media

Many participants initially became aware of Internet gambling by advertisements on television, in gambling venues, in newspapers and online. Adverts in gambling venues directed participants to websites related to the gambling venue brand. However adverts in newspapers, online and on television also influenced participants who were not already using gambling venues. Internet gambling was also advertised and shown on television, which also raised participants' awareness of Internet gambling availability.

> *I think what it was, was I used to go to bingo and then they give us a flyer about their online bingo site so I started… that's how I first started going on online bingo because I got a flyer or a leaflet through or something, telling us about their bingo website that they had..I think it was like you deposit £10 and you get £20 free play or something like that.*
>
> ***And had you thought about going online to play before then?***

No, I didn't really, I didn't really know that it was available. It's not something that I'd thought about, so it wasn't until that come through that I really thought oh, I didn't realise you could sort of do them things online.

NPG Isobel Bingo

Quite a few years ago; probably when it first kicked off, when it started getting all big on the old TV and that – along with the poker and that...mean obviously I'd been watching it on the TV and saw like the people who used to qualify from the internet, and that was the main attraction at first.

PG Callum Poker

Many adverts offered incentives for opening an Internet gambling account. This was attractive to many participants who indicated promotions and incentives were key to them initiating Internet gambling. Participants gave details of promotions in many different mediums that offered different kinds of incentives, for example, free money to play with, or money deposited in the account would be matched by the company. When Internet gambling first began this seemed to be given as unconditional 'free-money', however as Internet gambling has developed over time, terms and conditions have also developed, covering, for example, how much must be won from 'free-money' before winnings could be withdrawn from the account and matched deposits had certain limits.

Well basically when my friend who had turned 18 before me, he found out, this is when he's 18 like, although it's sort of nearly three years ago, internet gambling was quite different back then I think and basically there was some deal on [casino site] where he deposited like £100 which you'd probably get about… I think about roughly $200 dollars or something back then, they'll double it, so basically you get $200 and they'll double it, so in total you'll have $400.
Now he didn't gamble any of it, he took everything out - he took his £100 out and £100 free and they didn't stop it, so he managed to basically take out £300, so like probably a month and a half later I did the same, however they seemed to have changed their policy. So I got told I can take my initial £100 out but I have to… in order to take out any profits and the £300, I would have to wager like some ridiculous amount, up to like … I think in total it was about $5,200 and then anything after that is I'm in profit, I am entitled to take it out.

Yeah, so it's some proper dodgy scam and I don't like any of that sort of stuff, I only did it purely to sort of double the money and take it really. I hadn't any intention to gamble it basically but I ended up having to, and I looked into sort of how I could possibly give myself the best chance in doing whatever to have a slim chance of making any money.

NPG Jason Poker

When deciding where to open new accounts, participants would sometimes check out competing offers before deciding which account to open. When Internet gambling was in its initial stages, running accounts online was seen as risky by some. To mitigate this risk some participants would choose a familiar brand for their account. Others had a less planned approach, reacting more impulsively to online advertising. Those with a less considered approach and appearing more impulsive tended to be PGs.

Well at the time I probably wasn't that aware of any sort of fixed odds bookmakers that weren't also on the high street, so I'm sure it was always going to be a Ladbrokes or a William Hill or a Coral that I would have gone to. Why I picked Ladbrokes, they may have just had a slightly better offer for new subscribers or something like that, I imagine I probably at least looked at Ladbrokes and William Hill and did a sort of quick compare before deciding who I was going to play with. But yeah, as far as I remember, I settled on Ladbrokes.

NPG Edward Odds betting

Well I just got a pop-up come up on my screen while I was checking some emails and surfing the net; it was for a gambling website, it was a bingo website, they would give you £10 as well, and I thought 'Oh I will have a look at that, you know, I think there's money in the bank, I had sold a property and so I just thought it would be a bit of fun.

PG Jackie Bingo

B2 Internet utility - Transferring offline activities

Many participants talked about initiating Internet gambling being related to wanting to transfer their current offline gambling activities to the Internet. Some participants

transferred all activities on to the Internet, but some also maintained some offline gambling activity.

Those who were thinking about transferring activities online tended to do some research on how different sites worked and what Internet gambling could provide that was better than offline gambling. They tended to be bettors and NPGs, who often actively considered their options and were engaged in thinking about and planning their Internet gambling initiation. They tended to find a number of features of Internet gambling which were attractive, with the main features being increased convenience and accessibility. Internet gambling was available from anywhere, 24 hours a day and was quicker than a trip to a gambling venue.

> *... a couple of years ago I was on a holiday and I normally put a bit of like a bet… I normally go down the bookies maybe once every couple of weeks just to put an accumulator on and I was away and I thought I'd open an account so I could do it from abroad.*
>
> *NPG Lee Odds betting*

> *I was 29, the very first time I went on, I went on to set up an account with [gambling site] who I am sure you've heard of, and yeah, I set up an account with them and yeah, it was all very, very easy. It didn't take long to open up an account, I transferred money across from my bank account and linked my bank account to them, no particular debit cards to that account etc, and it's very easy just to transfer money over in seconds and begin gambling whenever you want to.*
>
> *PG Luke Blackjack*

Other features that participants had researched included having increased choices about when and how to gamble. Also it appeared to provide better value for money.

> *Oh yeah, I had something in mind that I wanted to bet on, yeah, and I had … you can do it… I suppose a mate of mine, he said you can't put that particular bet on in the bookies, you have to go online because it used to be that you could do*

pretty much anything in the shop, and now they've got online betting, they do a bit more of the obscure bets, and you have to do it through the actual internet site

NPG Lee Odds Betting

I have to admit, I think I'd already made a conscious decision that if I was going to gamble on a sporting event, I would get better value for money gambling online on [gambling site] and I can't remember which day I signed up or what motivated me to do it that day, but I think it was something that I was kind of planning to do if that makes sense.

NPG Kevin Odds betting

Internet gambling also provided an opportunity to practice for offline play and build skills. This was particularly relevant for poker players. Participants could play for points and pretend money where success, or frustration as play gambling was not sufficiently real, could lead to Internet gambling with money. Some participants also gambled for small amounts of money to test out different ways of gambling and different systems.

Because I started… as I said, I got this book and so I started to play the play money tournaments and they were on every day and there was about a good few thousand people on them and I won one, actually came first, by just following the strategy in this book and I started to think 'God, do you know what, I'm ready now, I'm ready to go onto real money.'

PG Liz Poker

I think initially I played without playing for money which you could do, and I quickly got bored with that because without some restriction, financial penalty really, there's no reason not to play in every hand, you know, it's like if you knew there aren't going to be any cars on the road, you might drive well over the speed limit or on the other side of the road, but as soon as you know there might be a car, you know, kind of natural caution comes in. So I played a little bit without… you know, for free as it were, and then I fairly rapidly started playing for small amounts

NPG Sam Betting exchange (talking about Poker)

Some participants were not keen on the offline gambling environment so preferred the idea of gambling on the Internet from the comfort of their home where they could also smoke if they wanted to.

So when my friends at work were talking about this website that you could bet on online, I thought that was a cleaner way of doing it if you will, slightly more removed from the not terribly pleasant bookie environment.

NPG Brian Poker

Since the smoking ban really has come in and it kind of died down, and that's when I started going online to do it.

NPG Millie Bingo

For others, a transfer to Internet gambling was just a natural progression as technology had just moved on, and they felt they were just moving with the times.

... it was a natural progression because I felt the betting industry went, it went so-called high-tech, you know. It was the way forward if you know what I mean, you just adapted with the way technology has moved on within the betting industry.

PG Antony Odds betting

B3 Social introductions

Some participants considered that initiating gambling was in part due to a social introduction. Family, friends and colleagues may have recommended Internet gambling as an interesting pastime. Some had recommended websites, helped with technical aspects of using a gambling site, or taught participants about aspects of the gambling activity. Additionally, family, friends and colleagues were talking about Internet gambling activities that they themselves were undertaking. Some participants felt that they wanted to join in as it looked interesting or fun, and they thought it was something they could do to socialise and connect with other people.

Do you know, it was my mum, she had found it and she said to me 'Oh, you must try this', you know, as usual, 'try this.'   *NPG Hannah Bingo*

I was interested in supporting my team and I'm also interested in taking part in…or part of the conversation at work and so on, so I got involved in the conversations, and as a result of that, yes, I would say it was sort of 50:50 between… I was interested in following my team and betting anyway, and I was also interested in being/partaking of the same activities as the people that I work with.

NPG Brian Poker

Participants who had been introduced to Internet gambling by family, friends or work colleagues and shown what to do by others, tended to be NPGs. Some PGs appeared to have a briefer, less involved social introduction where they may be given some information in a social environment or play with others offline, and then carry on to undertake Internet gambling with little apparent further social involvement with those who had introduced them.

I'd been sport betting anyway, but some of the guys that I worked with had opened up a spread betting account and they were … I was listening to them talking about it and we'd always talk about betting in general, but I remember then going on and doing it and yeah, I've always had an interest in golf and I thought that was quite a good way to bet on that particular market by the way in which they were offering a market on Tiger Woods that day. And yeah, that's what took me into that area.

PG Stewart Financial spread betting

I had a friend who was into poker and I quite liked it so I sort of went on and was playing online poker... I think I'd played poker when we'd all been together and then just decided … you know, it's like bigger tournaments and stuff online see.

PG Adam Poker (PG mode slots)

B4 Thinking about winning

Participants talked about initiating Internet gambling because they wanted to make money. Some thought they would be successful as they were knowledgeable about sports or finances, and would be able to use this knowledge to win. Others believed

they would be successful as they had been successful when playing for points or play money.

I think actually when I first started, I was a lot more naïve, so when I first started I thought I was definitely going to make lots of money and this was going to be a second income for me, and all these kind of things, so I very kind of cocky about my understanding of sport and I was going to do really well, so I guess… when I first started, I probably just had a very out-of-touch with reality view on what online gambling could offer.

NPG Kevin Odds betting

I was so confident that I could make money...I was earning a lot of money, I was doing rather well. I didn't need any money. I didn't do it because I needed money, I did it because I thought probably it was an easy way to make money. We know there are no easy ways but perhaps that's what you think. Or perhaps it's greed, perhaps you think you want more, even though things are going well, I don't know.

PG Sheila Financial spread betting

B5 Counteracting loneliness and boredom

Participants talked about how their everyday circumstances and lifestyle influenced them to initiate Internet gambling. They indicated that being lonely, having time on their hands and being bored was causal in influencing them to initiate Internet gambling. These were often poker players. (This is different to category A3 which summarised general circumstances and lifestyles of Internet gamblers prior to initiation.)

I sort of was made voluntarily redundant from [company] in 2001 and … so I had a lot of time on my hands. I took a whole year off because I'd got a nice pension, there a big lump sum so I didn't have to work. So I took a year off to try and get my head together and see what I wanted to do and I started to play then because as I say, it was just starting then, online poker.

NPG Stephen Poker

I have had a couple of games going down the pub with my ex, but that was all, and what it was, I did, it was boredom because my ex used to lie on the sofa and didn't do anything, and watch cricket for five days - he never spoke to me, and I got fed up, so I just by chance found the [poker site]… I didn't really have any friends and I got to know some really nice people.

NPG Maggie Poker

I had been ill and I had to have an operation and it was just … I had to have bed rest, so I started going on internet a lot and I got an email saying 'Oh, come and try us, get £10 free' and that's how it started... It was the chat mainly that I got that I enjoyed...

PG Andrea Bingo

Preliminary Discussion B – Triggers for Internet gambling initiation

For individuals with no prior knowledge of gambling, advertising provided information about an entirely new online activity. For individuals already undertaking land-based gambling, advertising provided insight into new gambling options available on the Internet. Advertising forms part of the necessary social characteristics for gambling and problem gambling in that gambling must be available and an individual must know where and how to gain access to it (Griffiths, 2011; Abbott, 2007). Above and beyond advertising, participants also found they were offered incentives for opening an account and/or depositing money.

Internet gamblers who were current PGs appeared more likely to have reacted quickly to advertising and promotions and not given them in depth thought; they saw an advert or an incentive and opened an account. This perhaps reflects the impulsive nature of problem gamblers found in existing research (e.g. Lloyd et al., 2010b; Matthews et al., 2009; Zangeneh et al., 2008; Clarke, 2005; Stewart & Kushner, 2005; Abbot et al., 2004; Blaszczynski & Steel, 1998) which appeared to have existed prior to IG initiation and had a role in reacting spontaneously to advertising.

Current NPGs reported reacting more slowly, giving adverts and promotions a degree of consideration, weighing up risk and weighing up options about which companies and

incentives were the best before they decided to initiate Internet gambling. These findings for NPGs support research by Hanss et al. (2015) who found gamblers indicated the role of advertising was primarily one of providing knowledge of gambling options and operators. However, the role of advertising was not explored in Hass' research in terms of the differential impact on new gamblers or existing land-based gamblers, or on problem or non-problem gamblers. The impact of gambling incentives offered in gambling advertising was also not explicitly explored in the research. Further research exploring the differential impact on gambler sub-groups would be helpful to understand the impact on gambling initiation in different groups, some of whom may be more vulnerable to problem gambling than others.

Valentine and Hughes (2008) found that advertising was the prime reason for 27% of gamblers starting Internet gambling. However, the impact of advertising as a prime motivator appears broader than the 27% suggests. Many participants in this research who were already gambling offline, talked about initiating gambling on the Internet as an active choice, made over time, following exposure to numerous adverts, research and anecdotal information. From this information, they perceived that it offered better gambling experiences and opportunities than offline gambling. Internet gambling was perceived to be a logical and pragmatic choice to replace or supplement land-based gambling. Many researched and planned their transfer online looking at the increased convenience, accessibility, choice and value for money that was available on the Internet. These were key situational characteristics of gambling identified by McCormack and Griffiths (2013) as being higher in IG than in land-based gambling. What is interesting from this research is that convenience and value seem of prime importance in motivating IG initiation in bettors, more so than gamblers undertaking other gambling activities. Some poker players initiated play on the Internet to practice for their offline play, also appearing as a logical choice to improve their skills and improve opportunities to win money. Participants researching and planning an offline-to-Internet transfer of gambling activities tended to be NPGs.

Some participants had been introduced to Internet gambling in a social way. This sits with previous research suggesting 5% of Internet gamblers started IG due to introduction from family members, 26% due to introductions via friends and colleagues (Valentine & Hughes, 2008). Introductions for PGs appeared to be generally less social

then NPG's. PGs appeared to have some social contacts who were involved in planting the idea of Internet gambling, but no additional further social contact or support relating to initiation is apparent. It appears to be more of a solitary start. NPGs appear more involved in initiating Internet gambling as a social process. They appear to be more likely to be invited to undertake Internet gambling as an activity, have particular gambling sites directly recommended to them and be shown how to gamble on the Internet. Social motivations, in the form of reward from increased social affiliation, as identified by Stewart and Zack (2008), may therefore come into play for NPGs as part of this initial IG initiation stage. It may be that this fuller social introduction provides some protective factors in the form of offering experience or guidance to a player new to Internet gambling. Alternatively, a fuller social interaction may be offered to those who appear more likely to be able to control their gambling.

Some participants initiated gambling on the Internet as they believed they had an edge in the form of a 'system', gambling skills or knowledge about sports. For poker players in particular, play for points or play money (as described in Sub-Category A4.3) could support this. Participants believing they had an edge often believed they could transfer these advantages on to the Internet, be successful and make money.

Some participants were consciously aware they were bored and needed something to do, and initiated Internet gambling as a source of entertainment and interest to fill their time. Other participants stumbled across Internet gambling as an activity and later, as they continued Internet gambling, found the unanticipated rewards filled the gap in their lives. This reflects findings in other research where boredom, excitement, variety, and entertainment have been identified to be motivators for gambling by gamblers where the stage of their gambling has not been measured (e.g. Wood & Griffiths, 2014; McCormack et al., 2014; McCormack & Griffiths, 2012a; Recher & Griffiths, 2012; Wood & Griffiths, 2008; Pantalon et al., 2008; Clarke et al., 2007). It is now clear that these are also motivators for initiating Internet gambling. This situation is described by participants in terms of indicating they had a deficit, something missing or detrimental in their life, and this seems to be compensated for by undertaking Internet gambling. This has been labelled in this research as a "vulnerability-compensation effect". It is explored further in Discussion C.

Core category B is concerned with key aspects of initiating gambling on the Internet. It has provided new findings in that NPG gambling initiation behaviour appears to be qualitatively different to PG gambling initiation behaviour. There are also differences in the way that gamblers initiate IG on different gambling activities. These key findings are summarised below and put into hypothesis suitable for further testing using an Internet gambling survey (See Chapter 9).

Key Findings B – Triggers for Internet gambling initiation

Categories B1 to B5 indicate that

1. Advertising, and promotions offering incentives, have a central role in initiating Internet gambling.

2. PGs appeared to be more immediately influenced by advertising than NPGs. NPGs appeared to respond to advertising and incentives in a more considered way than PGs.

3. Many participants actively chose to initiate Internet due increased convenience, accessibility, choice and value for money perceived to be available on the Internet. This appeared particularly relevant for bettors.

4. NPGs appeared more likely than PGs to plan a transfer of offline gambling activities on to the Internet.

5. Some participants had been introduced to Internet gambling in a social way, via recommendations from friends, being shown how to play and continuing Internet gambling activities in a social way. This was more apparent for NPGs than for PGs.

6. Some poker players initiated gambling on the Internet as a way to practice for their live play.

7. Some participants initiated gambling on the Internet as they believed they had the skills and knowledge that would enable them to gamble successfully and make money. This was primarily poker players, and bettors to a lesser extent.

8. Some participants initiated Internet gambling as they were bored and lonely and needed something to do. Some consciously initiated Internet gambling as a source of entertainment and interest to fill their time, whereas others stumbled across Internet gambling and later found that Internet gambling filled the gap in their lives (the "vulnerability-compensation effect").

Hypotheses for quantitative research were designed based on key findings above. Hypotheses number B2 below relates to key finding 2, B6a/b to finding 6, etc. These hypothesis were taken forward into the Internet gambling survey (See Chapter 9)

B3a   Convenience will be the strongest influence for initiating Internet gambling

B3b   Convenience and choice will be a stronger influence on initiating Internet gambling for bettors than gamblers in other domains.

B4   NPGs will be influenced more strongly than PGs to initiate Internet gambling due to a transfer of offline activities

B5   NPGs will be influenced more strongly than PGs to initiate Internet gambling due to recommendations, being shown how to play and joining in Internet gambling activities with friends and family.

B6   Poker players will be more strongly influenced than gamblers from other domains to initiate Internet gambling to practice for live play and to start by playing for points or play money.

B7a   Poker players will be more likely than gamblers from other domains to initiate play to beat other players.

B7b   Bettors will be more likely than gamblers from other domains to initiate play to 'beat the system'.

B7c   Poker players and bettors will be more likely than gamblers from other domains to initiate play for skill-related reasons, the opportunity to make money and because they anticipate more success on the Internet.

B8a   For the vulnerability-compensation effect, there will be an association between the influence of loneliness/social isolation and thinking that Internet gambling would provide the opportunity to make contact with other people

B8b   For the vulnerability-compensation effect, there will be associations between (i) the influence of boredom and thinking that Internet gambling would be fun and entertaining and (ii) the influence of boredom and thinking it would be interesting to do something new or learn a new skill.

B8c   There will be factor analysis evidence for clusters of initiation groups that support the concept of a vulnerability-compensation effect

CHAPTER 6

QUALITATIVE FINDINGS II:

STABILITY AND CHANGE IN INTERNET GAMBLING

6   Core category C – Stability and Change

This category considers the course of Internet gambling over time, and how a pathway consists of periods where Internet gambling levels are stable, escalate or reduce. Stable, escalation and reduction phases can be defined in terms of their properties and dimensions, and are also defined in terms of factors that influence changes of phase.

Participants talked about how their Internet gambling levels changed over time. They talked about stable phases of Internet gambling, phases when participation escalated and phases when it reduced or stopped. These phases and changes in gambling levels were described in terms of spend, stakes or loss, the number of online modes played and the time spent on Internet gambling activities. Participants often subjectively identified a cause and effect relationship, where a particular factor was seen to influence continuation, escalation or reduction of Internet gambling participation. They also explained some relationships that were more cyclical in nature, where cause and effect influenced each other.

The stable phase was a phase where levels of internet gambling were relatively steady. Participants' dialogue suggested they were in a stable continuation phase when they indicated their money spent, time spent, and number of gambling modes played had a relatively consistent steady pattern for a period of time, when only a few transient minor escalations or reductions of play occurred occasionally across only a few sessions. The same central modes of gambling (e.g. betting and poker) would be regularly played, a regular amount of money would be staked or lost, and the amount of time spent gambling was generally similar on a weekly or monthly basis. A stable phase could occur at a lower level of gambling, where, for example, bingo was undertaken four times each month, for one to three hours each time, spending up to £50 a month, or could occur at a higher level of gambling, where, for example, bingo and slots were undertaken four times each week for five hours each time, spending up to £500 a week.

For some, a stable phase was a habitual pattern which had been played for months or maybe even years at a time. For others, stable phases were shorter or more irregular, and were interspersed with phases of escalation and/or reduction.

An escalation phase was a period during which levels of Internet gambling increased. An escalation phase was identified by increased money spent, time spent or number of gambling modes played. Participants indicated that escalation may happen gradually or rapidly, over a short period of time, maybe a few sessions or few weeks, or it may happen over a longer time period interspersed with phases of stability or reduction. Whilst the change in level was quantitative in nature, escalation was often accompanied by a qualitative element in that engagement with Internet gambling could become more intense and serious.

A reduction phase was a phase where the levels of Internet gambling decreased. A reduction phase occurred where, for example, participants indicated they their money spent, time spent or number of gambling modes played had reduced. Again, similar to the escalation phase, participants indicated changes may happen over a short time or over a longer period of time. Gambling may have completely stopped during a reduction phase and this could appear to be instantaneous in some cases.

Participants indicated that the phases could occur in any order, for example, new Internet gamblers may initiate Internet gambling, have an initial phase of escalation, followed by a phase of reduction and then a phase of stable continuation. They may then escalate again, have a phase where they continued at a higher level, perhaps to a level when it may be problematic for them, and then they may have a phase of reduction and then stop for a while. At some point, they may then resume internet gambling, which for this Core Category, would be classed as an escalation, and then maintain a stable level of gambling that was at a level that was acceptable to them.

The mediating factors of stability, escalation and reduction are included in sub-categories C1 to C7. These factors may have different influences in different phases, and more or less influence on NPGs, PGs, players of different games and men or women. Where the research suggests this, this is highlighted in each sub-category.
Sub categories for Core Category C are

C1 Financial interests and concerns

C2 Enjoyable leisure activity

C3 Skill development

C4 Life events, emotions and escape

C5 Social relationships

C6 Utility

C7 Time

C1 Financial interests and concerns

Throughout their interviews, participants frequently talked about their internet gambling in terms of the related financial interests they had. This covered a wide variety of financial topics including how much they spent, staked, won, lost, borrowed and stole, along with their profits, losses and debts, and how this related to their gambling and household finances. Ultimately, stability, escalation and reduction phases appeared to be influenced by two main factors; how participants set their monetary limits, and whether they were winning or losing.

C1.1 Setting, adhering to and breaching monetary limits

Many participants set limits or restrictions on how much they were prepared to spend, lose or risk on Internet gambling. If the limits were adhered to, the number of modes that could be played and the amount of time spent gambling could fluctuate, and gambling levels could change, but only within the constraints of the money available within the limits set.

A stable phase was established when participants decided which or how many modes they would regularly play and the amount they would stake or spend on each game. Some played their limited spend with low stakes which lengthened the gambling/leisure time and would most likely result in lower individual wins and losses. The exception to this was when playing some large poker tournaments where small stake play could result in relatively large win, though the likelihood of a win was much lower. Participants could also stabilise into a phase of using their limited spend with higher stakes resulting fewer individual plays or bets and the potential for larger wins. This was apparent in

one participant who had put aside a larger amount of money and used it periodically to place an arbitrage* style bet.

* arbitrage - where a bettor places a series of opposing bets that increases the probability of making a profit, or will make a profit regardless of the outcome, as bookmakers have different odds, or odds are set in error

> *You know, I mentioned before betting small amounts, I mean if I... I would rarely bet over a tenner on anything and I think I've done so twice and I put £50 down on results that seemed too good to pass up and I won on both of them, but broadly speaking it's the same as it was when I was writing it on the bookies' slips, you know*
>
> *NPG Jake Odds betting*

Limits could be increased or decreased, resulting in escalated or reduced play. For many participants, limit alterations were led by the availability of more or less money. For some participants, when their available funds were increased significantly, Internet gambling could also escalate significantly, and likewise, when available funds significantly decreased, a reduction phase could end in cessation of all Internet gambling activity. These types of quick and dramatic phases due to financial changes tended to be experienced by PGs.

> *I ended up losing about £60,000 in the space of six weeks, because I'd just got made redundant and they gave me a big pay off*
>
> *PG Paul Roulette*

> *..foolishly I started gambling again quite heavily and got myself into a situation where I couldn't get out of it that time, and I had to declare myself bankrupt. And at that point I did stop for a while …*
>
> *PG Stewart Financial spread betting*

For other PGs, who did not have sudden changes in access to funds, and NPGs, the income-related escalation and reduction phases were less extreme.

Yeah, when I first started I was in full time employment doing a different job so I was setting it [my limit] about £50 a month…I reduced the limit when I became unemployed down to about £10 and then when I got this job I'm at now, about five years ago, I went, I put it up to £20 a month.

NPG Jacob Odds betting

…depending on how much money I had spare, my bets would vary depending how much I'd earned and how much I'd be winning recently. I did tend… I know you shouldn't actually bet more when you're winning, when you've got more money, but I tend to do that, so I would easily bet in £50s.

PG Barry Poker (PG mode Roulette)

Participants talked about self-control as being an important feature of setting and staying within limits. In general, those PGs who set limits frequently failed to maintain self-control and breached limits they had set themselves. Participants who found self-control more difficult, talked about relying on external means that set limits or restrictions for them.   NPGs, worried about loss of control, talked about using the features available on a gambling site to restrict the amount they loaded into their account on a weekly or monthly basis. PGs also used these facilities, but when their limit was reached they may breach it simply by changing it or using a different gambling site.

Yeah, I will set limits, initially I will set limits, but then … I don't know what happens. I know what happens, what literally happens, what happens is I'll stop setting limits, I'll get into a 'it'll be all right in the minute' and then I get into 'It'll be all right tomorrow' and then it isn't, and then you get into .. like you're losing, so you might as well hang on, and then the next thing you know you've lost the lot… When I'm in the moment I can't see it, I just can't see it, no matter whatever I say to myself, no matter what is happening, I can literally sit there and watch it disappear, like almost paralysed and without the ability to do anything about it, even though doing something about it is two clicks of a mouse.

PG Harry Financial spread betting

Some PGs talked about their limits in other ways, rather than setting a limit on what they spent, it was a limit more in terms of what they would not spend on gambling or what they were not prepared to lose, financially or otherwise; a bottom line which enabled a maximum spend without impacting on 'essentials'. Some participant's limit was all the money they had available to them, limited only by how much they could borrow or how much they could obtain by criminal or fraudulent means. Their limit was more of an external restriction, only reached when they could borrow no more or their fraudulent criminal behaviour was discovered. Thus, due to breaching limits, a bottom line approach and external restrictions, PGs financial limits were prone to fluctuation and influenced more frequent and/or more significant phases of escalation and reduction than NPGs.

I would lose control, yeah. And I could gamble with… I mean I have learned the very hard way, as I've said about gambling and my use of money with gambling and I have got contingencies in place now so that… on my pay day everything is paid out - there's no chance of me being able to lose my mortgage money …

PG Jenny Bingo

…at the end the roulette just completely took over and that's when I discovered that there were no limits, you know, the amount of money I could spend, if I had it in my account I could spend it all online, and so I was depositing thousands and thousands each night and I was just going a bit crazy really, crazy in as much as my kind of behaviour as well, you know, I would press the button to spin the wheel – when it got extreme it was like £5,000 a spin, you know, because the limits online seem to be non-existent… I was spending thousands on every spin until I lost £12,000 one day and £8,000 the next, and then I won £7,000 and then it went on like that for a few days until I was losing so much that I knew I wasn't ever going to get it back.

PG Paul Roulette

C1.2 Winning and losing

For some participants, Internet gambling needed to be played for money to add an air of risk and excitement to a gambling activity, and the amount of the win or loss was not

always important. However, ultimately, winning or making money, for most participants, had a central and important role in undertaking Internet gambling.

…your ultimate goal is to win money. I can't play a game of poker for matchsticks because there's no risk involved, and you know, like I said a couple of minutes ago, I am averse to risk if it meant losing something significant, if it's something that I consider to be money that I can easily afford to get by without, such as ten dollars, then it's not such an issue, but then there has to be an element of risk in order to make the game worth playing.

NPG Charles Poker

Some players indicated they continued to play in a stable way in the hope that they would be lucky and win some money. Some were hoping to turn a small amount of money into a large amount, while for others small wins were sufficient to keep them playing. Others were less reliant on luck, striving instead to establish a strategy that gave them a regular profit and that enabled them to make some money from gambling. Some participants indicated that they were already winning regularly and that the winnings had become important to them in terms of regular income or for extra treats. Those who were established in a stable pattern of play, and were making money, were content with a steady profit over time, as this was a safer and more realistic goal. They maintained stable play to maintain a steady profit. The steady profit in turn provided continuous validation that their strategy was successful. Some players were willing to accept a steady small loss as part of their gambling, particularly when first developing their skills or when treating Internet gambling as an enjoyable leisure activity and they continued stable play anyway. Some participants were thinking of taking up Internet gambling as their main source of income. (See C2 Enjoyable leisure activity, C3 Skill development)

...this year has been one of my most successful years betting on football probably, but it's still only been a fairly modest profit and I've still made more profit betting on horse racing which I really have a much more modest level of understanding on, so it's an ongoing battle to try and turn understanding of the game into a decent level of profit. (Talking about betting)

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…it probably took at least nine months until I was at a point where I could slowly turn a very slight profit by playing those tournaments, but I was having fun playing them as well so I'd probably have still done that even if I was making a very slight loss. (Talking about poker)

NPG Edward Odds betting

I think now I'm always playing to make money, that's the aim, that's the reason I'm playing it. I'm not playing it just for something to do, I'm playing it to try and make money from it to buy… you know, not to pay the bills, but I call my poker money my fun money, you know, it's a new car or it's a holiday or something for the children. I mean I've just bought my daughter a new laptop, £400 for her birthday last week which I wouldn't dream of doing if I wasn't playing poker…

NPG Olivia Poker

Poker players tended to be the gamblers who were showing the most regular profit-making pattern. Poker players who had developed their skills and were playing at the right skill and stake level for their ability, had good bankroll management and were consistently disciplined in their play, appeared to be the most successful. Stable play seemed to be associated with these stable regular low-level wins. Sports or financial bettors with specialist knowledge, looking for apparent errors in odds or setting up arbitrage situations could also be successful at winning, but their success was more intermittent as it relied on finding the right opportunity, at the right time, with the right odds.

On the subject of wins, participants talked about the effect that wins had on them. Some saw wins as being a validation of their skill (see C3 Skill development) and it boosted their confidence and the money in their account, so they could gamble on the Internet more often, for more money, and for a longer time. Wins could encourage short- term periods of escalation.

I think just as confidence grew in the game really, as my confidence grew that I knew what I was doing and what I was playing and one thing and another, then you're more confident to then risk your own money aren't you? And I think the

more then that you win, the more higher stakes you're comfortable playing, and it just escalated from there really.

<div align="right">

NPG Olivia Poker

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For those who had a relatively big win for a small stake, it changed their perception of the likelihood of winning and the long term possibilities of gambling. They typically escalated their amount of time or money they invested in Internet gambling in order to maximise their potential to win well. Some participants indicated that wins had to get larger in order to gain the same feelings of excitement and self-esteem they had previously felt for lower wins.

The only thing was, every time you had a big win, you felt great, but then that quickly went back to 'I want to have another big win,' you know, it was kind of like… you're never happy with any sort of win, even if you felt like it was huge and it was your biggest win ever, you still felt like you wanted to go and keep going and keep getting bigger and bigger.

<div align="right">

NPG Billy Poker

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I had a big win off a 20p bet, I won a couple of thousand and then it changed into 'Oh, if I bet more, I will win more' which I did, to the point that I was going on there every day when I got home from work and then until I went to bed - I was on there all weekend … that was in the February, I logged on first in the February and by the October… all of my savings had gone.

<div align="right">

PG Jackie Bingo

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Wins went back into participants' online gambling accounts, where in some cases they remained for a few days before they could be withdrawn. Some participants had already gambled their winnings and their original stake by the time this withdrawal time was reached. However, some participants, mainly NPGs, deliberately left winnings on account as it meant they did not have to stake more money and they liked to see their account growing. They may later withdraw the money, when it reached a certain amount or when they wanted to splash out on a treat. Other participants, mainly NPGs, withdrew winnings as soon as they could, using them for example, for treats, to pay household bills or to pay debts, leaving a balance in the account to continue gambling.

When I got to £12,000 I said 'If I get to £10,000 I'm going to stop and walk away' and I got to £10,000 so I stopped, and it was then I went to withdraw the money into my bank and it said you can only do £2,000 a day. So I withdrew the first £2,000, and then I said 'Right, I'm going to go back the next day [to withdraw winnings], I'm not going to play'. I went on and I thought 'I might actually win again' so I put probably about… out of the £10,000 winnings, I probably put about £7,500 back on.

<div align="right">

PG Oscar Roulette

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..I always try… if I have a substantial win, you know, in the thousands, I always try and do something significant with that money that maybe we wouldn't normally have done, like we went on holiday for a fortnight at the back end of last year with some money that I'd won. I always try, you know, because I'd hate them to think 'Oh I never did anything significant with that money' – I don't like it to just get frittered away with bills and one thing and another, so I like them [her children] to see the benefit.

<div align="right">

NPG Olivia Poker

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Some participants were desperate to win. This was usually due to having a low income, a reduction in income, having bills to pay, having unaffordable debts, and/or chasing large losses. Some participants, those most feeling under financial pressure, would escalate their gambling in an attempt to win money to deal with financial problems. They would often increase the riskiness of their bet, playing with larger stakes and on riskier Internet gambling activities; a strategy very easily undertaken on the Internet. This opened up the potential of winning large amounts that would substantially improve their financial situation quickly. However in reality, for these participants, the wins did not occur as and when they were most needed, and even if they did, the wins were often spent on gambling.

I was working for myself and the economy crashed but I couldn't just come clean and say 'I'm struggling here' because that is against everything about me. I wanted to give off the image, even in recession I was super, I was wonderful, I was superhuman and I'm still making lots of money and I was doing so well. When I look back now it sounds absolutely ludicrous and crazy. I chose to

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gamble out of desperation so it just... I needed to get some money back, I needed to get money quickly, I needed to put money in the company so that I could pay the bills and pay the mortgage etc etc. initially on day 1 it was 90% poker/10% blackjack, by day 30 it was 90% blackjack/10% poker. The transition shifted so it was basically because on blackjack we can win much larger sums of money much, much quicker in reality. It's higher risk and obviously potentially higher gains, and the whole thing is a much quicker process. Obviously I found me actually betting a lot more money but also obviously losing a lot more a lot quicker.

PG Luke Blackjack

Whilst all participants had experienced wins which had an impact on stability, escalation and reduction, equally, all participants had experienced losses. Some losses were unacceptable to participants and these unacceptable losses resulted in a reduction phase. An unacceptable loss was defined by some participants in terms of a loss that indicated their strategy was not working, by some in terms of the amount of the loss, and for others in terms of the consequences of no longer having that money (e.g. using holiday savings). It may consist of one large loss or many losses over a period of time. A loss that was viewed as unacceptable by participants would trigger a review and reassessment of their Internet gambling behaviours and the resulting assessment influenced participants to reduce or stop their Internet gambling activity, either temporarily or more long term.

I kind of went back to it and I blew the lot and what happened then is that I had my son's nursery money, like obviously the childcare grant, and I blew £1,000 of that, and when I done that I was in a lot of pain, I was crying, I was so upset with myself because I knew I had to give £1,000 to his nursery, so my cousin come up with the £1,000 for me and he said to me, 'You've got a problem, you need to get counselling.' He said 'I'm going to lend you the £1,000, but you have to get counselling' so I got the counselling [locally], and I spoke to them about a lot of my problems and things that had been going on and I mean I haven't stopped gambling but I'm just… I'm a bit more wiser if that makes sense, whereas I won't gamble so much.

PG Oscar Roulette

Over the course of say six weeks, I probably lost about… over £2,000, probably about £2,500 which I didn't really have to lose, so at some point then, at the end of that period, I just stopped myself and said 'Look, this is getting stupid, I'm betting money I don't really have, I can't afford it.' I had a sort of heart-to-heart with myself almost that, yeah… I potentially had a bit of a problem and I was betting too much because I enjoyed it, so at that point I just said 'No, I'm not betting,' and I cut myself off from… and I stopped betting for probably a year, I just said 'No, I'm not betting any more' because I didn't consider my betting to be… I couldn't justify it and I wasn't… yeah, clearly I wasn't doing well and I stepped in and stopped myself doing it.

PG Terry Poker

Some participants talked about experiencing what they considered to be a significant loss resulting in chasing that loss and an escalation phase. Losses in these cases were not described as unacceptable, resulting in a reduction phase. Participants spoke about the losses in a way that indicated they considered them to be significant, in that they had a negative impact on their finances. Significant losses could trigger thoughts about recouping losses and participants would play more often, for a longer amount of time and/or for higher stakes and spends. Significant losses resulting in chasing losses were most usually experienced by PGs, although NPGs could experience them less severely as the chasing periods may be intermittent and relatively short. A series of significant losses could result in an unacceptable loss, and a reduction phase.

I did try to keep it from him [her partner], the extent to how much I gambled but I remember going up one day and saying 'I have been gambling' and he said 'Well, how much have you done?' and I said '£750'. He said 'You just can't do it.' And I said 'I know I can't do it, I know I haven't got it,' but of course the next day I woke up and it's very very very, very scary to realise how quickly those feelings of absolute despair, literally suicide go, because they go away…

…Yeah, I thought 'Oh I have got to go and get it back, I will just have one little go and I will get it back'. I think I knew deep down there's no way on earth I was going to get it back; not at all, but I couldn't help myself…'I will just get that back and then I'll stop.' …'Then I won't do it anymore.'

PG Lucy Slots

Losses were also discussed in terms that suggested that losses have to be managed, for example, not increasing a stake when a loss is experienced. Winning players talked about playing for the long-term and accepting that losses will happen, but keeping with a steady strategy over time will outweigh those individual losses for an overall win.

> *I mean you've got to be able to withstand the losses and not to lose too much because a lot of people will chase losses and eventually they'll end up with nothing, you know. If you have a bad day, you've got to acknowledge that you're having a bad day and just leave it and try again tomorrow, you know, and if you're good at what you do, you won't keep having these days. And your winning days will hopefully make up for your losing days.*
>
> *NPG Olivia Poker*

C2 Enjoyable leisure activity

Both NPGs and PGs indicated that initially, after they had first initiated Internet gambling, a stable phase had been largely prompted by the enjoyment, excitement and fun it gave them as a leisure activity. Many NPGs indicated that as their gambling continued, the enjoyment they experienced in this phase was more important than winning money. They regarded the money spent on Internet gambling as part of the cost of their leisure activity, in a similar way that other leisure activities would cost money. Some set a financial limit at a level that they were prepared to pay, or to lose, for a few hours leisure activity, whereas others felt they were in control and a limit was not necessary. Some participants played in a way that maximised their playing time, for example, playing low stakes so they could play more games, taking advantage of promotions so they had more money to play with and playing free games, free rolls or for virtual money when their stake money ran out.

> *I'm the sort of person that, to me, like bingo and things like that, to me it's a fun thing, I don't do it to sort of win loads of money, I don't have that in my head, so I think right, well I've got this £10 to play with, so I'm happy to play that, and if I lose that, that's fine. So I've not actually ever set myself a limit on there because I don't feel that I need to. I'll sort of only do it as and when I feel in the mood to have a go... well I put in that £10 or £15 so however long… I might play sort of*

for an hour that day and then maybe a week later if I've still got funds there, then I'll play again. I sort of kind of spread it out over… make that sort of last over a week or two.

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NPG Isobel Bingo

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There are games out there that cost thousands to play, it's just ridiculous, but I play very very low stakes games and the free rolls that I've started out with, the ones that you start playing, will have 10,000 people starting in a tournament for the chance to win may be $2 in total, if you're lucky. So I would play and play for three or four hours in the tournament and then I would be absolutely delighted because I've won 20 cents. But it's been an entertainment and one that I've been quite strict about, making sure that I didn't start pouring money into online.

<div align="right">

NPG Brian Poker

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Some participants indicated that their drive for continuing with an enjoyable leisure activity occurred as a result of boredom and having nothing else to do.

I could play poker for matchsticks if I had to, you know, if I was bored; it's not the fact that it would have to be about money.

<div align="right">

NPG Martin Betting Exchange

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... once my children have gone to bed, I've got nothing to do really and I'm not a big fan of sitting watching TV and it's too early to go to bed and I don't read a lot, so I think oh I'll get the laptop and do a few hours with the poker

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NPG Olivia Poker

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Many participants indicated that part of the enjoyable experiences they had while continuing gambling, consisted of the excitement that experienced during play, largely experienced when a win seemed imminent, when they experienced a near miss, or when they actually won. For some, enjoyment and excitement could lead to an escalation of play and a boost to self-esteem.

I'll look at it and pay more attention to it then when I'm closer to winning because it's more interesting then, and obviously as it gets close as well, you get a little bit

more excited and think oh, like you might win, but when the game first starts up, it's a bit tedious while sort of building up your numbers on your cards and stuff.

NPG Isobel Bingo

It's very exciting when you win. You feel 'Oh I have done something and I really.. I have won this and this is really good'. Even if I don't win anything else in my life, I have won at this game, I am really good at this. And you never think that 'OK, since I have won £20 and I have only put £10 in, let me take that money off.' You just think 'Oh, it's free money, I will just gamble with it again.'

… sometimes you might start off and you think 'Oh, I am losing everything' and then you might win £5 and that's… you're really excited that you've won something, you've invested it again' and at the end of the night, you've realised that you have probably lost about £40; you have lost that hour that you've sat there messing about on the computer.

PG Grace Bingo

PGs, who had experienced escalation to problem levels, talked about how their enjoyment changed over time. Many found that Internet gambling was an enjoyable leisure activity when they had first started and experienced a stable continuation phase at a low level. However, after significant escalation, for a variety of reasons not necessarily related to enjoyment, when they continued Internet gambling play at a high level, Internet gambling became less of an enjoyable leisure activity. Internet gambling was still enjoyable to some participants while they were actually engaged online, or while they were winning, but as soon as the session stopped, the level of the loss or spend would hit home. The enjoyment experienced was soon replaced by unpleasant feelings and worry about the losses. Some PGs also described how previous feelings of enjoyment experienced during play could be replaced by stronger feelings of escaping from problems and difficulties in everyday life. If money became a problem, through gambling debt or spends which were impacting on everyday life, gambling also provided an escape from money worries. A spiralling circle of gambling, debt, more gambling to escape from debt worries and more debt could develop. For PGs, a stable high level continuation phase involved mixed feelings, where feelings of worry and escape appeared to be more salient than feelings of enjoyment.

Yeah, there's something. I mean I think there's one probably that I've played more recently than that, I've just played literally all night and the things are just swirring round constantly and there's no thought that's gone into it, there's no, no humanised input that will make any difference, it's just pressing the button...originally I thought it was just for fun, and now I find myself playing when I'm trying to avoid situations in my life I think.

PG Lisa Slots

I think initially I started out, it was definitely for a bit of fun, and then I found out that I enjoyed it because during that time I wasn't thinking of all the other stuff that I had to go through... it's positive I think when I am in the moment, that gambling moment, but then when it all dies down and I come off the computer, the second it hits home and you realise that oh, I have just spent that money that wasn't really mine, it was set aside for something for the house, and then you lie about it and you think 'Oh, I have to do this and that…' and that's exactly what I did. I used it on the internet for gambling, so it's just horrible.

PG Grace Bingo

Some NPG participants also found that over time their enjoyment reduced. This was as a result of frustration with the activity they undertook, having a losing streak, feeling bored with or losing interest in Internet gambling. Many then reduced their Internet gambling activities, perhaps stopping for a period of time.

But then about a year down the line I started…'Yeah, it's OK, but I mean it's not my whole life' and you know, I started being a bit more kind of less bothered about it - still enjoying it but less, and I think it goes through periods really. Some periods I go through and I really love it; other periods I don't really like it so much. I don't know if that coincides with the good lucks - we do have good patches of luck - but yeah, sometimes it gets… what I have found is that I have stopped doing it in the day time now, because it is stressful

NPG Rebecca Poker

…but yeah, the play itself seemed to be less enjoyable, actually both in the live games and online, you know, it seemed to require a lot of waiting around, there

didn't seem to be… there was a bit of a luck factor which goes against what I've just said actually, but yeah, so for whatever reason it was easy, it wasn't a deliberate decision, it was just that I lost interest I suppose

NPG Sam Betting exchange

C3 Skill development

Many participants talked about the role of developing skill and expertise in particular gambling activities, and how this affected stable, escalation and reduction phases. Skill development included, for example, developing self-awareness of own abilities and limits, developing knowledge a particular sport, how different websites worked, the role of probability, and developing or using strategies within the game.

The main Internet game that involved skill development was poker, followed by betting, then lastly casino games. More men talked about skill development than women, most likely because more men in this sample undertook poker and betting activities. Participants talking about skill in each of these activities, whether the activities were more skill based or more chance based, believed that their skills, in terms of their performance, knowledge or strategy, could outweigh any chance elements. If they were able to develop their skill, they would therefore be successful.

Participants gambling on the Internet for skill-related reasons considered that they would win more, or beat other people more often, if they developed more skill. They enjoyed a deeper engagement in the game in that they became interested in developing strategies for play and, in poker, for 'reading' other people's play. To develop their skill in any Internet gambling activity, many read books, used gambling systems, joined Internet forums, measured and analysed their performance statistics, and attended training events.

Well what I did is basically just get all the knowledge I can about poker – I bought different books, talked to different people that are winning players and went on forums and just sort of moved on completely from just using it as a gamble, as something that I can … if I play correctly I can make money in the long term..

PG Barry Poker (PG mode Roulette)

In terms of proving that I'm doing well, yes, it's like score-keeping if you will, so I'm… you play to win, you play to win because that means you've done well but I get a great deal of pleasure out of just the playing in the first place, so the process of playing the game and the process of working out how I've done, and also analysing afterwards what I did wrong and what I did well which I quite like doing too because I'm quite an analytical type, that's why I keep a spreadsheet that tracks everything I've done it why I've done it and so on and so forth. All of that gives me pleasure and gives me a sense of satisfaction.

…I mean obviously I would be absolutely delighted if I won a fortune but that's not what I'm playing for, I'm playing for validating my approach and validating that I'm learning and getting better and understanding more how the game plays and the probabilities. I'm almost of the mind that I would prefer to lose having done the right thing, than win having done the wrong thing.

NPG Brian Poker

Gamblers interested in developing skill often played using very low stakes or play money to practice, or, in poker, play free rolls, where they could play free lengthy tournaments (with prizes) with many thousands of other participants. In any case, a win provided validation that their strategy, expertise or mental skills were of a good level, and they were better than other players or they could 'beat the system'. The win was important; for some it was the money that came with the win that was most important, whilst for others, the validation was most important. Some winners, generally skilled poker players and bettors (particularly arbitrage and betting exchange* bettors), found they could establish a profit over time. The profit may not necessarily be large; some participants were happy to win a few pounds, considering the boost to their self-esteem was a more valuable prize. For others, a win was not necessarily important to them; they were willing to accept a regular, usually low level, loss. Learning some skills and taking part in the gambling activity provided interest, and gambling was mainly undertaken as an enjoyable leisure activity.

* betting exchange - where a bettor can place a bet of any size and odds, providing another opposing bettor is willing to take the bet. Bets can be sold for a profit nearer the event or as the event is occurring. Arbitrage bets can be set up where simultaneous bets on all outcomes can provide a guaranteed profit.

To be honest with you, it's not the betting, it's the selection process. I get as much kick… I get the same adrenaline rush if you want, if a horse comes in and I've got 10 pence on it, as if it comes in and I've got £100 on… it's the 'Yes, I selected that horse correctly, I picked that one out, you know, there's 15 runners in that race and it came in and yes, I picked that one right.

NPG Ian Odds betting

Many participants talking about continuing gambling due to the rewards of developing a skill, experienced stable phases of gambling. These people tended to be poker playing NPGs, gambling at steady lower levels of play. They indicated that staying in control was part of the skill set needed for successful play, and they talked about how they planned and approached Internet gambling to ensure they maintained stable play that was controlled and consistent over time.

…I only play for 2% of my entire profits, so like if you've got $100 and you play for 2%, you're only can really buy for like $2 a game and you stick to this rule, and as long as you know your odds and your game's very good, you'll become a winning player. Like I said, if you're the best player in the world at poker but you don't have a bankroll management you'll go broke, it's as simple as that, because poker is luck-based in the short run, but over a high volume of games you should see like your graph when you watch, when you follow your stats, so slowly, like, on an incline.

NPG Jason Poker

I mean when I first played poker, I've played poker for about three years, the first two years I was probably I'd say a losing player, now … the first year because I wasn't very good, the second year I was a bit better but I didn't have much discipline, I wasn't recognising when I was playing well and when I wasn't, and things like that. In my most recent year I'd say I'm a mildly profitable player and the biggest difference in that is focus, listening to my body, listening to my mind, not playing when I'm tired, all these kind of things, the actual level of play hasn't changed that much, it's personal discipline that's been the change.

PG Barry Poker (PG mode Roulette)

Skill development led to escalation phases in that simply developing an interest in the game, and wanting to learn and practice skills, involved investing more time in gambling. This time may be spent researching strategies and analysing outcome, as well as spending time on the Internet testing strategies and practicing.   Additionally, for some participants, as skills developed they experienced greater success and this led to increasing stakes. For some players this escalation resulted in a series of wins over time and they were making a profit. However, over-confidence was an issue for some participants as they reached levels where their skill was not sufficient to keep winning, or they relaxed and were not as controlled about their play. Additionally, strategies may have worked for a short time due to luck, and success could start to dwindle. Losses may begin at this time and to compensate, some participants reduced their stakes to play at a level that matched their ability and some reduced their play to take time to review their skills and strategies. However, some continued to gamble, thinking it was a short term dip or they could recoup their losses.

> *No, I think just as confidence grew in the game really, as my confidence grew that I knew what I was doing and what I was playing and one thing and another, then you're more confident to then risk your own money aren't you? And I think the more then that you win, the more higher stakes you're comfortable playing, and it just escalated from there really.*
>
> *NPG Olivia Poker*

> *I thought of this experiment with the system, it seems ridiculous now saying it out loud, you know, a kind of double or nothing system, to try and make some money and see how it went, push it to see how far. And then I went through probably two months or so where I was playing roulette regularly and keeping a track of what I was winning or losing on there.*
> *It was going reasonably well, I was moderately winning each time as a long-term trend, but I just made a real mistake one day when I'd had some losses, big losses and pains on poker the day before, and rather than just accepting that happens as a long-term trend and if I'm a good player it will come back, I tried to quick fix… I was feeling guilty and anxious about losing the money and frustrated, I bet the equivalent sum I'd lost on roulette… you know, in the spin of a wheel I might have it back and then I'm back to square one again – lost it…but*

that was my experience and it just escalated from small, 'I'll just experiment, I reckon I can beat… you know, what … do double or nothing, or do whatever and it was a spur of the moment decision to try and win back a relatively small loss and it just escalated.

<div align="right">PG Terry Poker</div>

C4 Life events, emotions and escape

This sub-category explores how participants found that taking up gambling on the Internet could help them cope with everyday life, allowing them to divert their attention away from problems in their life and undertake an activity that could provide some relaxation and respite from everyday demands. Some participants became reliant on the escape from everyday life and problems to help them cope, playing more frequently and for extended periods of time. Things could soon spiral out of control as everyday activities took a back seat and as debts built up, making the relief and escape provided by Internet gambling, even more attractive.

Many participants talked about specific events in their lives that had influenced continuation, escalation and reduction of their Internet gambling. Life events included, for example, losing or gaining a job, ending or starting a significant relationship, having a child, bereavement etc. Participants explained how these events often provoked a number of different emotions and could result in significant changes in circumstances and lifestyle. Such accounts suggested that certain events, for example, a relationship breakdown, could influence a reduction in Internet gambling activity for some participants and an escalation in others. Also, a relationship breakdown may influence an escalation and a reduction in the same person as they experienced different phases of the breakdown.

My marriage went very wrong. My wife had an affair and she was absolutely horrible about it. I won't go into details but it was messy and I tried… you know, I loved her so I tried to save things and she basically just used various opportunities to make it even worse. So that was about the end of 2006 so there was like a year after that when I basically didn't play at all, and not just poker, I

pretty much didn't play anything, it's probably the longest I've gone in my whole life without playing!

<p style="text-align:right">*NPG Will Poker*</p>

The one time it was a problem about the amount I lost was when I was going through a divorce and I found playing online a solace to that, and I lost £2,500 over, I don't know, about six months and that was the worst gambling losses I've ever had.

<p style="text-align:right">*NPG Sam Betting exchange*</p>

Life events that had an impact on finances and time available could have a mixed outcome. For example, for some NPGs, losing a job may result in them tightening their belt according to the money they had available and this may result in reduction phase. Alternatively, some PGs, described becoming bored at home, and experiencing an escalation phase and gambling more frequently for longer time periods, albeit staking less overall than they were previously. This may have a significant effect on gambling beyond their means. A few individuals with a change in their financial situation viewed Internet gambling as a potential solution. As they thought about the potential wins, it provided hope that problems would be resolved and everything would be ok in the end. It was not always possible therefore to generalise about how specific life events would affect different types of gambler.

Well obviously I don't have a salary anymore, so I've had to make some major life adjustments in terms of spending and things like having gambling… although having said that, I did go on the other day when the Euro Millions came up, and did play some scratch-cards just to use up the credit in my account, but yeah, literally a lifestyle change, I don't have the money, you know, I can't afford to eat! It's literally a lifestyle change.

<p style="text-align:right">*NPG Marie Instant win games*</p>

And any normal person would actually just kind of tell their wife that business is struggling, we're struggling, you know, and either we need to cut back on our spending, we need to downsize, whatever we need to do – any kind of rational person would do that, whereas I decided to not do that, not tell anyone and to try

and find a way out of it by gambling...I needed to get some money back, I needed to get money quickly, I needed to put money in the company so that I could pay the bills and pay the mortgage etc etc.

<div align="right">*PG Luke Blackjack*</div>

Difficult life events appeared more likely to influence the stability of PGs' Internet gambling than NPGs, most usually causing an escalation of gambling. This seemed to be because PGs generally appeared to experience more challenging life events than NPGs. PGs may also perhaps have greater difficulty coping with difficult life events than NPGs. It is difficult to draw substantial conclusions about the relative complexity of life events and adequacy of coping styles of PGs and NPGs in this research. However, this difficulty that PGs had with coping with life events appeared to result in a need to block out negative thought and emotions, a need for escape, and their Internet gambling escalated.

My father died when I was eight in front of me, on my living room floor and my partner at the time went… well not at the time when I was a child obviously,… when I was 21 I met my partner, my husband, and he had a gambling problem and did something we needed to leave the country about, and well, I went with him and we survived for four years in another country, we left everything behind, didn't tell our families; when we came back I found out I couldn't have children, I had special IVF to have my son which was quite stressful, I had several miscarriages; my mother had cancer – I don't know, I think these are all little things that prompted me on, things I was trying to avoid in my mind I suppose and I found that gambling was a way of hiding from all of that.

<div align="right">*PG Lisa Slots*</div>

My mother had died… there were three of them, we used to call them the terminal three; it was my aunt (she was 38 I think), and my grandmother and my mother and they all had cancer…It wasn't particularly good; they all died within three years of each other and in that time as well I got married, and the day that my mother died, I found out I was pregnant, so there were horrendous contrasting emotions. And then two years later my brother committed suicide so…

My sister summed it all up because she also lost - she had stillborn twins; my other sister had IVF which failed five times and I had four miscarriages in this time, and I remember sitting down outside a pub at one point and my husband had gone for a long walk and my sister just turned to me and she said 'I am sick and tired of being in the first car at funerals' and that just summed up the 90s, it really did. We were on first name terms with the bloody undertaker at one point. 'Another one, mate!' (LAUGHS).

So I think looking back it was most definitely… because I was the oldest child, the oldest girl, [Internet gambling] was most definitely my way of coping, you know, because I had coped for everybody else, I coped for my father, for the family, the kids - everybody else, but I didn't allow any time for myself and so for me, that was my world.

PG Lucy Slots

For some individuals, positive life events, such as starting a new relationship or getting a job, could result in restrictions on time available to gamble, increased responsibilities and changing priorities, which in turn could result in reduced Internet gambling activity. This seemed as if it were a natural life progression for some participants, as increased responsibilities meant Internet gambling naturally became a lower priority. Other responsibilities took priority and participants had more to lose than just money.

...I mean I'm at university now and I'm getting married in the summer and have moved to [Town] and all these things have happened that have kind of made me far too busy to be spending Saturday in the pub, but there was a time obviously when I was kind of young and free and so were most of my friends, we were all lads, so we kind of… that was what we could do with our lives on a Saturday and it was good fun

NPG Kevin Odds betting

I think one of the things I would say is, and I sort of started talking around it in a different way, but when I was risking the most was when I had the least money. So when I was poorly paid, when I was working in the mental hospital, when I was doing that, the money I was risking was … it was a big chunk of what I was earning, but then I didn't have any responsibilities so it just... it was just me

involved….And if I had to sort of walk and take a bus because I didn't have any…
because I'd spent the money, that was different. But as soon as I started earning
money my gambling sort of… the amount of risk I would take dropped, and as
soon as I got married, then the level of risk I'd take went really down.

NPG Stephen Poker

Life events, along with general circumstances and lifestyle, influenced participants' moods. They talked about how their mood influenced their play. The main moods they spoke about were stress and depression. Some found that a negative mood could be relieved by undertaking Internet gambling as it could block out negative feelings. Some were very aware of their mood and would not gamble on the Internet if they were in a negative mood. For some, this was because they were aware of a 'mood-emotional relief' spiral of escalation, and would not risk play as they had experience of the effect of this cycle. For others, particularly poker players, they would avoid Internet gambling because their mood affected the way they played and they found a negative mood meant they were more likely to lose control, either by not being fully focussed on their play, or because they reacted emotionally to other players poker play. Gambling when in a bad mood could influence escalation, however, conscious awareness of being in a bad mood, could provide some protection against escalation.

It was more wanting an escape I guess from the sort of domestic situation of the
stress of that, and rather than, I don't know, turning to the bottle or something
else, without consciously making the decision I played more, and also at a bigger
stake.
…to get involved in something financially risky like that, when you're in emotional
turmoil, it's not a good idea. In fact, you know, one of the … one of the things I
learnt as I got more experienced in poker is you must … you have got to sit down
in a happy frame of mind expecting to win, you know, if you sit down and you're
tired or angry or depressed or tipsy or exhilarated, you're massively more likely to
lose and yeah, I try to bear that in mind and always follow it, but I completely
believe that too, you know, the times I've won I've always felt I was going to win,
and the times I've lost, I would say are 98% my fault, you know, from sitting
down without the right frame of mind

NPG Sam Betting exchange (talking about Poker)

I think that mood is crucial and what I find as well - you should never play poker when you have got stuff on your mind. You know, when I am stressed when I play, I know I shouldn't, but then you want to take your mind off your stress, you know, so when you do that, your mind is detached… you know, your mind is elsewhere. You do silly moves because you might be pissed off, so you just carry on whatever, all in, and you shouldn't have done that and you know it's your mood which is making you play like that, so it's… I don't always stop myself playing, but I try now, if I am not in the right frame of mind, you know, not to play; or if I do play, play really low, so that I only lose a few bucks if I lose, you know? Because being in a mood, playing for high stakes and losing, it just… it spirals, yeah.

NPG Rebecca Poker

Escape and relief from everyday problems were mentioned by a number of participants, both NPGs and PGs. They found that engagement in Internet gambling gave them respite from the hassles and problems in their lives. NPGs tended to talk more in terms of Internet gambling providing a pleasant distraction and mild relief from daily hassles. PGs talked more about escape from bigger problems which they could not cope with, but this was also evident in some current NPGs who had also experienced relatively short term escalation for escape.

Well I think it's that distraction to think when you're stuck and you're writing a report and you're just like 'Oh my God, I'm going to go nuts, but I can't leave my computer because it has to be finished, you know, by tomorrow's meeting deadline' and it's very much like 'Oh, I know what I'll do, I'll take my mind off it for five minutes' but I'm not really going away, I'm not doing something different, no one is going to judge me for disappearing for a run when I should be writing this report kind of thing – it's just spending five minutes just trying to forget about it and get your head in shape

NPG Marie Instant win games

It just takes you to a different place, you know, it's an escape so you don't have to live with your feelings, the feelings of at that time rejection and sadness. If you fool yourself… you do escape from them feelings, but you fool yourself it's going

to make everything seem better, and of course it never does but that's how you think, you know, you have to.

<div align="right">

PG Richard Poker

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Some PGs felt mesmerised and numbed whilst gambling on the Internet and they found they could completely forget about problems, which would be blocked out whilst they gambled. When PGs stopped, their problems would return and may have increased, as money spent or debt had increased while they gambled. Some PGs appeared to be trapped in a cycle of increasing problems and an increasing need for escape from problems, followed by escalating Internet gambling, and escalating debt, which in turn increased problems. Internet gambling was used more frequently and for longer periods of time, as a coping mechanism to provide relief from and avoid problems, rather than taking action to deal with problems. The majority of participants talking about a problem and escape cycle undertook Internet gambling in luck based games in the Casino games mode.

Yeah, but your problems go away; when you are on there, you don't have no problems; as long as you have got a couple of hundred quid there which you have got to play with, you don't have no problem. It's when you get down to only having £10 left and you don't know where you are going to get the rest of your money from.

<div align="right">

PG Nicola Slots

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I suppose there's always a kind of a numbing effect that when you get involved in the roulette, nothing else kind of matters which, you know, any other problems that are going on in my life are completely swept from my thoughts and then when I've lost the money, then that problem becomes bigger than any of my other problems...

<div align="right">

PG Paul Roulette

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...about two years ago my husband passed away and um I haven't really been able to get over it. I haven't been able to get any help from my GP and things, they just put me on anti-depressants which don't really work. And I have been trying to find different obsessions, to stop me thinking about it.

…he had a heart attack and I watching the ambulance guy working on him for an hour and you know that is just something that I just cannot ever get out of mind.,

…yes, so the situation I ended up with- I done this gambling thing- I was totally conscious of what I was doing, um, spending the money, at the same time I didn't really care because I didn't want to be here anyway.

...but I did not actually realise the danger as to how it was going to make me just sit and forget everything and just concentrate, that was the ideal and that has been my ideal to concentrate on the casino and forget everything- it emptied my mind

<div align="right">

PG Ruth Casino games

</div>

C5 Social relationships

Participants talked about how their Internet gambling was influenced by social relations and interactions with other people as result of Internet gambling. Influence from other people could come from existing social contacts in participant's social circle or from new contacts made through Internet gambling. New contacts were generally made through online chat rooms and forums on gambling websites.

Some participants indicated that their gambling had continued as they wished to interact with existing friends who undertook Internet gambling. For NPGs in particular, the social interactions, discussing their play, near misses and successes, were an important element of the enjoyment of their gambling activity. Amongst these friendship groups, Internet gambling was seen as a socially acceptable activity and gambling behaviour appeared to be in control. These kind of groups appeared to centre around betting and poker. PGs also had social interactions involving Internet gambling, although the groups appeared less cohesive and social interaction seemed to have far less importance.

We used to meet pretty much every Saturday afternoon, me and my friends, we'd go to the pub and would have all, if you like, in some way, shape or form put bets down on the day's football for example, or some of my friends are more into horseracing, and they might gamble on the horseracing and we'd have done that on our own sort of accounts online and we'd basically just socialise in the pub that afternoon watching the results come in and seeing how we did. So it was

kind of… even though the gambling was online, it was definitely part of like an activity.

<div align="right">*NPG Kevin Odds betting*</div>

I was doing a client services role and behind me there was just like a bunch of stockbrokers and that's what got me sort of like more heavily involved, because I was listening and talking to them and there was another guy on my desk that was sort of like into it, and that's what sort of like really spurred that period of spread betting on financials especially from 2000 up until the time I literally went bust.

<div align="right">*PG Stewart Financial spread betting*</div>

Those undertaking bingo talked more about chat rooms than others. For regular users, the chat rooms provided a feeling of belonging. Internet gamblers could be invited by others to participate in group games, chat about their wins and losses, and talk about everyday life and problems, whether they be gambling related or not. Some indicated they continued gambling to maintain relations with their online social contacts, some also indicated that acquaintances started in chat rooms could develop into friendships away from Internet gambling.

And it's the fact that - all right, other people are playing - and you do feel part of something; you do feel part of something and I think it's easy to… I don't know… you know, I think the isolation that you might feel from having kids and being on your own at home all day, it's probably similar to the PhD thing, it's nice to feel part of something I think.

<div align="right">*NPG Rebecca Poker*</div>

Probably because I chat to my friends and what have you. I have met quite a lot of them. We all went on a cruise in March and so a lot of us met up and what have you and we had a great couple of days. I even took my nan with me!

<div align="right">*NPG Hannah Bingo*</div>

Through personal email, and online chat, participants could be invited and encouraged by friends to join in and continue their gambling. This, and the feeling of friendship with others, could make it difficult to break away from gambling as friends and relationships

built over the Internet could be lost. This social pressure to continue Internet gambling appeared to be expressed more by women than by men.

I was lucky in that I got on the [gambling site] and there's some nice people there, and of course a few of them, because I was new, took me under their wing a little bit; I was really fortunate in that respect, and I managed to … one of them said 'Oh come and join our poker team online and you will learn a bit more' so I joined an online poker team.

NPG Maggie Poker

I had also got into the chat online as well, I had made lots of friends online and if I didn't play I would get emails like 'Where have you been?' so it was… it was then like an online social thing as well. 'Oh no, you have got to come and play.' So you felt like you was missing out if you didn't go on and…

PG Jackie Bingo

Social relationships could cause reduction phases, in that some participants indicated they reduced their gambling due the effects their gambling was having on family and friends. Some participants reduced gambling as the time and money spent on Internet gambling was putting a strain on or jeopardising their relationship with their partner and others considered that they needed to focus more on their responsibilities to their children. However, some social relationships that were problematic and caused negative mood, could cause escalation phases, as Internet gambling provided a means to escape (see C4 Life events, emotions and escape).

With your gambling, would you ever say your gambling has been a problem to you?
No, I wouldn't say financially a problem. As I say, time. Sometimes I have to think 'No, now you must take a break.' Like I'm conscious that I worked last weekend and I am going to be in Blackpool all this weekend so I have arranged to take my children away the weekend after. So that's the problem for me, is that it's taking up a lot of my time so I have to make a conscious effort to put days aside to spend with family.

NPG Olivia Poker

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[My husband] never gave me an ultimatum, you know. We were, we went through a tremendously bad patch where we did discuss… this must have been two Christmases ago, two or three Christmases… no, it was two Christmases ago, when we said 'Well that's it, you know, we have had enough, we'll…' And he said 'No.' He said 'I am not going to give up on it.' He said 'The only thing we are arguing about is financial' and we did sit down and we had a couple of months and that, so I think just after Christmas I thought to myself 'Well I am going to go to Gamblers Anonymous.' It took sort of like two months to pluck up the courage to do it.

PG Lucy Slots

C6 Utility of Internet gambling features

Participants explained that they had found there were a number of features of the Internet, of Internet gambling sites and within Internet gambling modes that could influence continuation, escalation and reduction of their Internet gambling. Accessibility, new opportunities and personal accounts were the features that were talked about the most frequently. Features that are within a particular mode or a particular game (e.g. event frequency, win probabilities, win size) are often referred to in research as 'structural characteristics', whereas features external to a particular mode or game, but particular to the gambling environment (e.g. accessibility, availability, venue features) are often referred to as 'situational characteristics' (McCormack & Griffiths, 2013; Park & Griffiths, 2007).

C6.1 Accessibility

The Internet in general enables participants to access Internet gambling whenever they like, any time of day, 24 hours a day, from the comfort of their own home. Correspondingly, participants reflected that accessing gambling websites, setting up an account, and staking money was a very quick and easy process. Coupled with other factors, such as being alone at home all day, being bored or chasing losses, this convenience also provided a ready opportunity for Internet gambling to escalate in terms of time spent gambling and also in terms of financial losses.

The good things are that I can do it in the comfort of my own home, I can wear what I want to wear, I can play when I want to play, as far as stakes, length of tournament, people to play against, anything like that, it's just convenient. It's not restricting in any way.

NPG Olivia Poker

I mean gambling on the internet, I don't know… in comparison to being in a casino or even in a bookmaker's it doesn't come close, there is no thrill, there is never the adrenaline for me gambling on the internet, it was the least exciting way for me to gamble without a shadow of a doubt, but it also without a doubt the easiest and quickest.

PG Luke Blackjack

… the bulk of my poker playing was on the internet. I think it was maybe just about access. You know, I could play for 24 hours at a time without even having to get dressed, without even having to go out, it was brilliant it was.

PG Stephanie Poker

C6.2 New opportunities

Participants liked the novelty and variety of Internet gambling. They could play different gambling modes, and there were many different and new ways to gamble in each mode that were not available in land-based gambling. New opportunities were available that some individuals had not thought of before they came across them on the Internet. Some indicated that novelty and variety was part of the reason they continued gambling. This was particularly the case for bettors who had new betting opportunities in sports from all over the world, they could undertake "in play" betting and had access to novelty non-sports bets.

…one of the hooks for me was the whole novelty value, you know, I could sit down at a virtual table and see where people said they were from, you know, somebody might be from New York, or somebody from Australia, you know, like sending your first email to somebody in Australia was pretty exciting, or the fact that I can sit down at a virtual table and play with a friend in France was

enormously exciting, but that didn't really influence the amount of poker I played I don't think, that initial novelty wore off. It did become a regular hobby...

<div align="right">*NPG Sam Poker*</div>

I remember there was some daft programme on the telly where they were impersonating people and the actual internet said 'We've giving odds on which person would win' and I remember having a silly bet on that, sticking a £50 on a certain person that I thought would win this talent show – I remember that, which sticks in my mind because it's a bit odd to do. If I didn't have the internet, I would never dream of going to a bookmakers and doing that, so that sticks in my mind.

<div align="right">*PG Barry Poker (PG mode Roulette)*</div>

For some, these new opportunities led to phases of escalation where new forms of gambling were added to the original form of gambling they started with. For PGs, adding modes provided an immediate opportunity to chase losses from one mode in a different mode, where there was a potential for a bigger win.

I think it would have probably escalated, you know, I was just starting the sports and doing a bit of poker, and then as the years go on, then I got into the black jack and now I bet on absolutely everything now, any sport that's coming up, especially if I watch it, I've got to put a bet on, no matter if it's basketball or hockey or X Factor, anything!

<div align="right">*NPG Martin Betting exchange*</div>

I mean you could be hundreds and hundreds of pounds down and then that most… the biggest pile you can potentially win might be £100, and the chance of you winning four or five times is not going to happen. I mean I end up turning to the alternatives - you will use the fruit machines or you will use the scratch cards on there because there's a chance… the potential of winning a greater amount of money.

<div align="right">*PG Jenny Bingo*</div>

There are various different combinations that you can do. I mean I don't personally, I just purely bet kind of I suppose we'd call it 'real time' but you can

bet obviously more than one market, so you can bet the English market, you can bet the American market, you can then bet through the night on the Japanese market and the Australian market and then that leads back into the English market again in the morning.

When I'm kind of controlled and playing sensible, I'll do the UK market, and then I'll probably do… I might do the US market in the evening. When I completely lose it, I'll do the whole lot, round and round the clock.

PG Harry Financial spread betting

C6.3 Internet gambling accounts

Internet gambling involves setting up an online account via a gambling website. Participants found that their accounts had various features which could affect continuing, increasing and decreasing Internet gambling activity. Initially, just the fact that participants had registered with a gambling website meant that they were sent Internet gambling information. Participants received information about bets, games, tournaments, promotions, etc., tailored to reflect their interests. This type of information encouraged participants to continue Internet gambling. For some participants, this led to an increase in the time spent on Internet gambling, particularly when responding to promotions offering free stake money (see Ch 6, C6.4 Promotions and incentives).

…a spread-betting company wrote to me and I can now get information on my phone. I've got a Blackberry yeah? I can get all the bets and the trading prices on my phone – I've cancelled that, because I found it was an obsession…if it's on there I'm going to check it aren't I? Yeah, and I don't need to, that will encourage me to do more bets

NPG Grant Financial spread betting

I will probably just think 'Oh I will just sit on the computer and … I convince myself I am not going to gamble, I am just going to go on there and just read my emails you know, before I go to bed, and then I never end up doing that. I probably read my emails and then I probably… in that email is probably one of these sites that I go to that says, 'Oh remember you have got £10.'…Yeah, and

you end up going back to that and you know, you end up.. the next thing you know, you have been on there for two hours or so.

PG Grace Bingo

As accounts continued to be used, participants found they could access information about their gambling activities, wins, losses and spends. Some participants monitored their accounts to check their spending levels and make sure they were not spending beyond their limits. They could check the accounts in great depth, including spending, wins and losses, and could analyse their stakes and wins. Where the information was available, they could also check their overall position against other players. Other participants did not regularly check their account, and for some, when they did, the shock of their spend was sufficient to reduce their Internet gambling activity and even stop gambling completely.

...there's a website which kind of collates and tracks all the hands from all the big sites and if you log onto that website it is possible to look up your user name and see how much you've won and lost and there's like… I've seen people saying 'For God's sake don't mention this in the poker room, don't tell people' because most people, if they go and look, they'll realise they're big losers and they'll stop playing, which I thought was a pretty unkind attitude to take really but yeah, it's… I think most people don't actually realise, most people play recreationally I guess, they just… they spend a certain amount of money but they don't tot it up. It's like, you know, people who smoke, if they tot up how much they spend on cigarettes over a year, they're shocked, it's the same kind of thing.

NPG Will Poker

I did for a long time, I did for a hell of a long time start backing online, and backing via an account with an online… with one of the big companies through the banks, and the one thing they do do is give you like a betting history slip so you can have a look back over your account, so you can have a look at all your funerals sort of thing and this one particular time I was just absolutely devastated by what I'd seen and how much I'd lost over… well, you could go back as far as you started your account with these companies, you know, and it was unbelievable. So I just cut up my card there and then… There was more proof to

be able to say to myself 'Listen, you've got to stop because of…' you know, the technology, there's a printout and I could get a printout of how much I'd lost, where you're standing in the bookies, you're just doing scores, £30s, £50s here, £100 there.

<div align="right">

PG Stewart Financial spread betting

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Examining account statistics and evaluating play was used by some participants as a method to control their Internet gambling. However other participants seemed to become somewhat obsessive about analysing their data. In addition to account data they used software that could track every bet or every hand played in poker and analyse data in depth. For these participants, all male, and mainly bettors and poker players, their gambling escalated in terms of the amount to time they spent on their chosen activity.

I'll find the statistics, then match up the data and so on and so forth and it's… that's what I really, really enjoy doing, is just being there analysing it, analysing all the data, analysing the statistics, the form and so and so forth, you know, which jockeys are doing well, which trainers are doing well and which courses and you know, so on and so forth. You know, these horses have gone up in weight, you know what I mean? There's a statistical chance that it's not going to win, or it's going to win or so on and so forth, you know, and then trying to compile my own odds and then really compare my odds with the odds on offer and da-da-da and so on and so forth. It got quite involved at one point, when I had the business it was getting very involved, but that's the side of it that I actually love, like I say it's not… Although the gambling is an integral part of it, it's the not the part, the important part.

<div align="right">

NPG Ian Odds betting

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I keep a fairly detailed spreadsheet so I have my win percentages and how well I'm doing in cash games, how well I'm doing in sit and go's, how well I'm doing in tournaments; on each site my return on investment if you will and so on and so forth and so the amount that I will bet on games, it varies across them depending upon how well I'm doing. If I'm doing well in one particular type of game, I will devote more of my finances to that, and if I'm not doing so well in this other

game, my bet size will go down. In fact the interesting thing is I probably spend more time playing with the spreadsheets about how I'm going to manage my money and how I'm going to play the games, than I actually do playing the games.

<div align="right">*NPG Brian Poker*</div>

As well as keeping and providing information about gambling activities, participants mentioned a number of other features about accounts. Participants talked about how accounts could be used to set limits (see Ch. 6, C1.1 Setting monetary limits and C3.2 Control strategies), how withdrawal of winnings may be slow meaning it could be easily re-staked, how the use of credit and debit cards made it easy to put money into an account, and how the money placed in account to use on Internet gambling did not seem real. Some participants felt the lack of reality of money online made it easier to spend more than they planned, and this contributed to escalation.

I think with land gambling there is perhaps less chance of getting so kind of involved in it because you know, it's a much more physical thing if you're walking into somewhere with a pocket full of notes and then you suddenly don't have a pocket full of notes; it's a bit more sobering than if you're just entering numbers onto a screen and watching, you know, seeing that rise or fall as…

<div align="right">*NPG Charles Poker*</div>

Yeah, it's so easy and because I had the money there as well; when you put the money in your account, it's just numbers on the screen. It isn't like you are handing money… I couldn't imagine giving somebody £1,000 in cash for an hour's entertainment. It would be ludicrous, but I thought nothing of spending a whole month's salary in two hours.

<div align="right">*PG Jackie Bingo*</div>

C6.4 Promotions and incentives

Promotions and incentives not only influenced initiating Internet gambling (section Ch.5, B1), but also had role in continuing and escalation gambling. Participants may open up new Internet gambling accounts when Internet gambling sites were offering promotions and incentives. Some participants felt that they were taking advantage of the

opportunities available, and switched between accounts to follow the offers. To them, following promotions and incentives seemed like a logical and potentially cheaper way of continuing play. Offers of free money, may involve participants placing their own money onto the account to be given the additional free money. Some participants found that there were restrictions in withdrawing the money, which meant some participants continued gambling to unlock their winnings. Offers where participants' stake influenced how much free money they would be offered, encouraged some participants to increase the size of their stake, and some participants following these types of incentives, would experience an escalation phase. Escalation could also occur as participants engaged in additional Internet gambling activities. Promotion and incentive offers would continue being sent to participants even if they were no longer using the site, to encourage them to return to their site to gamble. More PGs appeared to escalate their stakes as a result of incentives than NPGs.

... they'd normally give you £5, dollars or $10 or whatever to go and spend, so if I had that…The offers they give you; I still get... because I've got a lot of poker and betting accounts, and if I haven't used my account for a while, they normally give you money to try and get you back into their site.

NPG Martin Betting exchange

The reason I got into slots was they would offer you money to play on the slots. I'm sure you're aware of all this with the people doing this survey, you know, you put in £100 and we'll give you £100, play until it's 30 times, 40 times or whatever it is, and I got quite good at that. But then you lose control a bit and you start putting more money in, so you end up putting £400 to get £100.

PG Sheila Financial spread betting

I have used bonuses, but for me they were just um… they really are very misleading, they encourage you to gamble more, because a lot of them you can't actually just have your bet, win your money and take it out, they say well you can only have it once you've weighed it seven times or whatever, and so they are very very misleading and they do encourage people to gamble a lot more than they ever envisaged. In the first place they thought they would go on and have

one bet on a big race, and then they find that they can't get their bonus money and so they have to bet on other things and maybe that hooks them.

<div align="right">

PG Paul Roulette

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C7 Time

Many individuals talked about the time they spent on Internet gambling. With the accessibility of the Internet, participants could play for as long as they wanted to, until the money ran out or until something else came along which took priority. Some NPGs played for short amounts of time, maybe placing a few bets and then checking results after the event, and others spent a small amount of money, and played until this had run out. These NPGs felt they had no ill effects from the time they spent internet gambling.

I might play sort of for an hour that day and then maybe a week later if I've still got funds there, then I'll play again. I sort of kind of spread it out over… make that sort of last over a week or two…One night a week, yeah, I'd say roughly, yeah.

If I wasn't doing that, I'd probably spend that hour on maybe Facebook or another sort of website on YouTube, having a look at videos or something like that, so I don't really... all it's done is probably detracted from that little time that I could have spent studying, but I do like to have that little bit of time out, so I'm sure I would have found something to fill that time anyway, so I don't really feel it's had any major impact…

<div align="right">

NPG Isobel Bingo

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Other participants gambled for many hours a week, some played through the night or played all day, when their partners and children were out of the house.

…if I got home about half ten, if I was on a two-ten shift, it used to be… probably from about half ten until about four am some nights, and then like if I was on an early shift at work, I could be playing from three o'clock in the afternoon until about 1 am in the morning.

<div align="right">

PG Callum Poker

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Some participants spent more time planning their game, day dreaming about winning and analysing their results than they spent actually gambling on the Internet. No participants indicated that they set limits on the time they spent on Internet gambling; time limits were more likely to be due to external causes, for example, needing to pick up children from school, demands from partners, the end of a tournament, reaching a financial limit. Some others found as they were so involved in what they were doing, they lost track of time whilst they undertook their gambling activities and whilst they experienced this disassociation, the time and money they spent on Internet gambling would escalate

I would guess I would probably spend two or three hours a day every day going through the statistics looking for the… you know, going through the selection processes and so on and so forth…

…and you don't realise what time it is, you know, because I was working from home and all of a sudden they came in from school and work and I've not even started thinking about dinner …I've been there for the last 12 hours engrossed in statistics, you know, and not realising it.

NPG Ian Odds Betting

I would look up at the clock and find that I'd been sitting at the desk for four hours and it was now two in the morning. In fact it's kind of that, that kind of thing. I was kind of definitely losing track of time. I wouldn't eat, you know, that kind of thing, while I was doing it, wouldn't answer the door, wouldn't answer the phone.

PG Paul Roulette

Poker tournaments were often mentioned by participants as being particularly time consuming. Lengthy tournaments with hundreds or thousands of gamblers were not uncommon, and they were particularly attractive as large prizes could be won for low stakes. Many participants who played tournaments did not see the time they spent on Internet gambling as being problematic as their finances were not adversely affected. This was also true for gamblers who spent time learning and researching how to play certain gambling activities, mainly poker, and those who spent time checking and calculating performance statistic, mainly betting. NPGs seemed more likely to spend long periods of time playing poker tournaments. Poker tournaments appeared to have a

large role in escalation of gambling in term of the time spent on Internet gambling, but not necessarily in financial terms.

> *Well some of these tournaments jut go on and on and on, so I played for about six hours, six or seven hours I think was the longest. Because you start with, you know, sort of 10,000 people in the tournament or something stupid like that, and if you do well you're there forever getting this tournament to wind up.*
>
> *NPG Brian Poker*

> *…I'll be playing at five in the morning but I probably would have started playing at like eight that evening, so just like over nine hours, so yeah, and then if I get wrapped up in a long tournament and I'm doing very well, I could be playing on until like 11 in the morning, sleeping, obviously, waking up at six in the evening, waking up and starting playing again, and I've done it before and you get into such a horrible like way of living where like you're sort of … what is the word? Sort of very disorientated basically.*
>
> *In the holidays I'm pretty much on poker all the time basically, like stupid amounts of time. Like recently I've been playing … I haven't really slept today actually to be fair. I played yesterday from about eight o'clock to four in the morning and then I fell asleep, woke up at six in the morning and I've had like two hours sleep.*
>
> *NPG Jason Poker*

Participants who were playing for long periods of time, whether on poker tournaments or on other gambling modes, often had to fit their gambling time around work and other responsibilities. These participants were often preoccupied with gambling whilst they were not actually online. In some cases the time spent Internet gambling could conflict, disrupt and interfere with everyday life. Some participants were aware that they were spending time on Internet gambling that would be better used elsewhere.

> *It's taken up a lot of my time, a lot of my time, and as I say, things like housework and that kind of thing, that is the last thing on my list. It's just literally the time involved for me, because poker games are like tournaments and they're so longwinded you know. It's very difficult, very difficult because what I'm having to*

do is… which is something that I don't normally do, I'm having to pay my sister to do my cleaning, I'm paying somebody to do my ironing, I'm paying somebody to do my gardening, and it's … I am using the money to pay to do all the things that I should be doing…

NPG Olivia Poker

I played every single night from once I had took my children to bed, until the early hours, three or four o'clock in the morning…Literally. I had no time for my children. So any work to be done, my partner would do it, you know…I would get up in the morning at seven, half seven, and the first thing I would do is turn my computer on.

PG Nicola Slots

If more time became available, for example, by being at home ill, or losing a job, Internet gambling could escalate and equally, if less time became available, for example, by getting a job, having additional responsibilities or taking up another activity, Internet gambling could to reduce.

Like I say, when the kids are on holidays I don't play at all, so there are times when I don't have the girls, when I put in much more hours, but my biggest week, like I say, has probably been about 25 hours, I've probably hit that a few times…Partly it's just about having the time because it's just about how much I have the girls, so obviously it's a school week and perhaps my ex had them slightly longer that week. There was also a week where they went away to visit her parents in Yorkshire with her, so I played more that week as well.

NPG Will Poker

Yeah, I tend to go to the smaller games, because that's one of the big changes; I'm busier now because I'm working, I do a lot of freelance work teaching and training, so I don't want to… I don't have the spare time and I don't want to spend the time, I've got other things to do.

NPG Stephen Poker

A few participants reduced their gambling without the involvement of external factors impacting on their time; this was usually due to burn out, where participants played so much they became bored with it.

> *…it did take over and I was playing it so much that you sort of think um… And then in the end I just basically didn't want it, I just obviously got bored with it, and even now I might play a couple of times a night, but I never really get interested in it so much.*
>
> *NPG Michael Odds betting (talking about poker)*

Preliminary discussion C – Stability and Change

All participants had an interest in the financial aspects of gambling, whether it was to do with winning and losing or setting financial limits. Wins provided validation of skill, new financial opportunities, and enabled continued gambling. Escalation due to wins was evident in early stages of Internet gambling, where big wins had influenced escalation as participants thought they could win more if they increased their Internet gambling activity. Escalation was also evident where winning boosted participants' confidence in their own ability and their gambling involvement escalated. An unacceptable loss, where a participants' individual loss limit, small or large, had been breached, often resulted in a reduction phase for both NPGs and PGs. However a significant loss that was not experienced as unacceptable could result in chasing losses and an escalation phase, more apparent on PGs.

NPGs appeared more likely to withdraw wins, leaving a stake remaining to continue play, or maintain wins in their account to see winnings accumulate, whereas PGs appeared more likely to gamble winnings, plus the original stake, before the account payout interval was reached. Research from the Gambling Commission (2009a) suggests that PGs gambling on gambling machines play to win and chase their losses, which explains why PG Internet gamblers gamble winnings and stake money before payout, whereas NPGs see money as a way to facilitate longer play time, explaining why NPG Internet gamblers leave wins on account or removing winnings, leaving the original stake on the account. McCormack and Griffiths (2013) propose that 'payout intervals', the time delay between winning and the winnings being available to withdraw,

may differentially impact on PGs and NPGs. Participants in this research provide some evidence that this is the case. The research therefore consolidates the finding of previous research on the different roles that wins and losses can play for NPGs and PGs, and confirms that they apply to Internet gambling.

Some participants in stable phases of gambling involvement were making small losses over time and were content to play at this level. Other NPGs established in a stable phase of gambling involvement found they were winning more that they were losing, and were content with a steady profit over time rather than big wins. These tended to be skilled NPG poker players who were playing at the right skill and stake level for their ability, had good bankroll management and were consistently disciplined in their play. These findings about NPG IG poker players confirm findings in other research focussed on Internet poker players (Bouju et al., 2013; McCormack & Griffiths, 2012b; Wood & Griffiths, 2008). A stable phase, with stable wins and losses over time, appeared to be associated with stable money management by NPGs who set financial limits and only gamble what they could afford to lose. However, financial limits did vary for many gamblers as increases and decreases in available funds would often be reflected in escalation and reduction phases for both NPGs and PGs. For PGs, escalation and reduction phases were also influenced by breaching limits, having a bottom line approach (i.e. a maximum financial limit based on what they were not prepared to lose) and limits only influenced by external financial restrictions. PGs talked about financial limits being variable and flexible whereas NPGs limits were more consistent and adhered to. Thus, just by having variable financial limits and a variable approach to adhering to them, PGs appeared to experience more frequent and/or more significant phases of escalation and reduction than NPGs. This confirms that the first point of maintaining stable gambling involves setting and adhering to reasonable financial limits.

Gambling Commission (2009a) research found that financial characteristics had a role in motivating gambling machine play. All gamblers wanted to win money, but it was not necessarily seen as the most important motivator and its role was different for different gamblers. The Financial Interest core category supports these findings for Internet gambling. It confirms that financial interests and motivations are variable both between and within each gambler, facilitating both motivators for and against gambling

involvement, depending on its salience at the time, and the processes and consequences of setting and breaching of internal and external financial limits.

Most participants indicated they experienced enjoyment during the initial phases of Internet gambling. For NPGs this enjoyment generally persevered through continuing, reducing and escalating phases. If NPGs became bored or frustrated with the Internet gambling activity, some experienced a loss of enjoyment, and gambling activity reduced. For PGs, as their Internet gambling escalated over time, enjoyment was more likely to be replaced by feelings of relief or escape from problems when playing, and worry and anxiety about the money they had lost or spentEnjoyment was experienced as a positive experience from the outset of gambling by NPGs and PGs, whereas escape was mixed somewhat negative experience, found in later stages of gambling primarily by PGs. Research by the Gambling Commission (2009a) also found enjoyment was a key motivator for gambling machine gamblers, largely defining the construct of enjoyment as bi-dimensional, consisting of excitement and escape, however, this description of escape does not sit with this research, as relief from a negative mood state was not described as enjoyment. They considered enjoyment had transformed to escape, and escape was a temporary experience, associated with worry and the negative consequences of their gambling. The Gambling Commission research also reported that PG's were more likely to talk about excitement as a motivator, whereas NPG regular gamblers were more likely to talk about escape. This appeared to be a novel finding, perhaps just relevant for machine gamblers, as other research, supported by the findings of this research, that gambling for escape or mood regulation, in terms of modifying a negative mood, is more apparent in PGs than NPGs (e.g. Lloyd et al, 2010b; Wardle et al., 2010; Stewart & Zack, 2008). As enjoyment declined, NPGs appeared more likely than PGs to initiate a reduction phase or stop Internet gambling completely. Research by Wood and Griffiths (2014) on gamblers recruited via Lottery websites, and other research (e.g. Wardle et al., 2010; Canale et al., 2015) also found this distinction between NPGs experiencing enjoyment and PGs experiencing altered mood states. However, this reduction of enjoyment experienced over time, and reported by both PGs and NPGs, results in a reduction in NPG gambling involvement, whilst PG gambling involvement continues and increases, despite enjoyment declining. This enjoyment transition for PGs may be an early marker for the pathway into problem gambling.

Skill development was an important feature of Internet gambling for many participants, particularly so for men. It provided interest in the game, and some participants, mostly poker players, regularly won, usually steadily at a low level. For participants playing for skill reasons, particularly those winning regularly, stable play over time was a key for their success. Winning providing validation that a player had a good skill level, using their knowledge effectively, and this in turn provided confidence. These findings support research on gaming machine gamblers where wins provided skill validation in a personal characteristic categorised as 'mastery', with the research reporting no apparent difference between PGs and NPGs (Gambling Commission, 2009a). Looking further into skill development, the risks with skill development seemed to lie with becoming over-confident about skill levels and losing control of play, which resulted in play beyond a participant's ability and an associated loss that may be chased. This seemed to be equally true for both NPGs and PGs, and both reported incidences when this happened. However NPGs reported being more self-aware and reflective about their play and performance, which they believed helped them stay in control or regain control quickly, and this prevented them from increasing their gambling involvement and sliding into problem gambling behaviour. This self-awareness and reflection appears to act as a protective factor (see sub-category D5). This has been reported in other research, particularly in relation to poker, where poker forums allow gamblers to dissect and understand skill based play, as opposed to luck, and the and learn from feedback provided from forum members (Parke & Griffiths, 2011; IGRU, 2007). This dissection of play can enable poor players to identify where their lack of skill lies, and vent their emotional frustrations, potentially enabling calmer play in the future, the skills as described by NPGs as self-aware gambling.

Both PGs and NPGs experienced life events that had an impact on their Internet gambling. These could include for example illness, losing or gaining employment, bereavement, moving away from home, losing or gaining a significant relationship, changes in financial circumstances. These could impact on individual experiences and result in increases and decreases in a variety of areas, for example, stress, anxiety, depression, boredom, contentment, happiness and social contact. Internet gambling provided low-level relief from day to day problems for both NPGs and PGs. However, when it came to significant life events, and the significant problems that they caused, NPGs reports appeared to include fewer or less traumatic difficult life events than PGs.

Thus, the impact of life events on gambling appeared to be more significant for PGs. Life events invoked an emotional response from participants. Should this emotional mood be positive, where participants valued the changes from an event, participants appeared to prioritise this over Internet gambling and therefore Internet gambling could reduce. Alternatively, if life events provoked a negative mood, this could be relieved by Internet gambling as feelings were blocked out whilst gambling and the gambler could escape from negative mood states and problems. This could result in loss of control and an associated escalation, apparent in both NPGs and PGs. As a gambling session stopped, negative feelings returned, increasing the need and desire for relief and escape, and influencing a spiralling escalation of Internet gambling, debt and problems, more apparent in PGs.

Gambling for escape is well-documented in gambling research literature, and it clearly pervades to Internet gambling (Canale et al., 2015; Wood & Griffiths, 2014, 2009; Llyod et al., 2010b; Wardle et al., 2010: Stewart & Zack; 2008). Research on gambling machine gamblers noted that gambling for escape was linked to life events, whether they were significant and painful events, or more to do with distractions from daily hassles and stressors (Gambling Commission, 2009a). Matthews et al. (2009) suggests that general negative mood states, and particularly a negative mood state after gambling, are predictors of problem gambling on the Internet. These negative feelings, including, for example, depression, disgust, anger, were interspersed with feeling in a more positive mood than normal when undertaking gambling. This finding sits well with the explanation provided by Internet gamblers in this study about life events, negative emotions and Internet gambling escalation. Evidence from Matthews could potentially be strengthened when considering the main gambling domain of the gambler, as it would be expected from the qualitative findings in this research that this effect, and therefore the predictors, would be strongest for those playing primarily in a Casino domain.

NPGs talked more than PGs about how social relationships encouraged them to continue with their Internet gambling, especially if friendships were strong and friendship groups cohesive. Female bingo players appeared to be more influenced by new social relationships on the Internet, whereas for male bettors and poker players, existing 'live' relationships and social groups seemed to have more influence. For some, feeling

involved with Internet gambling for social reasons could increase gambling involvement and make it more difficult to reduce. PGs talked more about the negative social effects their gambling had on relationships and how this influenced their reduction of play.

These findings were similar to research in gambling machine gamblers, in that if play was undertaken in a familiar gambling venue with fellow gamblers or onlookers, this could motivate going to the venue in the first place, and continuing a gambling session (Gambling Commission, 2009a). The findings also support Rockloff and Dyer (2007) and Cole, Barrett and Griffiths (2011) which suggest that the presence of others can increase gambling involvement. It seems that these social influences present in offline gambling persist into online gambling even though the social side of gambling is primarily undertaken in a virtual domain, with some social gambling relationships being formed and maintained purely in the virtual environment. However, the Gambling Commission research also noted that PGs were more likely to play in a solitary and anonymous way, which is reflected in the finding that NPGs generally talked more than PGs about the relevance of social relationships to their gambling activities. The increased involvement effect facilitated by social interaction may only therefore persevere in NPGs, with social relationships encouraging players to maintain gambling activities in order to maintain their gambling-related social relationships.

All participants indicated they found Internet gambling accessible and convenient. They found Internet gambling provided new opportunities as Internet gambling sites provided new ways to gamble. This accessibility, convenience and novelty encouraged participants to continue Internet gambling and were features that readily enabled, and sometimes encouraged, escalation. These findings support research on situational characteristics of gambling, which suggest that accessibility to and availability of gambling events are considered to be higher in IG than land-based gambling (McCormack & Griffiths, 2013). Additionally, the number of places where gambling is available, in terms of the number of sites available, is higher in IG than land-based gambling. However, whilst the role of 'familiarity' is included as a structural characteristic, thought to be similar in IG and land-based gambling, the role of novelty is not included. Participants in this research indicate that overarching IG characteristics of novelty and variety led to both maintenance and escalation of IG involvement. Some earlier gambling papers have hypothesised that a novel environment might inhibit

gambling as the stimulation of the novel environment might be sufficient to reduce the need for stimulation from gambling (Griffiths, 2009b). Whilst this may hold true for a land-based gambling environment, it does not appear to be true for Internet gambling.

Some individuals indicated they used their internet gambling accounts for control purposes as they could check their spending and assess their performance. They could also use the account to set financial limits. Some became especially interested in analysing their performance data and, due to this, the time spent on their gambling activity escalated.   Whilst 'online customer tracking' is noted as a structural characteristic specific to IG by McCormack and Griffiths (2014), its role is considered primarily as customer tracking for use by the industry, when in reality, some of this tracking data is available to and used by account holders for control purposes and to assess their performance. It is different to the structural characteristic of 'regular losses warnings' as it is not just about losses, it is also about successes, understanding the relationship between play and outcome and, for some sites, comparing performance with other players in the form of league tables.

Advertising and incentives had a role in gambling initiation (as discussed in Preliminary Discussion B), and also had an impact on escalation of gambling involvement, as participants were offered promotions and incentives to try out new gambling sites and new gambling modes.   Participants indicating an increase in gambling involvement related to promotions and incentives were mainly PGs. Hanss et al. (2015) similarly found in a Norwegian population that advertising had most influence on increasing gambling involvement in problem gamblers. They argue that there is no difference in the frequency of exposure to advertising between problem, moderate and low risk gamblers and non-problem gamblers. However, the top end of the scale used to assess exposure included exposure as being on 3 or more days per week. The scale may not be sensitive enough to pick up differences between gamblers, particularly gamblers operating online, where exposure to advertising is almost continuous, and therefore the longer a gambler is gambling online, the more exposure to advertising is experienced.   It should also be borne in mind that Hanss et al. looked at overall gambling advertising in Norway (TV, Internet, newspapers and retail outlets) where it may be regulated differently to the UK. The research did not specifically consider advertising offering financial incentives for participation.

McCormack and Griffiths (2014) acknowledge the role of advertising in gambling as a situational characteristic, but do not necessarily consider advertising has a greater role in IG than in land-based gambling. However, the ability to track interests and activities online has enabled advertising to be targeted and shaped to individual Internet users. This type of advertising has the potential to have a greater impact on increasing gambling involvement, and as yet remains under researched. Additionally, whilst participants in this research considered promotions and incentives could play an active role in escalation of IG involvement, promotions and incentives are not considered as a situational characteristic in their own right by McCormack and Griffiths.

Participants in this research talked about how the Internet and Internet gambling had a certain features, interactions and ways of gambling that were different in some aspects to the land-based gambling experience. Some of these were similar to situational and structural characteristics identified in current IG research, such as the structure of wins, and use of money online (e.g. McCormack & Griffiths, 2013; Griffiths & Parke, 2007). However, some situational and structural characteristics were not mentioned at all, and for those that were, an explanation of the characteristic and its impact on IG involvement were sometimes only considered briefly and in a limited way. This suggested that participants identified and considered only a few key situational and structural characteristics were most immediately relevant to their narrative of changing IG involvement. A more structured interview and an analysis including pre-structured categories for each characteristics may be more helpful than this research to specifically establish connections between some of these less prominent and even unconscious influences from situational and structural characteristics, and their effect on IG involvement.

Some participants spent a lot of time on Internet gambling and this could put pressure on their everyday life. If participants had more time available, their gambling could escalate, and less time available it could reduce. Poker tournaments and analysing gambling data were mentioned by a number of participants as particularly causing escalation in terms of time spent gambling. NPGs appeared to escalate time spent on poker tournaments more than PGs, but this was not always associated with an escalation in spending. Research related to time spent on Internet gambling has noted that more time for play is available, that a sense of time can be lost online and that time

reminders and limits can impact on reducing time online, and thus the amount spent, for the most intense Internet gamblers (Auer & Griffiths, 2014, 2013; McCormack & Griffiths, 2013). Time spent gambling is not a marker for problem gambling in DSM 5 (APA, 2013b), but could potentially be a useful marker for problem Internet gambling.

In summary, Core category C is concerned with factors that influence the stability and change in levels of Internet gambling involvement. It has confirmed that there are many similarities between land-based and Internet gambling. It has identified that PGs are more influenced to change their gambling involvement in response to external factors, such as life events and financial changes, whereas NPGs are more internally motivated, adhering to limits and conscious of their own abilities, limitations and preferences. These influences can be defined by 7 categories, with each of the categories appearing to have different influences on NPGs and PGs, and players of different games, but less so on men and women. The key findings on these differences are summarised below and put into hypothesis suitable for further testing using an Internet gambling survey (See Chapter 9).

Key Findings C – Stability and Change

Categories C1 to C7 indicate that

1. Internet gambling behaviours can be stable over time, but are usually interspersed with phases of escalation and reduction, and phases of continuation at different gambling levels.

2. Continuation, escalation and reduction phases of gambling are influenced by seven key factors which can operate differently for men, women, NPGs, PGs and players of different games. These factors are; financial interests and concerns, enjoyable leisure activity, skill development, life events, emotions and escape, social relationships, utility of Internet gambling features, and time.

3. Poker players and NPGs appeared to maintain stability in their Internet gambling pattern in terms of playing with and sticking to limited stakes. However, NPGs and PGs were both likely to change their spend or stake money depending on how much money they had available.

4. PGs' financial limits were frequently varied and breached, thus they appeared to experience more frequent and/or more significant phases of escalation and reduction than NPGs. Breaching limits, having a bottom line approach (i.e. a maximum limit based on what they were not prepared to lose), and limits only influenced by external financial restrictions, appeared to influence PGs escalation and reduction phases.

5. Skilled poker players could establish stable, controlled patterns of play, with a small relative level of profit over time, which validated their skill. These were NPG poker players gambling at the right skill and stake level for their ability, with good bankroll management and being consistently disciplined in their play.

6. Escalation due to wins was seen particularly in early stages of Internet gambling. Early big wins appeared to influence a probability bias where participants overestimated the probability of a win and escalated their Internet gambling activity to win more and/or win more often.

7. Escalation was also seen where winning boosted participants' confidence in their own ability, and they overestimated their win probability.

8. An 'unacceptable loss', where a participants' true limit had been breached, often resulted in a reduction phase for both NPGs and PGs. For PGs, the effects and impact of an unacceptable loss appeared more far-reaching than for NPGs.

9. A 'significant loss', one that was not described as unacceptable, but had a significant impact on participants' finances, along with potential wider repercussions. It could result in chasing losses and an escalation phase. Whilst this was apparent in NPGs and PGs, loss chasing appeared more severe in PGs than NPGs.

10. NPGs appeared more self-aware and reflective about their play and performance than PGs, which meant if they did chase losses, it was often only for a short period of time and under control again quickly.

11. Most participants enjoyed Internet gambling when they first started. For NPGs this enjoyment continued through reducing, escalating and continuing phases. However, if NPGs experienced a loss of enjoyment in any phase, gambling

activity often reduced. PGs, over time, as their Internet gambling escalated, also experienced a loss of enjoyment, but gambling activity appeared less likely to reduce than NPGs.

12. Skill development provided additional interest in a gambling activity, with winning providing validation of skill rather than, or as well as, being of monetary importance.

13. Men and poker players appeared to showed sustained interest in playing for skill and skill validation/ego-related reasons.

14. The risks with skill development were over-confidence and losing control of play, which could result in play beyond ability level or a loss that may be chased. This applied to both NPGs and PGs.

15. Internet gambling provided low level relief from day to day problems for both NPGs and PGs. However, NPGs appeared to experience fewer difficult life events than PGs. Life events could invoke a positive response where participants valued and prioritised the changes from an event, resulting in a reduction phase of Internet gambling. Alternatively, a negative response could increase the need for relief and escape and this could influence a spiraling escalation in gambling, more apparent in PGs.

16. NPGs appeared to continue Internet gambling due to social relationships involving gambling, whereas this appeared less so for PGs. Female bingo players appeared to be more influenced by new social relationships online, whereas male bettors and poker players appeared to be more influenced by existing 'live' relationships and social groups.

17. Social relationships did not appear to have a particularly strong influence on escalation on play, although it did encourage continuation of Internet gambling when otherwise, a participant may have decreased their gambling activity. Both PGs and NPGs talked about the negative effects their gambling had on social relationships and how this influenced their reduction of play

18. All participants indicated they found that Internet gambling was accessible, convenient and provided new opportunities to gamble. This encouraged participants to continue or escalate their IG involvement.

19. Some participants used their internet gambling accounts for control purposes as they could check their spending and assess their performance. Participants could also use their account to set financial limits.

20. Some participants became especially interested in analysing data about their bets, and the outcome, along with variables that might affect the outcome (e.g. success of jockey, how poker hands may be played differently). Due to this, the time spent on their gambling activity escalated.

21. Participants were offered promotions and incentives to try out new Internet gambling sites and modes, and this seemed more likely to result in escalation for PGs.

22. Some participants spent a lot of time on Internet gambling and this could put pressure on their everyday life. If participants had more time available, their gambling could escalate, and less time available, it could reduce.

23. Poker tournaments and analysing gambling data caused escalation in terms of time spent on Internet gambling. NPGs appeared to escalate time spent on poker tournaments more than PGs, but their spend did not usually escalate.

24. Escalation in terms of time was not necessarily viewed by participants as problematic and time alone would not necessarily directly cause a reduction in Internet gambling activities. It was more that other activities became a higher priority than Internet gambling or, in the case of poker tournaments, participants became bored with lengthy play.

Hypotheses for quantitative research were designed based on key findings above. Hypotheses number C2 below relates to key finding 2, C6 to finding 6, etc. These hypothesis were taken forward into the Internet gambling survey (See Chapter 8)

C3   PGs and NPGs will both reduce their IG when they have less money available, and escalate their IG when they have more money available, with PGs escalation stronger then NPGs.

C5   NPG Poker players will have more regular wins than PGs and players in other gambling modes

C6   PGs will be more likely than NPGs to escalate their gambling due to a big win and wanting to win again

C8   PGs and NPGs will be equally likely to reduce gambling if they had lost money and did not want to lose more

C9   PGs will be more likely than NPGs to escalate their gambling due to chasing losses

C13   Men and poker players will show more interest than women and players of other domains in playing for skill and skill validation reasons.

C15a PGs will be more likely to experience more difficult life events than NPGs

C15b PGs will be more likely than NPGs to escalate their Internet gambling after experiencing a difficult life event

C15c PGs will be more likely than NPGs to use Internet gambling to switch off, and forget about day to day hassles and problems

C15d PGs will be more likely than NPGs to feel detached from everyday life when Internet gambling

C15e PGs will be more likely than NPGs to experience stress and escalate their gambling due to feeling stressed

C16a Female casino games players will be more likely to experience, and be influenced to increase IG, by new social relationships made online, than men and players of other gambling activities.

C16b Male bettors and poker players will be more influenced by existing 'live' relationships and social groups than women and players of other gambling activities.

C18 More participants would indicate they had experienced the convenience of Internet gambling than any other feature of IG

C21 PGs will be more likely than NPGs to escalate their gambling due to advertising and promotions

C22 PGs and NPGs will both reduce their IG when they had less time available, and escalate their IG when they had more time available

C23 Despite the amount of time NPG poker players spend on their gambling activity, PG poker players will spend more time gambling than NPG poker players.

CHAPTER 7

QUALITATIVE FINDINGS III:

PROBLEM INTERNET GAMBLING AND

A PROVISIONAL MODEL

7.1 Core category D – Problem Internet Gambling

This section explores how problem gambling was viewed by participants. Participants talked about the risks they had considered when they had initiated Internet gambling, and what risks they thought about now. They were asked how they would identify if their Internet gambling was a problem or not. PG participants talked about how they had lost control of their gambling and how this control was regained. PGs often had repeated attempts at controlling their gambling, and they explained what strategies they had tried and how helpful the strategies had been. NPGs were also asked about what they did to control their gambling, and what ensured they did not slip into problem gambling. Note that some participants identified as current NPGs had experienced problematic gambling in the past.

Sub categories for Core Category D are;

> D1 Risk awareness
>
> D2 Problem Internet gambling criteria
>
> D3 Problem Internet gambling and suicidal ideation
>
> D4 Regaining control
>
> D5 Resilience and safe play

For the purposes of this section, gambling levels are identified as in the PGSI questionnaire (see Section 3.4) by their level of risk for problem gambling. NPGs are therefore broken down to no risk, low risk and moderate risk. PG still refers to Problem Gambling.

D1 Risk awareness

Participants talked about the risks of gambling on the Internet. They were asked how they viewed the risks when they first initiated Internet gambling and how they viewed them once they had some experience. Participants spoke about initial risks as including the technical risks of downloading software to their computer and the security of their deposits and bank accounts. These risks were often mitigated by choosing an Internet gambling provider with a recognisable brand, or by following recommendations from family or friends.

> *I mean probably the biggest risk I was thinking about was if I download this software, is it going to be full of viruses? Because it was at kind of beginning of the online poker explosion so there were a fair few companies out there trying to get your bank details and all that kind of stuff, so that was probably the biggest risk that I saw at that time.*
>
> *NPG (no risk) Max Blackjack*

Many participants already had experience of gambling prior to gambling on the Internet so were generally aware of risks of chance games and the potential of losses getting out of hand. Some talked about the risks of different types of gambling and of spending too much, and set limits from the beginning or played for points and play money before they used their own money. However, many considered Internet gambling would be the same as land-based gambling. Some considered they were not at risk as they would be successful. Others considered they were not at risk because their previous experience, self discipline and cautious personality minimised any risks, so they would not be vulnerable to potential risks of Internet gambling. NPGs appeared be more aware of risks when they initiated Internet gambling than PGs.

> *Well, I think I might have been gambling at that point already, I knew the risks, but I don't believe I thought of the risks of internet being any different to the risks of just gambling in general.*
>
> *NPG (low risk) Marie Instant Wins*

I think actually when I first started, I was a lot more naïve, so when I first started I thought I was definitely going to make lots of money and this was going to be a second income for me, and all these kind of things, so I very kind of cocky about my understanding of sport and I was going to do really well, so I guess… when I first started, I probably just had a very out-of-touch with reality view on what online gambling could offer.

I don't think I ever felt too much at risk because in the main I'm quite a cautious character if that makes sense, so I kind of… I don't have a particularly addictive personality if that makes sense. I guess when I compared myself to my friends, I was the kind of person that would quite happily say 'Right, that's enough beer for me, I'm going to go home' sort of thing, rather than the one that always leaves the pub last, so I guess I always consider myself cautious enough to not ever really be dragged into any kind of real problems with it.

NPG (moderate risk) Kevin Odds betting

I think I was aware of the risks, you know, that … with it being so easy, I was aware that you've got to limit yourself to how much you're willing to lose. But again I don't smoke and I don't drink, I've got nothing that I do other than poker, so to me if I put £20 in an account in the early days and lost it, then I'd just see that as that was my social sort of thing because I don't drink and I don't smoke. So if I was prepared to lose… I was prepared to lose that money, but I was also aware that it could get out of hand. You're always aware and you meet people that had struggled with it internet gambling, so I've never really let myself get there.

NPG (low risk) Olivia Poker

After participants had experienced Internet gambling for some time, some NPGs, mainly no and low risk gamblers, still held the same views about risk as they had at the start.

And now you've had an experience of gambling over the last few years, how do you see the risks now?

I wouldn't say there are any really. Yeah, but maybe the same kind of internet risk if I use some unscrupulous site but that's… I'm very unlikely to do that. And

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equally I'm unlikely to get caught in some sort of horrendous addiction aspect, it's just not really in my character.

<div align="right">

NPG (no risk) Max Blackjack

</div>

However, the views about risks had changed for a number of participants, especially those who had experienced some of the problematic aspects of Internet gambling. Some identified further risks including the additional accessibility Internet gambling provided, escalation of gambling, the time it could take up, the losses experienced compared to the wins initially anticipated and the use of virtual money on the Internet rather than real money used in a land-based gambling venue.

> ***OK and now you've had some experience of internet gambling, do you think the risks are different?***
>
> *Yes. I think it's much more dangerous…I think it's much easier to do it in a solitary way. I think it's very easy to spend money without realising you're spending money when it's coming straight out of your debit account and straight into your gambling account, whereas in something like a betting shop, you have to physically go in there, hand over your money and there's a transaction, and that's really lacking online.*
>
> <div align="right">*NPG (low risk) Marie Instant Wins*</div>

> ***When you first went online, did you think there might be any risk to playing poker online for you?***
>
> *Not over the $50 that I put in! I don't think I did really, I just thought it would be... I wanted to learn it and just have a go, you know, I didn't really think down the line of huge consequences and stuff.*
>
> ***And now you're a few years down the line with it, what's your perception of the risks now?***
>
> *Well I certainly wouldn't advise anyone to get into it. I think it's ... if you get into it, it can really sort of take over your life for quite a while and I mean I feel like I'm now … I feel like I can now switch on and off and just play it whenever I want and don't sort of … I won't get into that again, I don't feel like I'll ever get there again because I've been there and I've reflected on it in great detail, but I do think if someone gets into it, then it's certainly not a good idea, I wouldn't advise anyone*

to do it especially not around the 18 age when you should be thinking about your future and stuff.

<div align="right">*NPG (moderate risk) Billy Poker*</div>

When you first started, when you very first opened that betting account, when you very first opened your poker account, did you think at all about the risks that you might be putting yourself at?

Not really no. I would say I was very short-sighted in that I only really considered the immediate bets and didn't contemplate the fact that I might get escalated into that, no, I didn't. Whether that's, I don't know, the direction of your study, but yeah, all I saw was the short-term 'This is a profitable transaction, I'm getting a free bet for nothing here, can't lose.' No, I never envisaged it going that far.

…Well I'm aware of the risks now and yeah, I just feel like I'm a bit battle hardened, but yeah, I've learnt the hard way about things and I'm aware what everything could lead to, and I see other people doing it and I worry for them, but with myself I don't look too far ahead on that sense. I don't really have an option but to have faith that I would check myself before… if anything did start to escalate in the future. *PG Terry Poker*

D2 Problem Internet gambling criteria

During their interviews, participants talked about the signs and symptoms of problem gambling on the Internet. When they described problem gambling, it was talked about in terms of their own problematic gambling and the problems this behaviour had caused. Additionally they talked about it in terms of the problematic gambling behaviour of others. The main features of problem Internet gambling they identified were; gambling beyond means, deception, chasing losses, affecting social relationships, and the impact on time. Together these were most basically phrased by some participants as, "when it stops you functioning normally" (NPG (moderate risk), Billy, Poker). These behaviours were apparent in NPGs and PGs to different degrees.

I invest a certain amount that I am prepared to lose, and if I lose it then I don't lose more… and I don't bet more than I can afford, I stay within the strict rules I've set myself for how to play and as long as those rules are sensible and considered and allow for the maths, then I guess that's what stops it being a

problem. Although if I stuck to those rules but still invested vast amounts of hours and then started to knock everything else out of my life, then I guess that would be a problem too, so there's different ways it could be a problem but no, none of them really apply to me, although I guess I should keep my eye on it because I am very much intending to put more time into poker.

<div align="right">NPG (low risk) Will Poker</div>

In some low risk NPGs problem behaviours had appeared as temporary and transient behaviours during their own Internet gambling history. These behaviours were noticed, checked, changed and controlled.

I don't think it's been a problem. I've kind of… there may have been points where I've realised that I've been probably spending too much time or maybe too much money but then I've been able to kind of put the brakes on and stop and then, you know, I won't get involved for some time, but it's never been a problem, I've never found myself in financial difficulties because of it for example. But I mean I guess it's not just purely the financial aspect of it, but I don't think I've had any kind of social problems because of it either. I don't think, it's never seemed problematic to me

<div align="right">NPG (low risk) Charles Poker</div>

In moderate risk NPGs they were more likely to appear as one or two dominant problematic features, for example, a lack of social relations, spending too much time. Some appeared willing to tolerate these problematic features as the impact was limited to one or two areas of their life. Others took action and changed their behaviour.

I was definitely spending over my means, and as a result of that obviously, like bills weren't paid on time and that kind of stuff, which is obviously why I'd kind of stopped, because I could have quite easily carried on because it's quite easy to get the mentality of, you know, once you lose money, 'Oh I need to win that back' and you know, it changes from being a kind of enjoyable thing to a necessity and then obviously that's when people get like the addiction side of it and then they end up relying on it for kind of income.

<div align="right">NPG (moderate risk) Reece Poker</div>

That to me is a gambling problem. Like the questionnaire, like 'Do you hide everything from family? Do you go broke? Do you take money out and just play until you lose?' Yeah, 'Do you borrow money from friends to gamble? Do you steal from your family to pay for gambling?' and all this stuff, like I've never done in my life obviously, so… and I'm probably truthful about it. However I think what does affect me in my gambling is more like a health side and a social side I think. …Basically like friends would say 'Yeah, we're going to go out here tonight' and I'm like 'Oh I've got this poker tournament I've got to play.' And then like, I don't know, some girl that I might see, she's like 'Oh, do you want to go here tonight?' and I have to admit, I literally just blow her off and say 'No, I've got to play poker tonight, I'm sorry' and then like, it never goes well. Like I don't have relationships basically like because of poker, that's truthful. Like I can't hold one because I'm playing quite a lot. And it's not purely on poker, like my time is obviously my uni work. I play a lot of football, and then my other time I'll play poker, so if I didn't have poker, I would have more of a social life

<div align="right">

NPG (moderate risk) Jason Poker

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In PGs the behaviours were generally stronger than NPGs, present more often and spread across a more areas of their life. Deception was often apparent, and was predominantly a PG feature. PGs were actually deceitful whereas NPGs considered that Internet gambling provided an opportunity for secrecy. Many areas of PGs lives were severely disrupted by their problem Internet gambling behaviour. As the extent of the disruption continued spreading, PGs became increasingly desperate and their behaviour, increasingly erratic and high risk.

…when I had really lost everything and there was no hope and by this stage I was feeling desperate and that's when I took a second mortgage on the house without my wife knowing and I fraudulently made up the witness's signatures etc, so no one had to know about it.

…It was just getting every bit of money I could from wherever to continue to gamble because I think by this stage, after two or three months I realised I'd done so much damage, there was no hope really, and I kind of… my mentality then changed and it was just a case of… I knew one day the game was going to be up, I just didn't know when, so it's all about I never wanted that day to come

because I'd done so much damage and so much mistrust that if one day all of a sudden you wake up and your husband tells you for the last three months he's just gambled absolutely everything away in your entire… you know, not your entire marriage is a sham, but all of a sudden you've lost your home, you've got no financial security, you know, there's a good chance potentially someone might run a mile and think 'What the hell has happened here?'
…So all I did was keep it secret…   *PG Luke Blackjack*

…I was just going a bit crazy really, crazy in as much as my kind of behaviour as well, you know, I would press the button to spin the wheel – when it got extreme it was like £5,000 a spin, you know, because the limits online seem to be non-existent, and I would like rush out of the room so that I didn't have to see it or hear what was going on on the screen and then I would just kind of edge my way back into the room, poke my head around the door, just to see if I could get a glimpse of the screen and see if there would be any change to the balance, and that's how I would know I'd win… I was going, I was going crazy.   I was going crazy. Very bad. Very bad time

                     PG Paul Roulette

It was actually faking my own kidnapping, and extorting £20k off my parents because of getting into debt gambling online. I didn't gamble the £20k online, I gambled it in casinos, but it was as a direct result of getting into debt with loan sharks because of my internet gambling.
… the amount of time, the amount of money, the negative effects it's had on really every avenue of my life. There's not one avenue of my life that hasn't been affected in a negative way by gambling.

                     PG Richard Poker

In terms of being a mental disorder, more participants described problem Internet gambling as being an addiction, fewer described it as an obsession or compulsion, and least of all as an impulse disorder.

…am really assessing myself, the way I play, you know, because obviously I see poker like a relationship, it's like falling in love, you know, where it's like any

addiction, you know, when you first… when I first started off playing it all the time and I loved it, I couldn't stop thinking about poker…

I look back now and I do think 'Wow, it was like an addiction', you know, and now, when I don't play for a few days it's fine, but then when I… you know, when I first started and I hadn't played, I would be feeling really like 'Oh my God, I have got to play.'

NPG (moderate risk) Rebecca Poker

D3 Problem Internet gambling and suicidal ideation

Fifteen of the sixty-two participants spoke about suicide relating to their gambling behaviour, both in terms of having suicidal thoughts and in terms of suicide attempts. These were one moderate risk NPG and 14 PGs. The number of participants who spoke on this subject, nearly half of all PGs interviewed, suggested the risk of suicide is particularly high in the PG population.   As the person's situation became more desperate, they considered suicide or attempted suicide, as, to them, there seemed to be no way out of the debt, shame and addiction. For many, at this point, disclosure or discovery seemed to be the first step to regaining control (see section D4).

And then that was it, yeah, so in poker, after making like $800, I lost about half a grand in like the space of like four hours or something like that and I felt like killing myself, obviously not literally but you feel the lowest of the low. Like I have to admit that it's true, that I felt very bad...

NPG (moderate risk) Jason Poker

… to be honest with you, if I had to say straight… I think if I was like some of those people I would have to top myself because the debt, everything, I just could not… I would have to top myself.

Have you ever thought of that?

Oh loads of times, loads of times. You say to yourself well there's got to be a way out, and the only thing that stopped me is my children. I mean I tried to take an overdose last Christmas I think it was, just before Christmas last year, you know…I just felt desperate, depressed.

PG Nicola Slots

D4 Regaining control

Participants who gambled to problem levels often wanted to change their behaviour as, whilst the desire to gamble was often overwhelming, it was having an increasingly negative impact on their life, and was threatening their bottom line limit - what they were not prepared to lose or what they were not prepared to do. To instigate change, it seemed that they initially had to want to change, or change had to be imposed upon them. Once this change was instigated, they used certain methods and strategies to help them to regain and stay in control. These could be considered as either internal strategies, i.e. within the person, such as self control, controlling thoughts, diversion strategies etc. or external strategies, i.e. strategies put in place in the external environment, such as, limiting access to funds, blocking gambling websites. In reality, most individuals used a mix of internal and external approaches, for example, sustaining their self-control not to unblock their computer. This sub-category of regaining control considers how change is initiated and how strategies are used to regain and maintain control.

D4.1 The desire for change

Some PGs had a dawning awareness that their Internet gambling was problematic. Some began to realise their Internet gambling was problematic due to comments from friends and family and their own observations that their gambling was affecting themselves and lives of the people around them. Some participants rejected other people's perceptions that their gambling was problematic, believing them to be incorrect, and justifying this by believing their knowledge of Internet gambling was limited. However, information available from bank statements and Internet accounts provided undeniable evidence that spending on Internet gambling was beyond means and out of control. Some gradually realised that their expectations of a win big enough to clear their debts was unrealistic, and even if it did happen, they would probably continue gambling anyway. These changes of perspective could encourage participants to re-assess their attitudes and beliefs, review their Internet gambling patterns and begin to make changes that would enable them to regain control.

> *It is out of control and I think that's the thing that I have realised and I think that's like the first step to me dealing with it, is realising that it's really out of control.*

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Because sometimes I will sit there and I will think 'Oh, I have been sitting there since six, I will look up and the next time I look up my kids have fallen asleep in the sofa, it's about half past eight' and I am thinking 'Oh, I have been on here for a long time.'...It's gotten to the point now where I just need to… I need to do something about it so I am doing something about it.

PG Grace Bingo

I remember telling some other friends about it when we were out for a drink and they were telling me 'be careful' and I can remember this day when OK, you know, 'watch yourself', but you know, it's amazing, you just... you don't listen, that's the thing, that's the problem, but yeah, I should have perhaps, but you don't, it's very difficult to listen to someone, you know, someone who doesn't really understand what I'm doing…I was just absolutely devastated by what I'd seen and how much I'd lost over… well, you could go back as far as you started your account with these companies, you know, and it was unbelievable. So I just cut up my card there and then… There was more proof to be able to say to myself 'Listen, you've got to stop because of…' you know, the technology, there's a printout and I could get a printout of how much I'd lost

PG Stewart Financial Spread betting

Some PGs tried to ignore the warning signs. Only when their gambling had reached a critical level they would consider trying to regain control. This critical level seemed to be linked to a point when continuing gambling to problem levels was threatening areas of their lives and would breach their 'bottom line' limit; what they were not prepared to lose; what they were not prepared to do. This limit could be, for example, a financial limit, a relationship they were not prepared to lose, a threat to their children's wellbeing, a threat to their lifestyle or a threat to their life.

…this year things were going really badly at home, I was … everything sort of like culminated and I thought 'I want to gamble, I really really want to gamble' and I did and I did £3,000 in one night…It was unbelievable. It was the week before we were going on holiday as well so it was all my holiday money but I couldn't stop it; I couldn't help myself, and the next morning I woke up and I downed a bottle of vodka and I thought 'This is it, I can't do this' and I rang up [my husband]

and I rang up [my friend] - I was probably completely incoherent and I told my husband what I had done and he went to work and he was ringing me through the day, but of course I'd passed out, about lunch time I suppose, so I had so many messages on the phone. I had [my friend] come round to the house … and that was my rock bottom, that was it. I knew then that was it, and I sort of went out for a drink with him and said 'That's it. That is it' and I put gamblock on the computer which is the best thing I have ever done because I cannot access anything at all, I can't access it.

<div align="right">*PG Lucy Slots*</div>

Regaining control in these circumstances, where a bottom line was under threat, appeared to be led by initial decisions and action taken by the participant. However, a critical point could also be reached when the extent of participant's spend or deception was finally uncovered or disclosed, and family, friends or others (the bank, official receivers, police etc.) stepped in. In some cases, events had been very dramatic and happened very quickly.

…she [my wife] put two and two together and figured it out, and she started routing through the house and found a whole stash which I'd hidden of letters and an awful lot of them unopened from bills and debt collectors etc, etc.
That day, that's when it all came out basically and there was nowhere for me to hide and I just had to come clean and tell her everything.
…there was a lot of talk between me and my wife's father was phoning and couldn't believe what had happened and very quickly was making demands for money and what the hell, you know, 'What is going to happen?' And I was on the verge of losing the house, I hadn't been able to catch up with any bills or payments, I'd had bankruptcy letters through etc., and all of this came to light and obviously he was very, very, very worried about his daughter and said 'OK, what is going on?' You know, yesterday she was married to someone who was doing well, who was taking care of the family, and all of a sudden today, none of that exists, so he was obviously very concerned for her welfare and wellbeing, making demands, financial demands off me, which clearly I didn't have. I was just still in a state of shock, I didn't know what I was going to do.

<div align="right">*PG Luke Blackjack*</div>

Regaining control after disclosure or discovery, often involved an initial intervention from other people, usually taking immediate control of the financial situation. For many it also involved contacting gambling support agencies. Most participants appeared willing to engage in any action to regain control, however it was initiated, as they were usually unhappy at this stage and knew their current position was unsustainable.

It was my last chance. So I went to see my dad and I told my dad I had a gambling problem and he put me straight onto GA. I had been to the casino the night before and lost £1,500 and I spoke to my dad the following day, told him what I had done, told him about the money which I had wasted, I literally poured my heart out to him and he gave me the telephone number of GA which he'd had the whole time, but like you said, you have got to admit to yourself; nobody can tell you... if somebody had told me a year ago I would have said 'Forget it, you're stupid, you don't know what you are talking about, I haven't got a gambling problem.' But it was from that day, I thought I am not going to waste this money, it's my last chance. I am trying to turn my life around, so all the money which I did have from my divorce settlement, I didn't even have it, I gave it straight.. my dad had it straight away.

PG Nicola Slots

…So I knew about Gordon House because I actually knew of it five years earlier when I initially had my suicide attempts but had no interest in going, I didn't think I needed it, I thought I would be fine without it. But I thought GA would do the trick and I didn't want to go off to some rehab in the middle of the country for six months. But anyway this time, I kind of went online again and I saw Gordon House and I thought I really need to check myself in here. By this stage I was 30, I couldn't keep living like the way I was, you know.

PG Luke Blackjack

D4.2 Control strategies

Participants talked about how they regained control of their situation. Initially many had help from friends and family to make decisions about what they were going to do next. Most PGs had support from friends and family at some point. Some decided they needed professional help and turned to doctors or counsellors, or problem gambling

agencies such as Gamblers Anonymous, Gamcare or Gordon House. Others, mostly those with the less severe problem gambling, decided they could make changes needed to regain control on their own. However, decisions could change if the chosen route was not having the desired effect, and in reality, most PGs used a combination of approaches.

> *…my parents obviously were very helpful and were very, very supportive, but I was living back with my parents again when I was 30 and I hadn't lived with them for over 10 years. All of a sudden here is me who has messed everything up and gambling again… you know, they're worried, they didn't know what depths I could sink to, and they didn't want to feel they couldn't trust me, you know, it was just incredibly awkward. They didn't know how to act around me and I just... it was like a pressure cooker being there, so I phoned Gordon House,*
>
> *PG Luke Blackjack*

> *Well I actually phoned him up and I said 'Dad…' and I was crying down the phone and he said 'What's the matter?' I said 'Dad, I went to the casino last night and I spent £1,500.' And he said 'Oh my God'. I said 'Dad I need help' and he said 'Here you go, here's the number, phone them.' So I phoned them and within half an hour my dad was over my house; I phoned the GA, they told me where my closest meeting was and my dad was just there to console me really, to visit me and to listen to me and my first meeting - that was on the Sunday and I went to my first meeting on the Tuesday. Dad came with me and my partner came with me as well…*
>
> *PG Nicola Slots*

There was another decision here too; whether individuals would stop gambling and try to abstain completely, or whether they would moderate their behaviour so they could still continue gambling, but at a lower, safer level. Complete abstinence seemed to be associated with PGs working with Gamblers Anonymous and Gordon House.

> *I wasn't sure… they [Gamblers Anonymous] kept telling me that I could never have a bet again on anything and I was thinking 'Oh, I like going to bingo with my*

mum, and I do the lottery' - you know £1 a week, surely that won't hurt and it took me a long time to get around the fact that no actually, I can't do that anymore.

<div align="right">*PG Jackie Bingo*</div>

Yeah, just to try to winning big, I mean it is quite addictive but like I know my limits now rather than back then when I was younger, I didn't. Well I mean I only enter these small tournaments and I mean like when I say small tournaments, I mean like $3, $4, usually $4 dollars in the biggest. I mean if I do good in that that can last like four or five hours and then that's like not playing any other games at that point, so the money like lasts longer but you know, I'm still losing I'd say probably, probably about £30 a week I'm probably losing.

<div align="right">*PG Callum Poker*</div>

Participants talked about internal and external strategies they used to help them get their gambling under control. Internal controls were those that the participants themselves used to control their own behaviour. Participants talked about using will power, self control, controlling thoughts and diversion techniques to prevent their gambling starting again or escalating. This also included making sure they kept busy to limit time available to gamble.

There are occasions where I think 'Oh, I fancy a scratch card, I feel lucky' - and at that point I just have to stop and say 'Well I don't want to go there.'
…I think one of the big motivations was to be able to use the forum and just keep my head focused on the fact that I didn't want to go back to day one.

<div align="right">*PG Stephanie Poker*</div>

I just stopped myself and said 'Look, this is getting stupid, I'm betting money I don't really have, I can't afford it.' I had a sort of heart-to-heart with myself almost that, yeah, you might be able to spot the occasional judgement but it's obviously a long-term losing trend. You're not in a position to be able to afford to do that… if you're enjoying the whole adrenaline rush as a leisure experience, it's pleasurable, you know, you don't think there's… you can see clearly that you're not good enough to produce an outcome, it's quite hard, I mean despite moments of insight that I was proud of, in the long-term I was… I potentially had a bit of a problem and I was betting too much because I enjoyed it, so at that

point I just said 'No, I'm not betting,' and I cut myself off from… and I stopped betting for probably a year, I just said 'No, I'm not betting any more' because I didn't consider my betting to be… I couldn't justify it and I wasn't… yeah, clearly I wasn't doing well and I stepped in and stopped myself doing it.

<div align="right">

PG Terry Poker

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Internal strategies all included a degree of conscious self-monitoring, where PGs noticed when they had feelings or thoughts that increased the desire to gamble. They stopped these from escalating into unwanted gambling behaviour by suppressing, diverting or altering their thoughts and replacing them with thoughts that were more helpful. This seemed to take a deal of effort and willpower, and could slip out of control, particularly if external events, such as arguments, passing gambling venues or, financial changes, added additional pressure to the situation and the desire to gamble increased.

…if I'm making a conscious effort not to gamble, then I won't gamble because I sort of fight the urge, but it's normally after like say a month to six weeks when I'm not that conscious of it anymore, so I'm not sort of fighting it, then there'll be like an opportune moment and that's when I'll do it, as opposed to just every day waking up thinking God, I need to gamble, I need to gamble, it's not really like that.

<div align="right">

PG Adam Poker (PG mode slots)

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It was just … I didn't change anything really. I just said 'No, I'm not doing it anymore,' and I didn't delete any numbers, I didn't close any accounts, I just said 'I'm not going to do this anymore' and I stuck to it. So that was really what I did. Yeah, I still find myself occasionally looking at the… flicking my eyes through the betting pages, but then I will just try and turn away as I know I'm not involved in it, I know it's a long-term losing situation, and move along. So it was really just a case of, I guess like when people stop smoking and just stop and say 'Right, I'm not smoking' and just discard it. It was quite tough for a little while but I just realised that it was unsustainable so I stopped.

<div align="right">

PG Terry Poker

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External controls were those that PGs put in place which either worked on their own, or in conjunction with internal controls, to support PGs by stopping them from gambling on the Internet, if and when the desire to gamble became overwhelming. External controls included, for example, limiting access to gambling funds, setting financial limits on Internet accounts, closing gambling accounts, using self exclusion options on sites and installing Internet gambling blockers. In their own right they could be useful in preventing and controlling gambling, however, some external controls could be overcome fairly easily and were not particularly helpful, whereas others were more robust.

> *…even this morning I was doing something on the computer and I thought oh I'll just put £50 in there and see if I can turn it into £100 and come out… and I realised I'd self-excluded myself from the site, so it meant looking for something else, and I'm thinking no, I'm not even going there because how on earth are we going to dig ourselves of this if I keep … every bit of spare money there is, I keep using it?*
>
> *PG Sheila Financial spread betting*

> *When it started to take over, I managed to just go for a couple of days or something and now it's becoming a bit too much and too consuming - that's when I closed them back down again and I can be without it for many months.*
> *…Well I would like to think it was under my control, but it obviously isn't. Because if it was really under my control, I wouldn't keep setting up another Internet account.*
>
> *PG Jenny Bingo*

Putting others in financial control seemed a fairly robust measure, whether this was a family member controlling access to funds, or limited access to bank services due to bankruptcy.

> *Yes, my brother's sort of taken the credit cards um and he has got all the money from my bank into his bank account and he just transfers enough to pay off the bills. It really is like being treated like a child (laughing) but it is my own fault really*
>
> *PG Ruth Casino games*

Basically I don't have my own name on my own bank account, and basically I just sort of take away my ability to be able to get at the money.

So does your wife manage all the accounts then and..?

Yeah. I mean everything's… she doesn't really manage it, because it's all direct debited anyway generally, but she will... my wages go in there and that's how it works and then I'll get … go down and get some money out on a Saturday to sort of see me through the week sort of thing.

PG Harry Financial spread betting

The time and determination needed to re-instate access to Internet gambling sites, could be a deterrent in itself or it could provide PGs with time to stop and re-think, change their mind and regain self control, and not reinstate access. Thus external controls could deal with loss of internal control, however, if the desire to gamble was still stronger than the desire to stay in control, and external controls could easily be removed or circumnavigated, external controls were less effective. Some participants resorted to disconnecting the Internet completely or removing computers from the house, as these needed more determination to reinstate access to gambling sites. However, this was not practical for some participants as they and others in the household were still reliant on the Internet and a computer for work, education and shopping purposes.

Well the problem is, it's a bit like I say, you self-exclude on one site and then the following week you can just open another account again.

There was one site I came across that was quite good though and they …when you opened an account, they wouldn't activate it for 24 hours, so that was quite a good idea...like I opened an account with them and it said 'You have to wait 24 hours' and then by the time it was 24 hours later, I'd sort of gone off the idea because it sort of seemed like a bad idea.

…because with the online gambling I installed something like [blocking] software on there, and that's been on there for a year, and that pretty much like knocked the online gambling, that was the end of it really, apart from like a couple of times at work I did it and then when my licence ran out, there was like a day when I didn't have a licence on that [blocking] software and then that was another day that I ended up by doing it as well… that's just been like an opportunity like if I've

been on a computer like a friend's or a family member's where they haven't got the software.

<div align="right">*PG Adam Poker (PG mode slots)*</div>

The only other willpower I have had… well I have, is to actually give away my computer. (LAUGHS). I have thought about doing that, but then again I think OK, but when I need to type my assignments, I am going to need to go to…So what I did was, I cancelled my internet service…I do miss it because I didn't have anything in my head that would have filled that gap. So I haven't found anything yet to kind of fill that gap. So yeah. I do miss it.

<div align="right">*PG Grace Bingo*</div>

…then a couple of weeks later I did and I done exactly the same thing again and lost whatever money I had in the bank and this time they wouldn't let us overdraw from my card, and I ended up selling my PC because it was just too tempting to have it in the house.

<div align="right">*PG Richard Poker*</div>

D5 Resilience and safe play

Whilst many participants talked about times when they had problems staying in control, many participants also talked about times when they successfully stayed in control. They described personality characteristics and beliefs which they believed provided them with an ongoing ability to maintain control. The characteristics and beliefs appeared to be ingrained and stable, and participants believed they provided protection from any long term loss of control and associated harm from Internet gambling. This was apparent largely in NPGs. For this research this is termed 'resilience'.

Resilient characteristics and beliefs included being disciplined, focussed and patient, having a sense of financial responsibility and responsibility to others, being risk averse or low risk, and being self-aware of own behaviour, ability and risk limits.

The real risks are in your own personality, we spoke about that. There's lots of evidence that, you know, lots of traders in the city who are very successful in

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their jobs, then try and follow like spread-betting by themselves and lose a lot of money. It's personality factors; if you're competitive, eager, macho, greedy, these count against you. I don't mean this in a sexist way but you have to be quite feminine in your approach to this, you have to be organised, you have to be patient, you have to be slow and you have to tolerate downside and a lot of people don't do that and if they find they're losing a bit of money, they double up.

NPG (low risk) Grant Financial Spread Betting

I thought (a) I saw myself as fairly self-aware, (b) I'd been playing for a long time, and (c) I could sort of see the risk, I played at the lowest stake tables, almost the lowest stake ones, and I could see the huge sums changing hands very quickly at the bigger stake tables. I mean for me they were just gob-smacking amounts of money exchanging, being exchanged per hand on these other tables. But I never felt drawn to that, as indeed when I played live poker in Las Vegas, you know, I was never tempted to sit down at the bigger stake tables there, you know, I knew what my operating pool was.

NPG (moderate risk) Sam Betting exchange

Some individuals talked about general beliefs they held, for example, towards money and responsibility. Other beliefs were more specifically related to gambling, for example, gambling only what is affordable, not playing luck based games, and these could develop as a result of participants' gambling experience. Resilient beliefs that influenced participants to keep their gambling under control and prevented them coming to harm included participants wanting to stay within comfortable limits, not wanting to be gamble more than they could afford to lose, not wanting to be in debt, and seeing gambling as a way to have fun rather than a way to make money. Having an enjoyment motivation that was stronger than a financial motivation seemed particularly central to the resilience of many NPGs.

…I'm the sort of person that, to me, like bingo and things like that, to me it's a fun thing, I don't do it to sort of win loads of money, I don't have that in my head, so I think right, well I've got this £10 to play with, so I'm happy to play that, and if I lose that, that's fine. So I've not actually ever set myself a limit on there because

I don't feel that I need to. I'll sort of only do it as and when I feel in the mood to have a go.

<div align="right">*NPG (no risk) Isobel Bingo*</div>

But I have never done that, I have never played for cash* - only the odd game and that was 2p. You know, whereas some of them, you can tell on the sites, they have got no regard for money at all. They play £10 for a hand and it's just crazy. There's no way I would even contemplate… If I lost £50 I think I'd cry, you know, I would be upset for a week I think, probably more. But maybe it's because I am on my own and that and I know the value of money.
[* meaning sit-and-go poker games that are on the Internet]

<div align="right">*NPG (moderate risk) Maggie Poker*</div>

Some participants identified resilient characteristics and beliefs as ones they already had before they initiated Internet gambling and participants often considered these had been developed in childhood. Some also indicated their resilient characteristics and beliefs were related to their maturity, life experiences, responsibilities and priorities.

Like obviously I've got three children and I wouldn't ever spend money that I didn't have, or money that was for other things, so I couldn't imagine a time where it would become sort of out of control at all.

<div align="right">*NPG (no risk) Isobel Bingo*</div>

I've sort of got experience from all angles kind of thing, you know, which is often now why I tend to steer clear of a lot of the casino games and that kind of thing because I've seen the amount that these casinos make and that the players don't make, whereas at least in poker there's a large element of skill involved, so I can see that that's the way to go, you know.

<div align="right">*NPG (low risk) Olivia Poker*</div>

…in my family, gambling is kind of viewed on as something that you do for maybe a bit of fun, do sport, that kind of thing, but at the same time it's always going to be recognised as something that you need to become responsible with if that makes sense. So I mean I do consider myself a relatively responsible

gambler, and I think that's because I kind of… because in a way I was brought up to sort of see gambling, not as a bad thing, but as something that you need to kind of do responsibly and you know, and you gamble what you can afford to lose and all those kind of things.

NPG (moderate risk) Kevin Odds betting

Others explained that they had deliberately developed these resilient characteristics and beliefs to help themselves to exercise control when gambling. This was usually because participants either had been out of control in the past and wanted to continue gambling without problems, or because they wanted to develop an approach to gambling that would help them win more, which was more evident in poker players.

But something made it just sort of real – an eye-opener, a jolt, so 'What went wrong there Ian? What on earth were you thinking? You know, all this discipline that you started out with went out the window' and it was from that point on that I was like 'Right, OK, if I'm going to do this, it's going to be professional, it's going to be disciplined, it's going to be with money that you can afford to lose and' so on and so forth, you know, I really… it really was a major, major eye-opener for me.

NPG (low risk) Ian Odds Betting

…if I'm playing poker, I'm playing poker and I'm not doing anything else. I'm not reading a book with one hand and waiting for my turn, I'm getting on with it, so that's pretty much how… it's been a change in discipline and focus more than anything else, and I'm not saying maturing because that sounds a bit strange, but I guess my game is maturing and my poker is maturing and it's just a learning curve and I feel I'm in a stronger place than I was a year or two years ago.

PG Terry Poker

From these beliefs and characteristics, and wanting to minimise risks of loss or harm, many NPGs developed a number of plans and strategies for gambling on the Internet, which they believed could keep them safe from gambling-related harm. These 'safe play' plans and strategies included setting limits, sticking to limits, keeping financial

records and accepting losses rather than chasing them. Although for some NPGs, most usually MRs, this was not always easy.

> *I don't bet anything I can't afford...I wouldn't chase a loss and that's not changed from 20 years ago...The stakes have probably gone up as my earning power has risen but it's still… I would still never go over what I could afford to write off, i.e. a fiver or a tenner.*
>
> *NPG (no risk) Jake Odds Betting*

> *I invested $50 the first time and I topped up, like after eight months or a year or something, I topped up another $50 and I never really thought much beyond that because I just didn't consider that to be too much to lose, you know, I was putting it on $50 at a time because I didn't want to be losing more than that,*
>
> *NPG (low risk) Will Poker*

> *Well I think it does help to keep records, so you can't fake it if you keep records. One of the weaknesses I've… the awareness or the looking at those records showed me was that although I would say win eight or nine sessions out of 10, the losing session, the one of those 10 I would be losing was often a big loss, so I realised that was a fault. I didn't… I wasn't able to control that. The obvious thing to do would be to say 'Right, well once I've lost a set amount, then stop playing rather than to get the money back.' I tended to not do that, so the weakness was in a losing session to chase my… to chase the losses, and sometimes that worked, probably three-quarters of the time I was able to get back to zero or something like that, but occasionally it didn't work.*
>
> *NPG (moderate risk) Tim Betting Exchange*

Some NPG participants talked about how they withdrew their winnings immediately or kept their winnings on their account but dipped into them for other things in their life when needed.

> *I have a number of different ones [accounts] and I never have any money in any of them. What I win, I take out immediately, because it's better for me to have it because you can always just put some back in, you know*
>
> *NPG (no risk) Jake Odds Betting*

Yeah I tend to sort of… say for example I won £120, I'd probably take the £100 quid out and keep £20 in, that's like… that's what I did last week, like I withdrew the money out for my daughter's school uniform and kept a bit more in, you know, it's a form of entertainment I suppose.

NPG (moderate risk) Liam Betting

PGs appeared more likely to consider winnings as free money to play with, and ended up spending all winnings. However some PGs did make withdrawals though appeared mainly to occur if withdrawing part of a large win. This could be partially due to withdrawal limits on some gambling sites (see Section C.12)

And you never think that 'OK, since I have won £20 and I have only put £10 in, let me take that money off.' You just think 'Oh, it's free money, I will just gamble with it again'. In the hope of getting more money and that doesn't happen very often. More than often I have lost everything I have put into it and I haven't won once.

PG Grace Bingo

I had an enormous win on blackjack which would have cleared about 80/90% of my losses across the whole time and I paid off two of my credit cards in full which I'd maxed out in the last… in that six weeks on [gambling site]. I put the money back in my savings account which I had completely virtually wiped out and it put me virtually back in the clear. Had I been able to say 'Right, stop being such an idiot', that could have been a lifeline to get out without too much trouble being caused and then going to my wife and family 'Look, it's not gambling, but the business is struggling; and that could have been a lifeline but I just didn't take it. I paid everything off; because I'd won such a big amount I paid everything off, I left something like £5,000 in the blackjack account or in the [internet gambling] account and went on the next day and kind of went to bed thinking I'm going to turn this into £20/£30/£40,000 and yeah, very quickly lost it and then again, I just started dipping into my credit cards and as I say, it was all the money I had.

PG Luke Blackjack

Control strategies appeared to be most important to participants who played poker. For poker players, bankroll control was additionally important. Participants talked about certain recognised ratios between the amount of money that theoretically should be staked on each hand and the amount they held in their bank roll, the total money that was available to stake.

Bank roll management to me is a big thing, and again I'm a numbers man so I sit there and worked out what games I can afford to play with the money that I have won so far and … so I have a maximum amount that I'll bet on any game because I don't want to risk any more than a certain amount of all the money I've already won because I want to carry on playing over a certain period of time. So yeah, everything... I'm very keen on controls and making sure that I can enjoy myself within a set framework and that actually is the role that I'm in at work too; I work in the product control part of the bank which is the guys that control the traders and stop them over-spending.

NPG (low risk) Brian Poker

… with poker it's all about bankroll management really which is like a really big thing, so you've got to have the money there so that you can… you are going to have bad days and it's known as variance, there's going to be days where no matter what you do it's not going to work out, but as long as you've got the money to withstand that loss, it never really affects you, because, for example I've got a poker account, and I think I put about £50 in once and I've not deposited in there again and every time I win a few hundred quid, I will draw £100 out and leave the rest in, if I have a bad day, but I won't let myself lose more than say £100, but there will be £500 or £600 still in there, so never keep playing until you've lost it all, and also be happy with small wins as well, you know. If you've come off and you've only won £20, it's still £20, you know, don't sort of go on thinking I've got to win £500 a day, but the game is not to lose any significant amount in a day.

NPG (low risk) Olivia Poker

Preliminary discussion D – Problem Internet Gambling

The main initial risks of harm from Internet gambling identified by participants were the security of their bank details, the safety of their money and potential risks to their computer. Initially, when considering safety and security of IG sites, participants across all gambling activities considered using known and trusted brands to mitigate this risk. This is similar to findings in a cohort of Swedish poker players and International research (Wood & Griffiths, 2008; IGRU, 2007). After some experience of Internet gambling, some Internet gamblers identified further risks of harm from the additional accessibility Internet gambling provided, the time that could be consumed by Internet gambling, the losses experienced compared to the wins initially anticipated, the use of virtual rather than real money, and ultimately, the escalation of gambling involvement. The risk of the increased accessibility is identified as a situational characteristic of IG that can influence increased gambling involvement (McCormack et al., 2014; McCormack & Griffiths, 2012a; Griffiths & Barnes, 2008; Walker et al, 2008; Reith, 2007; Orford et al., 2003; Room et al., 1999). The risk of using virtual money in IG gambling has been identified as a structural characteristic of IG where there is some evidence that using virtual money (e.g. on credit or debit cards) can result in higher spends than when using real cash.(McCormack & Griffiths, 2013, Griffiths, Parke, Wood & Parke,2006; Griffiths, 2003).

NPGs seemed more likely than PGs to weigh up a range of initial risks and they were also more likely to consider there was no change in risk with experience, suggesting they considered their initial risk assessment was correct. They often took their own personality and individual characteristics into consideration, in that whilst there were risks, they were applicable to other people rather than themselves, as they knew they would be able to stay in control. PGs were more likely to see additional risks after experience, suggesting a lack of foresight, self-awareness and/or knowledge was apparent from the start of their interaction with IG. There has been no specific research undertaken on the process of initiation of IG and risk assessments. As there appear to be qualitative differences between PGs and NPGs this may warrant further investigation for the potential development of a responsible gambling intervention.

The main indicators of problem Internet gambling identified by participants were; gambling beyond means, deception, chasing losses, negative impact on social relationships, and the impact on time consumption. In low risk NPGs they appeared as temporary and transient behaviours, in moderate risk NPGs they appeared as a single dominant problematic feature, and in PGs the behaviours appeared strong, present more often and spread across a more areas of their life, sometimes causing severe disruption to normal living. Deception was predominantly a PG feature. Participants described problem Internet gambling as being an addiction, rather than obsession, compulsion or impulse disorder.

This sits well with existing research on problem gambling, both in terms of problem gambling features and the measures associated with it, though potentially time may be an additional relevant diagnostic criterion for problem Internet gambling (APA, 2013, 2000, 1994; PGSI, Ferris & Wynne, 2001; Lesieur & Blume, 1987). Additionally in relation to DSM criteria, nearly half of problem Internet gamblers in this sample indicated they had experienced suicidal thoughts and suicide attempts, though this was not a question directly asked to all PGs so in reality it may have been higher. This is in line with levels of suicide ideation in gamblers in treatment reported in DSM-5, with up to half reporting suicide ideation and 17% attempting suicide (APA, 2013b).

Some PGs wanted to regain control themselves, due to the negative impact of their behaviours, supporting findings from Hodkins and El-Guebaly (2000), reporting that the majority of land-based problem gamblers had the desire to handle their problem gambling themselves. Other PGs had control imposed on them as their access to gambling funds ceased. A participant's desire for change sometimes was instigated by: self assessment of their own behaviours; other people's reactions to their behaviour; changes of attitudes and beliefs; a critical situation linked to risk or breach of a bottom line limit; or disclosure/discovery of the extent of gambling, and/or debt, through undeniable evidence. Suurvali et al. (2010) found that dealing with problem gambling was motivated by financial problems, relationships issues and negative emotions.

The rising awareness and self assessment that starts the process of identifying the impact of problematic gambling behaviours seems a significant step in the process of regaining control. A responsible gambling checklist to guide this kind of self-

assessment could be a useful tool, and these have been designed for a number of gambling and responsible gambling websites. However, with all the behavioural information available, self-assessment could be pro-actively nudged in response to behavioural patterns, rather than waiting until further down the line when an individual's rising awareness reaches a point of self-initiated action.

Control was usually regained with involvement from family and friends, and/or from gambling support agencies. Internal controls, such as will-power, self-control, controlling thoughts and diversion techniques, were used by participants to control their own behaviour. External controls, such as handing finances to a family member, restricting access to gambling funds, setting financial limits on Internet accounts, closing accounts, using self exclusion options on sites, installing Internet gambling blockers and removing computers, were those that PGs put in place which either worked on their own, or in conjunction with internal controls. Having restricted access to money and bank accounts seemed particularly successful in controlling problem gambling. External controls were helpful for dealing with loss of internal control, however, if the desire to gamble was stronger than the desire to stay in control, external controls could easily be removed or circumnavigated, and were less effective. Research from other sources has emphasised the role of informal support over formal support, where emotional support, distraction and controlling the gambler's finances were crucial in many cases to a problem gambler's recovery (Moore at al., 2012; Orford, 2003).

Participants, nearly all NPGs, identified resilient personality characteristics and beliefs which they believed protected them from slipping out of control and succumbing to the risks and harms of Internet gambling. These may have developed in childhood or as a maturing adult, or may be consciously developed to improve control, mitigate the risks of losses and improve the likelihood of wins. Resilient characteristics included being disciplined, focussed and patient, having a sense of financial responsibility and responsibility to others, being risk averse or low risk, and being self-aware. Resilient beliefs included staying within the limits of disposable income, avoiding debt, and gambling being undertaken primarily for pleasure rather than profit. Additionally NPGs developed strategies to minimise risk including staying within financial limits, keeping records and accepting losses rather than chasing them. NPGs also appeared more likely to withdraw or save their winnings, whereas PGs appeared more likely to spend

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winnings or withdraw part of a large win. Control strategies appeared to be most important to individuals who played poker, who additionally controlled their bankroll.

These findings have the potential to add to research on responsible gambling as they add a new perspective, in terms of identifying some of the attitudes and beliefs that underpin responsible choices. Responsible gambling involves interventions designed to reduce risk of harm from gambling and are presented on Internet gambling sites to help players stay in control and adopt non-problematic behaviour (Wood & Griffiths, 2014; Auer & Griffiths, 2014a; Auer & Griffiths, 2013; Wohl et al., 2013). Information provided includes, for example, gambling activities guidelines, features of problem gambling, player account information, behavioural feedback and setting monetary and time limits, and this can enable players to devise or follow gambling strategies for responsible play. Responsible play strategies were explored by Wood and Grifffiths (2014) in a sample recruited via the National Lottery self-identifying as having experienced positive play. They reported the most popular strategies were to set a spending limit, a loss limit and a time limit. However, these type of strategies selected for analysis may not be entirely relevant to a group of primarily lottery playing gamblers, and also, the strategies to set a particular limit were measured, but it is not clear if the limits were maintained or not. The concept of resilience and positive play are novel in the gambling research field. More research in the areas of positive play and resilience has the potential to provide additional guidelines to define and develop responsible and safe attitudes and beliefs, as well as responsible and safe gambling behaviour, as opposed to much of the current thinking structured around avoiding irresponsible and risky play.

In summary, Core category D is concerned with problem Internet gambling and factors relating to it. It has looked at factors such as risk awareness at the point of IG initiation and also factors that influence responsible gambling behaviour. Both areas appear to have qualitative differences between NPGs and PGs. These are relatively novel areas for research and relevant for future research relating to the development of responsible gambling. These key findings are summarised below but were *not* developed into hypotheses to be taken forward and tested in the quantitative stage of the research. The key findings did not readily lead into hypotheses that could be tested by a small number of pragmatic survey style questions, and rather than expand the survey to a

point where it risked high levels of incompletion, the decision was made to focus the survey on Core Categories B and C.

Key Findings D – Problem Internet gambling

Categories D1 to D4 indicate that

1. The main initial perceived risks of Internet gambling related to the security of the site. After Internet gambling experience additional risks of the Internet were identified such as accessibility, escalation of play, unanticipated losses and the use of money that was not real.

2. Some NPGs seemed to weigh up initial risks and see no change in this risk after Internet gambling experience. However, most NPGs and PGs were more likely to see additional risks after experience.

3. The main features of problem Internet gambling were identified: as gambling beyond means, deception, chasing losses, affecting social relationships, and the impact on time.

4. Problem behaviours were apparent in most gamblers, being temporary and transient in LRGs, one or two single dominant problematic features in MRGs and across the board in PGs, sometimes causing severe disruption to normal living.

5. Deception was predominantly a PG feature.

6. Problem Internet gambling was described as addiction, rather than obsession, compulsion or impulse disorder.

7. Nearly half of PGs talked about their suicidal thoughts and suicide attempts.

8. Problem gamblers may reduce their gambling as they assess a combination of their own behaviours, other people's reactions to their behavior, and undeniable evidence of the extent of their gambling. They may then change their attitudes and beliefs.

9. Problem gamblers may also reduce their gambling if they experience a critical situation. This may result from a risk to or breach of a bottom line limit or disclosure/discovery of the extent of their gambling.

10. Regaining control utilised support from family, friends and gambling support agencies and using a selection of internal and external control strategies.

11. Particular resilient personality characteristics and beliefs were believed, mainly by NPGs, to protect them from problem Internet gambling.

12. Resilient characteristics included self-discipline, self-awareness, a sense of responsibility and low risk tolerance. Resilient beliefs included only using disposable income, debt avoidance and prioritising an enjoyment rather than financial motivation. Strategies for safe play included staying within financial limits, keeping records and accepting losses rather than chasing them.

13. NPGs were more likely to withdraw or save their winnings, whereas PGs were more likely to spend winnings or only withdraw part of a large win.

14. Safe play strategies appeared to be most important to NPG participants, and particularly those who played poker.

7.2 **<u>Development and change of Internet gambling behaviours: A provisional</u>**
     <u>model</u>

The central category of this qualitative element of the research reflected development and change of Internet gambling behaviours, with evidence of development and change found throughout all interviews. The central category was underpinned by four core categories and their subcategories. These were arranged into a hierarchy of core categories at the start of the results section (see Section 4.2). The core categories and sub-categories have been integrated into a diagram showing relationships between them. This provides the basis for a provisional model representing the interactions between key factors that influence the development and change of Internet gambling behaviours. This is shown in Figure 7, and is followed by a description of how a case study fit with the model.

Figure 7   Development and change of Internet gambling behaviours - A provisional model

Potential relevant factors for the model not covered by this research
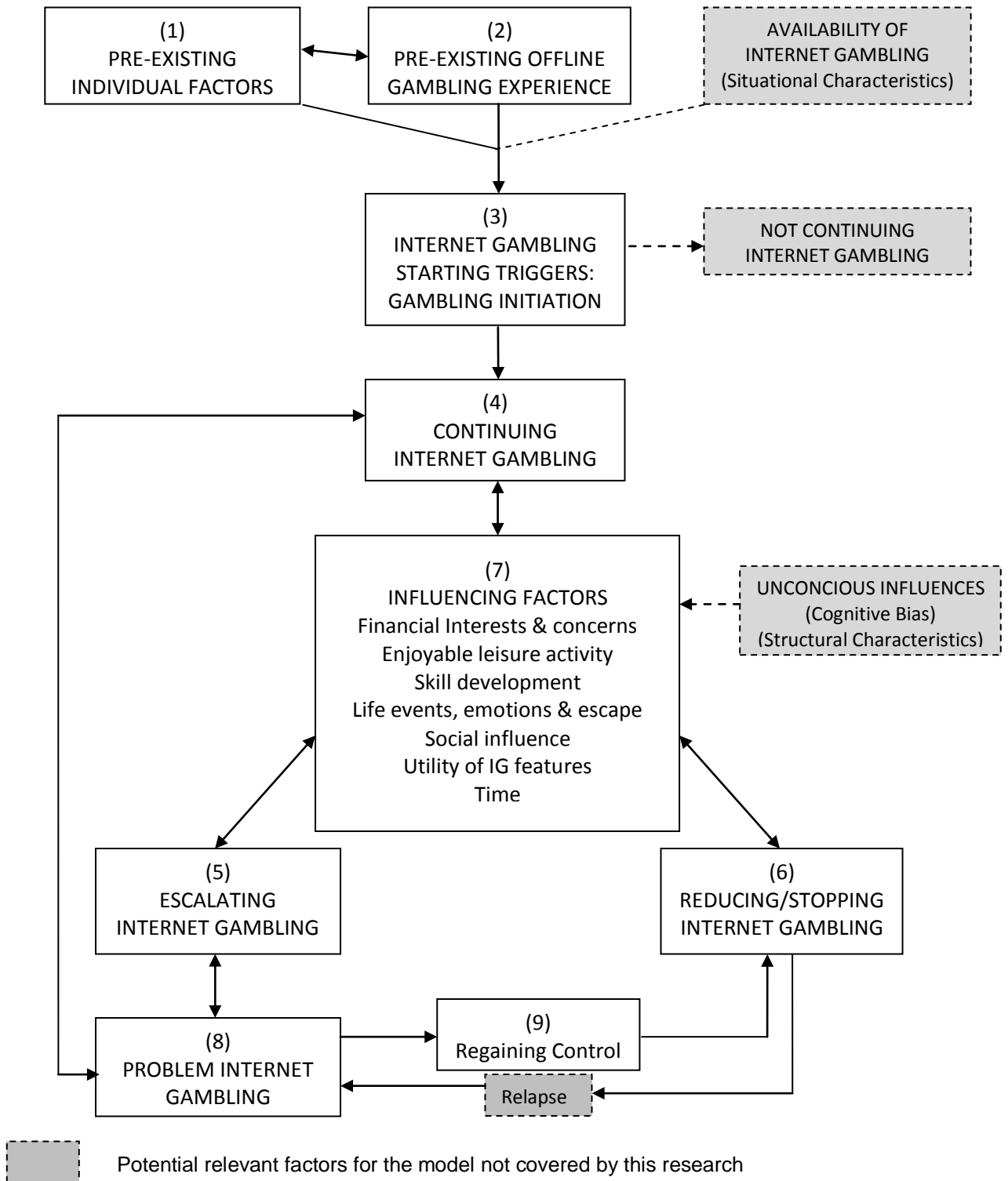
To explain the model and to provide a sense of reality, the route of one Internet gambling individual is described.

Martin is 28. He has been gambling on the Internet for about 10 years. He currently undertakes betting activities with betting exchange being his main activity, in terms of the time he spends researching, planning and placing his bets and the amount of money he stakes. He is currently classified by PGSI as a moderate-risk gambler.

Martin began gambling as a young child when his father would give him small amount of money to pick horses to place bets on. His pre-Internet gambling experience involved betting on horseracing in betting shops when he was underage. From these experiences, Martin developed attitudes and beliefs included never gambling what you cannot afford to lose.

Martin was already an Internet user, and whilst still at school he decided to open a betting account online due to the convenience of gambling on the Internet and the financial incentives offered for opening an account. Apart from the underage aspect of his gambling, Martin is a typical gambler who transfers his existing land-based gambling activity to the Internet due to the convenience and incentives offered.

Martin's initial Internet gambling (IG) was at weekends, typically spending £30 from his part-time wages and mainly betting on horseracing and football. His main motivation for continuing was the enjoyment he had from analysing and planning his bets and the buzz he had when winning proved him right in his analysis. In these initial stages, Martin continued gambling for skill development, in terms of developing knowledge, strategies and deeper engagement with betting, and valuing wins as skill validation. Due largely to these skill factors, Martin experienced IG as an enjoyable leisure activity, which also influenced his continuation.

Martin had been gambling for a few months when through his betting account he was exposed to advertising pop-ups offering free money to play and learn poker. He responded to this new opportunity and impulsively took up playing Internet poker during the week; an escalation of gambling involvement, in terms of an additional activity and an additional time spent gambling, due to the utility of IG features. Martin continued to

bet on sports at the weekend and play short, small-stake poker tournaments during the week, learning how to play poker from books. He enjoyed gambling on both betting and poker primarily for skill-related motivations, and his gambling involvement remained relatively steady.

About seven years ago Martin's circumstances and lifestyle changed. Martin was in a full-time job earning more money and had moved into his own house. He had a sports TV channel and had more freedom to do as he pleased. Martin's gambling escalated. He bet on more sports as he could watch the outcome. His poker escalated as he participated in £10 tournaments most evenings, playing from when he came home from work until two, three or four in the morning. The escalations involved a change in the amount of time spent gambling and a slightly higher spend, though Martin was not losing much overall. Escalations were due to financial interests, i.e. having more money available, and the utility of IG features in terms of the opportunity to bet on any sport from home. Martin indicated he enjoyed the added interest of watching sport with a bet riding on the outcome and he found poker playing exciting. The fact that Martin valued the added interest and excitement from gambling suggests he may have been bored in his new house and looking for something to do; a vulnerability-compensation effect, brought about by a change in his lifestyle and circumstances.

Martin's gambling continued at this level of involvement until five years ago, when he was tempted by a promotion with a financial incentive to play blackjack and roulette; an escalation in gambling involvement in terms of adding a new activity influenced by the utility of IG features. Martin had been successful in developing skill at poker and betting, and had been able to take winnings out now and again. He had a few hundred pounds of winnings left in his account, and he promptly lost the free money from the promotion, along with all his remaining winnings. He put money back into his account, rebuilt his winnings, and when his winnings were up to £200 he lost them again to blackjack. Over the space of two months he did this a number of times, losing a total of £1000. He felt sick as he was losing the money and was aware that he could have used the winnings for a new boiler he needed. He started to feel he needed the money back and increased his poker stakes to win it back; an escalation due to financial interests and concerns. He felt pressured, it affected his poker play and he began losing. He worried about the money and became frustrated as he seemed to get more

bad luck than other players. He decided to reduce his gambling involvement due to his financial interests and concerns and experiencing reduced enjoyment. He stopped playing casino games and reduced his poker to very low levels, continuing mainly with sports odds betting.

Martin's sports odds betting continued at a relatively steady level, fluctuating at times when more gambling events were available, for example during the Cheltenham Festival or the World Cup, and reducing again afterwards. He began placing bets using his phone rather than betting at home, gambling more while out and about, for example, when on a train journey. Overall his bets remained relatively small. His gambling involvement escalated 3-4 years ago when he additionally began using the betting exchange in response to promotions. This is currently his main gambling mode. Martin uses arbitrage style betting on the exchange, betting for and against different horses in each race, so theoretically, whatever the outcome he still wins. He keeps £ 3-400 in his account for betting. He undertakes detailed analysis of his bets and outcomes using specialised software programmes, therefore his gambling has also escalated in terms of time consumption. He currently makes a profit of around 10%. Martin talks about this activity as 'trading' and is considering working his account balance up so he can place larger bets and take it up full-time. Martin's gradual escalation over the last few years, whilst due primarily to skill and enjoyment influences, has also more recently been due to financial interests and concerns. This is a possible risk factor for Martin as he has experienced a small amount of time of chasing losses in the past when financial interest and concerns became a priority. However, his underlying attitudes and beliefs of never betting what he can't afford to lose, never putting savings at risk and staying in control, may prove protective factors.

CHAPTER 8

QUANTITATIVE METHOD AND KEY VARIABLES OVERVIEW

8.1　Quantitative Method

8.1.1 Design

This research used an integrated mixed-method approach in the form of an exploratory sequential design (Cresswell & Plano Clark, 2011, see Section 3.3).   This design was selected to corroborate qualitative findings and to test the influence of various processes that emerged from the qualitative phase of the research. Key findings from the qualitative phase were drawn up into hypotheses (see Section 5.2 & 6.2 Key Findings). These hypotheses were transformed into questions which were placed into an online survey, designed using '*SurveyGizmo*', which was administered online.

8.1.2 Participants

Participants were recruited from a variety of sources, as shown in Table 8.1 below. Recruitment was initially targeted directly at Internet gamblers via forums and websites, then later, via a University population. These two strands were selected to ensure a sufficient variety of gamblers were recruited to enable valid statistical comparisons between men and women, players of different gambling domains and problem and non-problem gamblers. The qualifying criteria for participation were being 18 or over, living presently in the UK and currently engaged in gambling online for money.

The targeted Internet gamblers consisted of self-selecting participants from a gambling population using online gambling-related websites, where advertising of the survey had been placed. This consisted of selecting gambling-related websites and forums by searching online for the mode of gambling by name (e.g. poker, betting, bingo etc.) and 'UK', as a UK sample was being sought. Search results were checked to establish websites and forums had involvement and connection with the UK market (e.g. UK flag on the site, English being the primary language) and to establish the site was currently active (e.g. current and recent posts). Additionally, the terms under which engagement with any forum community would be permitted were established. This included

checking an owner or administrator was present, establishing that joining the forum did not involve registering a credit card or undertaking any gambling activity, and establishing there was no requirement for a minimum number of posts before a link to the survey could be posted. This resulted in a list of 60 potential sites where the survey could be posted. Forum owners or administrators were contacted to request permission to post the survey details on the site. This was granted by 19 of the 60 forums and initial recruitment messages were posted (see Appendix F for example recruitment messages). These threads were monitored and updated during the 3 months the survey was active, so that queries could be dealt with and the survey stayed current and active on the forum.

The University sample consisted of self-selecting student and staff participants from a University population recruited by use of a global email. The global email was sent to all staff and students within the University population (see Appendix F for recruitment email). It was permitted as a one-off recruitment email so no follow-up email reminders were sent. This sample was used to boost the survey sample as the targeting of Internet gamblers had resulted a low rates of participation. The University staff and student sample was considered relevant as existing Internet gambling research had found that student populations tended to have higher prevalence of Internet gamblers that a general population and that Internet gamblers tended to be more highly educated than land-based gamblers (Ladd & Petry, 2002: Griffiths et al., 2009; Gainsbury et al., 2011; Kairouz et al, 2012).

The final sample consisted of targeted Internet gamblers (N=115) and University staff and students (N=118). The demographic differences of these two sample strands are shown in Appendix H.

A total of 447 individuals commenced the survey. The survey was designed so initial questions identified and automatically disqualified participants who indicated they were under 18 (n=0), were not resident in the UK (n=54) or who did not gamble online for money (n=18). Additionally, participants who did not complete at least the first two sections of the survey (n=107) were manually disqualified, along with two participants who completed the survey in less than 3 minutes (n=2). A total of 181 were excluded, leaving a sample size of 266.

Table 8.1   Survey sample - Recruitment sources

Recruitment source	N	%
University students	95	35.7%
Gambling forums	79	29.7%
University staff	23	8.7%
Gambling therapy forums	11	4.1%
Research contacts	11	4.1%
Facebook	8	3.0%
Gambling magazine	2	0.8%
Poker clubs	2	0.8%
'Other' (not specified)	2	0.8%
Not completed	33	12.4%
TOTAL	266	100%

The survey sample (n=266) all indicated they were over 18 years old, currently resided in the UK and gambled on the Internet for money. The sample included 232 participants who had fully completed the survey, and 34 who had partially completed the survey. Of the 266 participants, all completed a sufficient amount of the survey to enable analysis based on gender, 246 to enable analysis based on current main gambling activity, 240 to enable analysis based on gambling level, and 232 to allow full analysis across all variables and demographics. The partial completion of different part of the survey is reflected in the varying number of participants in the results tables and figures presented.

The demographics of the full sample are shown in Table 8.2. Not all participants opted to complete the entire survey, and this is reflected in the varying numbers of participants shown in the table. Overall, 76.7% of participants were male. The age range of the sample was 18-73 with a mean age of 35.8 years. The highest proportion of participants were in the 18-24 age group (30.0%) closely followed by the 25-34 age group (24.0%). A slightly larger proportion of participants was single (47.2%) as opposed to being married or living as domestic partners (45.1%), and 48.5% of the sample were educated to degree level or above. The largest proportion of the sample was White/White British (84.8%).

Table 8.2:   Survey Sample - Demographics

	N	%
Gender	**266**	
Male	204	76.7%
Female	62	23.3%
Age Group	**233**	
18-24	70	30.0%
25-34	56	24.0%
35-44	40	17.2%
45-54	38	16.3%
55-64	22	9.4%
65-74	7	3.0%
Marital Status	**233**	
Single	110	47.2%
Married/Living as domestic partners	105	45.1%
Separated/Divorced	16	6.9%
Widowed	2	0.9%
Level of Education	**233**	
GCSE or equivalent	32	13.7%
A level	48	20.6%
Vocational	26	11.2%
Degree	78	33.5%
Post Graduate	35	15.0%
None apply	14	6.0%
Ethnicity	**230**	
White or White British	195	84.8%
Asian or Asian British	19	8.3%
Black or Black British	9	3.9%
Mixed Race	6	2.6%
Other	1	0.4%

8.1.3 Materials

The online survey consisted of 14 survey sections resulting from the qualitative research, along with a number of exclusion and demographic items. The survey was designed to capture data about the pathways of Internet gambling, how Internet gambling was experienced and how it changed over time.   It started with an introduction, eligibility and consent page, and was followed by five sections covering: 1) first Internet gambling experience, 2) current Internet gambling activities, 3) general Internet gambling experiences, 4) changes in Internet gambling activities and 5) demographics. These sections were followed by a debrief page with contact details for further information and support. (See Appendix G for a copy of the survey.)

Section 1 covered when and how Internet gambling was initiated. Section 2 established the depth and breadth of current Internet gambling activities and captured current beliefs about Internet gambling. Section 3 established the occurrence of events that may influence gambling and included the 9-item Problem Gambling Severity Index (PGSI - Ferris & Wynne, 2001). Section 4 was designed from participant responses about the occurrence of events identified in Section 3, and rated how much Internet gambling had increased or decreased as a result of a particular event. Section 5 asked general demographic questions such as age, marital status, education level and ethnicity.

The survey contained a range of styles of questions with some questions consisting of a drop-down box to select responses from a range of answers, based on responses from the qualitative research. Options of 'other' and a text box were also provided where needed. Some questions consisted of Likert scale responses, for example, when considering the relative influence of a number of reasons for initiating Internet gambling and the influence of events on the increase or decrease of gambling activity.

Links to the online survey were provided in recruitment emails which were sent to University staff, students and research contacts. Links were also provided via recruitment notices placed on gambling related forums, Facebook pages, with poker clubs and with a gambling magazine. Recruitment materials contained details of the research process, eligibility for participation, details of completed entries being entered into a prize draw for an *i-Pod* and reference to the research sponsor. Examples of recruitment materials are included in Appendix F.

8.1.4 Procedure

Approval and permission for recruitment were obtained from the University Research Ethics Committee, from University management and from forum, Facebook and magazine administrators. Recruitment materials were posted online and a recruitment email was sent to all staff and students at the University. On accessing the link to the survey in the recruitment materials, participants were provided with full details of the research including what they would be asked to do, the *i-Pod* prize draw, confidentiality, right to withdraw from the research, data protection and details of the project funder. They were asked to give their consent for participation. Participants were then asked a

series of eligibility questions about their age, their residency in the UK and whether they had gambled on the internet for money. If they did not meet the research criteria they were thanked for their responses thus far and their access to the survey was not continued. A second attempt at completion of the survey was denied as the *SurveyGizmo* software employed IP address recognition to avoid duplicate or multiple survey entries from the same computer. Participants could however save their partially completed surveys and return to them later using a password. Partially completed surveys were accepted if at least the consent page and Section 1 of the survey were fully completed. On full completion of the survey, participants were provided with debrief material which included a reminder of how the data would be used and ethical requirements already stated in the introductory section. In addition participants were provided with contact details of the gambling support agencies that may be useful for them.

Eligible survey data was exported into SPSS and cleansed to remove identifying information. Participants who did not complete at least the first two sections of the survey and participants who completed the survey in less than three minutes were manually disqualified before data analysis was undertaken.

8.2   Key variables for all participants

The aim of the diverse recruitment was to ensure that sufficient gamblers were recruited across each of the three key variables to enable valid statistical comparisons to be made. The three key variables were gender, current main Internet gambling activity and gambling level (as measured by the Problem Gambling Severity Index (PGSI); Ferris & Wynne, 2001).   These were selected on the basis of previous research as outlined in Section 2.10.

For the purposes of this research the term 'gambling level' reflects 'non-problem gambler' (Non PG) with a PGSI score of 0-7, and 'problem gambler' (PG) with a PGSI score of 8 or more. The term 'gambling risk level' reflects scores within the PGSI and the labels 'no risk gambler', PGSI score 0, 'low risk gambler', PGSI score 1-2, 'moderate risk gambler', PGSI score 3-7, and 'problem gambler', PGSI score over 8. (See Section 3.4.5 and Appendix A for further details about the PGSI).

Amongst the sample of 266 survey participants, the key dimensions were represented as shown in Table 8.3. Not all participants opted to complete the entire survey, and this is reflected in the varying numbers of participants (N) shown in the table. The relative proportions of these key variables for the participants who completed gender, main gambling activity and gambling level elements of the survey (N=240) are shown in Figure 8.1.

Table 8.3   Survey Sample - Key variables

Key Variables	Total		Male		Female	
	N	%	N	%	N	%
Gender	**266**		**204**	**76.7**	**62**	**23.3**
Current main Internet gambling activity	**246**		**189**	**76.8**	**57**	**23.2**
Odds betting	54	22.0	48	25.4	6	10.5
Sport spread betting	0	0.0	0	0.0	0	0.0
Financial spread betting	3	1.2	3	1.6	0	0.0
Betting exchange	18	7.3	18	9.5	0	0.0
Football pools	8	3.3	7	3.7	1	1.8
Bingo	10	4.1	2	1.1	8	14.0
Roulette	15	6.1	14	7.4	1	1.8
Slots/Fruit machines	15	6.1	8	4.2	7	12.3
Instant win games	7	2.8	2	1.1	5	8.8
Blackjack	2	0.8	2	1.1	0	0.0
Poker	72	29.3	61	32.3	11	19.3
National/other lottery	37	15.0	21	11.1	16	28.1
2 or more equal main activities	5	2.0	3	1.6	2	3.5
Gambling Level *(Risk)*	**240**		**185**	**77.1**	**55**	**22.9%**
Non problem gambling (PGSI 0-7)	182	75.8	140	75.7	42	76.4
- No Risk (PGSI 0)	*61*	*25.4*	*41*	*22.2*	*20*	*36.4*
- Low Risk (PGSI 1-2)	*61*	*25.4*	*47*	*25.4*	*14*	*25.5*
- Moderate Risk (PGSI 3-7)	*60*	*25.0*	*52*	*28.1*	*8*	*14.5*
Problem gambling (PGSI 8+)	58	24.2	45	24.3	13	23.6

Figure 8.1   Survey participants by gender, current main Internet gambling activity and gambling level
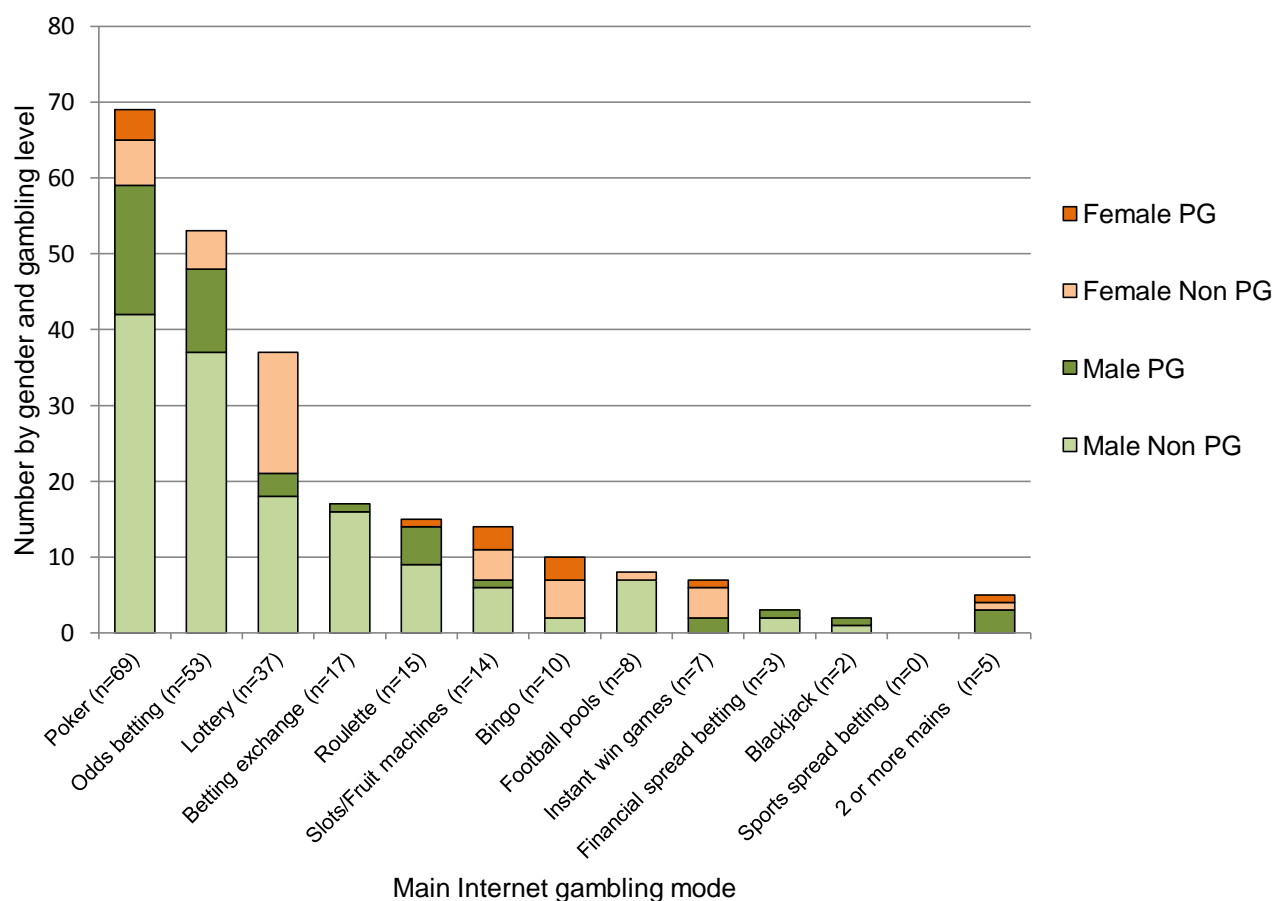
Figure 8.1 indicates that the most popular current main Internet gambling activity for this sample was poker (26.7%), followed by odds betting (19.9%), and the lottery (13.5%). Sports spread betting was included as one of the gambling activities, but no participants indicated this was their main form of Internet gambling.

Some gambling modes have relatively small sample sizes, e.g. blackjack (n=2), financial spread betting (n=3). In order to increase the power of the analyses run, modes have been grouped for analysis into 4 mode domains; betting (odds betting, financial spread betting, betting exchange, footballs pools), casino games (bingo, roulette, slots, instant win, blackjack), poker and lotteries. These were selected on the basis of previous research (see Section 2.6) and used in the qualitative research (see Section 3.4.3). All participants who indicated 2 or more main modes (n=5), either fell into these distinct mode domains by virtue of their multiple main modes both lying on one mode domain e.g. roulette & slots (n=2), or they were allocated a main mode

domain based on the mode with the highest frequency of play (n=3). The survey sample using the current main Internet gambling domain is shown in Figure 8.2.

Figure 8.2   Survey participants by gender, main current Internet gambling domain and gambling level
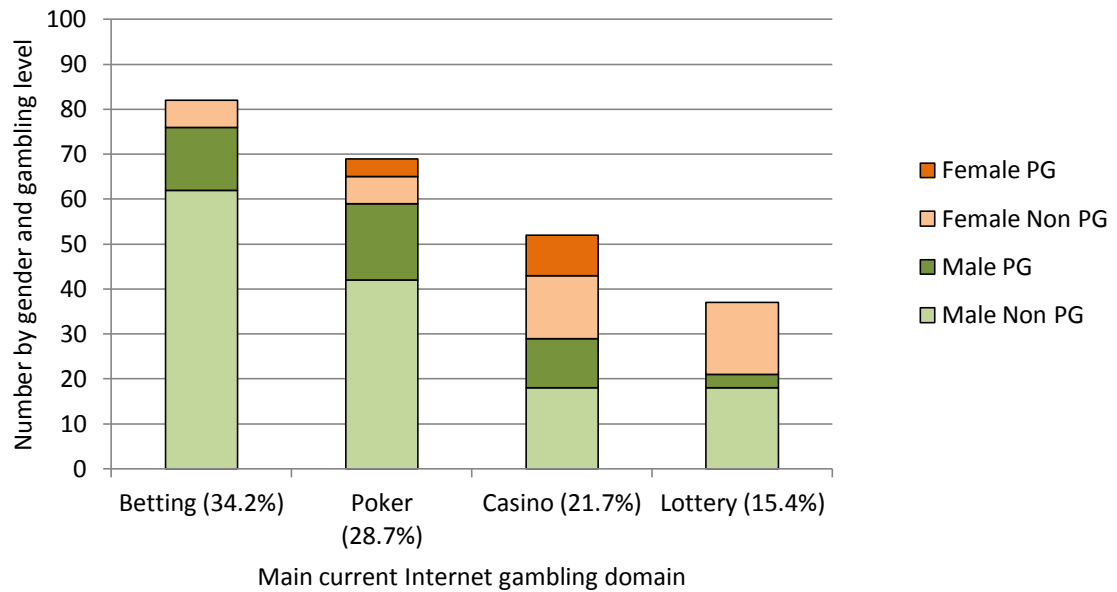
Figure 8.2, using current main Internet gambling domain as opposed to current main Internet gambling activity, highlights that for this sample, betting and poker are largely undertaken by men, whereas casino and lottery are more equally undertaken by men and women. More problem gambling appears to be in the poker domain (n=21), however relative to the total sample in each domain, there was a higher rate of problem gambling in the casino domain (38.5%), than in poker (30.4%), betting (17.1%) and lottery (8.1%) domains.

The key dimensions of the two sample strands can be found in Appendix H.

CHAPTER 9
QUANTITATIVE SURVEY RESULTS

The results section is broken in to a number of subsections, each of which reports findings relating to a particular set of hypothesis. A summary of non-hypothesis findings is also provided at the end of each subsection. Supporting tables and figures are included, with larger tables and figures along with full-results from non-hypothesis findings included in the Appendices. A list of all hypotheses from the qualitative data and the level of support, which may have come from a number of different tests, is included in Tables 10A and B at the end of the Discussion chapter.

Results are reported as being significant if $p<.01$ or $p<.001$. Results are reported as being marginally significant if $p<.05$. A value of $p<.05$ has been accepted as significant for exploratory results, for example, in the case of exploratory factor analyses post hoc tests. Bonferroni corrections are applied to adjust the acceptable significance level to correct of Type 1 errors where multiple tests have been undertaken (e.g. Kruskal-Wallis).

Preliminary Chi-squared tests were conducted to test the associations across the whole sample between key variables, gender, main current Internet gambling domain and gambling risk level.

A significantly higher percentage of women played casino games (40.4%) and lotteries (28.1%), whereas a significantly higher percentage of men undertook betting (40.7%) and poker (32.3%), χ^2 (3, n=246) = 33.46, $p<.001$.

Chi-squared tests conducted on the association between gender and gambling risk level, and gender and gambling level were not significant, suggesting there were no differences between the prevalence of problem gambling in men (24.3%) and women (23.6%) in this sample.

A Chi-squared test conducted on the association between main current Internet gambling domain and gambling risk level was highly significant, χ^2 (9, n=240) = 48.39, p<.001. The percentages are presented in Table 9.1 below.

Table 9.1   Main current Internet gambling activity and gambling risk level

Main Current Activity	No Risk Gambling		Low Risk Gambling		Moderate Risk Gambling		Problem Gambling		Total	
	N	%	N	%	N	%	N	%	N	%
Betting	17	20.7%	20	24.4%	31	**37.8%**	14	17.1%	82	100%
Casino	8	15.4%	11	21.2%	13	25.0%	20	**38.5%**	52	100%
Poker	13	18.8%	24	**34.8%**	11	15.9%	21	30.4%	69	100%
Lottery	23	**62.2%**	6	16.2%	5	13.5%	3	8.1%	37	100%
Total	61		61		60		58		240	

A Bonferroni correction was applied to indicate where the significant differences lay.

- A higher percentage of bettors had a moderate-risk gambling level, significantly higher than no-risk or problem level.

- A higher percentage of casino gamblers had a problem gambling level, significantly higher than having a no-risk level.

- A higher percentage of poker players had a low-risk gambling level (closely followed by having a problem gambling level), but there were no significant differences between gambling risk levels.

- A higher percentage of lottery players had a no-risk gambling level, significantly higher than having a low-risk, moderate-risk or problem gambling level.

9.1   <u>Initiating Internet gambling</u>

Results relating to the hypotheses about how individuals initiate Internet gambling, as stated in the qualitative findings, are presented in this section (see Section 5.2 Key findings B).   In addition, exploratory and novel findings are reported, with tests and figures contained in the Appendices.

Throughout this section, differences in Internet gambling initiation across the three key variables have been tested with Chi-squared tests.   Bonferroni adjustments were undertaken to test the significance of differences of variable levels.   Mann-Whitney and Kruskal-Wallis tests (with *post hoc* Mann-Whitney tests) have also been used.   These report effect sizes of differences, with the r value reported indicating a small effect at .1, moderate effect at .3 and a large effect at .5 (Field, 2009).   Spearman's correlations have been undertaken to test associations between initiation reasons.   A Factor Analysis has also been undertaken on initiation reasons to enable a quantitative comparison with the categories found in the qualitative research.   The Factor Analysis identifies factors influencing Internet gambling initiation and the associated gambler profile for each factor.

9.1.1 First activity

Participants were asked to identify the gambling activity they first undertook on the Internet for money.   Due to the low number of participants for some activities, these were grouped into Internet gambling domains, as outlined in Section 8.2, rather than using the actual activity.   These results are shown for all participants in Table 9.2. Betting was the most popular first domain for this sample

Table 9.2   *First Internet gambling activity domain*

First domain	All	
	N	%
Betting	105	39.6%
Casino	54	20.4%
Poker	63	23.8%
Lottery	43	16.2%
TOTAL	265	

Differences in first activity across the three key variables are shown in sections a) to c).

a. First activity and gender

A Chi-squared test conducted on the association between gender and first internet gambling domain was highly significant, χ^2 (3, n=265) = 38.58, p<.001. A significantly higher percentage of women initiated Internet gambling in the casino and lottery domains, whereas a significantly higher percentage of men initiated Internet gambling in the betting and poker domains (see Table 9.3).

Table 9.3   First Internet gambling activity domain by gender

First domain	Male		Female	
	N	**%**	**N**	**%**
Betting	96	**47.3%**	9	14.5%
Casino	30	14.8%	24	**38.7%**
Poker	53	**26.1%**	10	16.1%
Lottery	24	11.8%	19	**30.6%**
TOTAL	203		62	

b. First activity and current main activity

First activity domain was compared with *current* main activity domain for all participants, for men and women, and for problem and non-problem gambling (see Table 9.4). The percentages given represent the percentage of participants who initiated in one domain and currently still played in this domain as their main activity. It is a descriptive indicator of stability of domain play.

Table 9.4   *Stability of gambling domain over time - percentage of individuals by first domain currently playing in same domain*

First domain	N	Betting	Casino	Poker	Lottery
Main Current Domain					
All Participants (n=245)					
Betting	98	**68.4%**	6.1%	19.4%	6.1%
Casino	48	12.5%	**70.8%**	12.5%	4.2%
Poker	58	12.1%	12.1%	**75.9%**	.0%
Lottery	41	9.8%	12.2%	7.3%	**70.7%**
Men (n=188)					
Betting	91	**70.3%**	5.5%	19.8%	4.4%
Casino	25	16.0%	**60.0%**	20.0%	4.0%
Poker	50	14.0%	14.0%	**72.0%**	0.0%
Lottery	22	9.1%	9.1%	9.1%	**72.7%**
Women (n=57)					
Betting	7	**42.9%**	14.3%	14.3%	28.6%
Casino	23	8.7%	**82.6%**	4.3%	4.3%
Poker	8	0.0%	0.0%	**100.0%**	0.0%
Lottery	19	10.5%	15.8%	5.3%	**68.4%**
Non-Problem Gamblers (n=181)					
Betting	75	**73.3%**	5.3%	14.7%	6.7%
Casino	30	20.0%	**70.0%**	3.3%	6.7%
Poker	41	9.8%	7.3%	**82.9%**	0.0%
Lottery	35	8.6%	8.6%	5.7%	**77.1%**
Problem Gamblers (n=58)					
Betting	21	**52.4%**	9.5%	33.3%	4.8%
Casino	18	0.0%	**72.2%**	27.8%	0.0%
Poker	13	15.4%	23.1%	**61.5%**	0.0%
Lottery	6	16.7%	33.3%	16.7%	**33.3%**

The percentages highlighted suggest that Internet gamblers initiating gambling in one domain tend to remain playing in the same domain. Particularly strong indicators of this are female poker players where 100% initiated and remained playing poker, non-

problem poker playing where 82.9% initiated and remained playing poker and female casino players where 82.6% initiated and remained playing casino games. Less stable domains appear to be betting, where 52.4% of problem gamblers initiated and remained betting, with 33.3% switching to poker as their main domain. Additional less stable domains are also indicated by 42.9% of female bettors initiating and remaining betting and 33.3% problem gambling lottery players initiating and remaining playing lotteries. It must be noted some percentages represent very small numbers of participants.

Overall, poker appeared to be the most stable domain over time, with 75.9% of participants who initiated gambling on the Internet on poker, remaining playing poker. This compares to 70.8% of casino game players, 70.7% of lottery players and 68.4% of bettors. Taking the average of the highlighted percentages indicated that relatively, non-problem gamblers had the most stable game domain over time (75.8%), compared to problem gamblers who had the least stable game domain (54.9%). Women appeared to have a more stable gambling domain (73.5%) than men (68.8%).

c. First activity and gambling risk level

A Chi-squared test conducted on the association between gambling risk level and first Internet gambling domain was highly significant, χ^2 (9, n=239) = 27.55, p<.001. A significantly higher percentage of participants initiating by playing poker had low-risk gambling levels compared to no-risk levels. A significantly higher percentage of participants initiating by playing lotteries had no-risk gambling levels, compared low-risk, moderate-risk and problem gambling levels (see Table 9.5).

Table 9.5   First Internet gambling activity domain by risk level

First domain	No risk Gambling		Low risk Gambling		Moderate risk Gambling		Problem Gambling	
	N	%	N	%	N	%	N	%
Betting	23	37.7%	22	36.1%	30	**50.8%**	21	36.2%
Casino	10	16.4%	11	18.0%	9	15.3%	18	**31.0%**
Poker	7	11.5%	20	**32.8%**	14	23.7%	13	22.4%
Lottery	21	**34.4%**	8	13.1%	6	10.2%	6	10.3%
TOTAL	61		61		59		58	

9.1.2 Length of time since Internet gambling initiation

Participants were asked how long it was since they first gambled on the Internet. Across the whole sample (n=265), 28.7% initiated gambling on the Internet within the last 2 years, 20.4% between 2 and 4 years ago, 21.1% between 4 and 6 years ago, 9.8% between 6-8 years ago, and 20.0% over 8 years ago.

This was further analysed taking into account the three key variables gender, gambling domain and gambling level.

a. Length of time since initiation and gender

A Chi-squared test conducted on the association between length of time since initiating Internet gambling and gender was significant, χ^2 (4, n=265) = 20.87, p<.001. The highest percentage of women had started Internet gambling in the past 2 years, and women were significantly more likely to have initiated Internet gambling in the past 2 years (45.2%) than men (23.6%). In contrast, the highest percentage of men had initiated Internet gambling over 8 years ago, and men were significantly more likely to have initiated over 8 years ago (24.6%) than women (4.8%). (See Figure 9.1).

Figure 9.1   Length of time since initiating Internet gambling - comparison between men and women
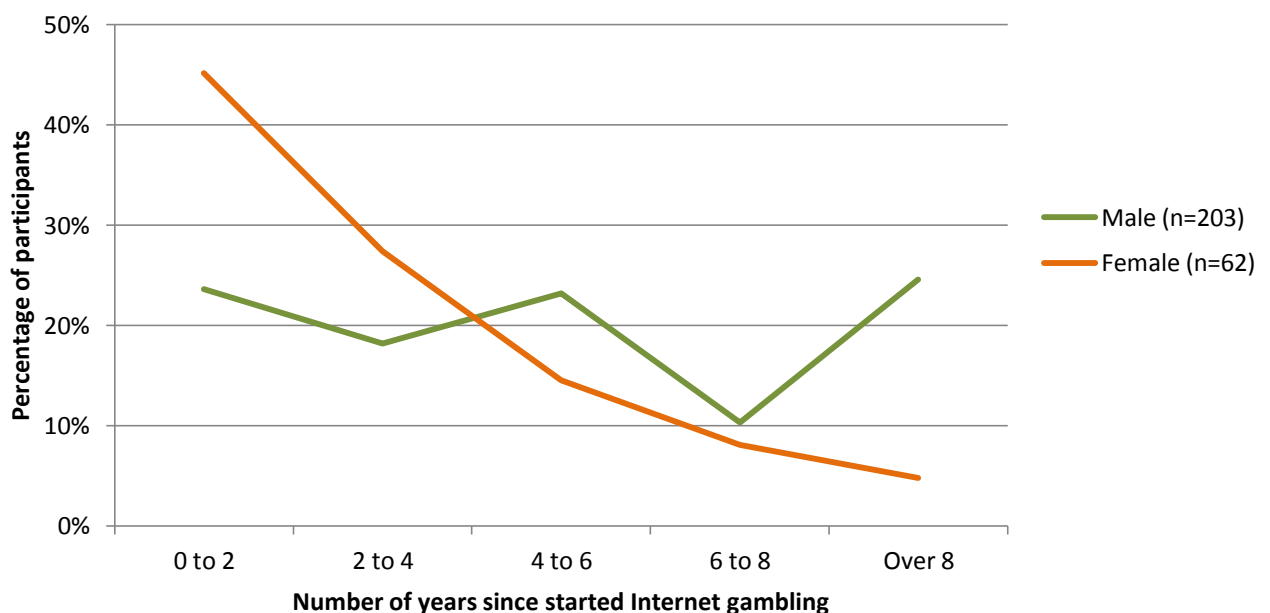
b. Length of time since initiation and first activity

The association between length of time since initiating Internet gambling and Internet gambling domain was explored both for first Internet gambling domain and current Internet gambling domain. Findings were similar due to the stability of initiating in one domain and remaining in the same domain, as already outlined in section 9.1.1 ii). The findings relating to first domain are presented in Figure 9.2, and indicate the difference in popularity of the different domains over time

A Chi-squared test conducted on the association between length of time since initiating Internet gambling and first Internet gambling domain was highly significant, χ^2 (12, n=265) = 45.91, p<.001.

In the last 2 years, initiating Internet gambling with lotteries (48.8%) was significantly more likely than initiating with poker (15.9%) or betting (24.8%). Between 4 and 6 years ago, first activity was more likely to be poker (41.1%) than betting (15.2%). Over 8 years ago, first activity was more likely to be betting (34.3%) than poker (14.3%), casino games (9.3%), or lottery (7.0%).

Figure 9.2   *Length of time since initiating Internet gambling - comparison with players'*
              first internet gambling domain
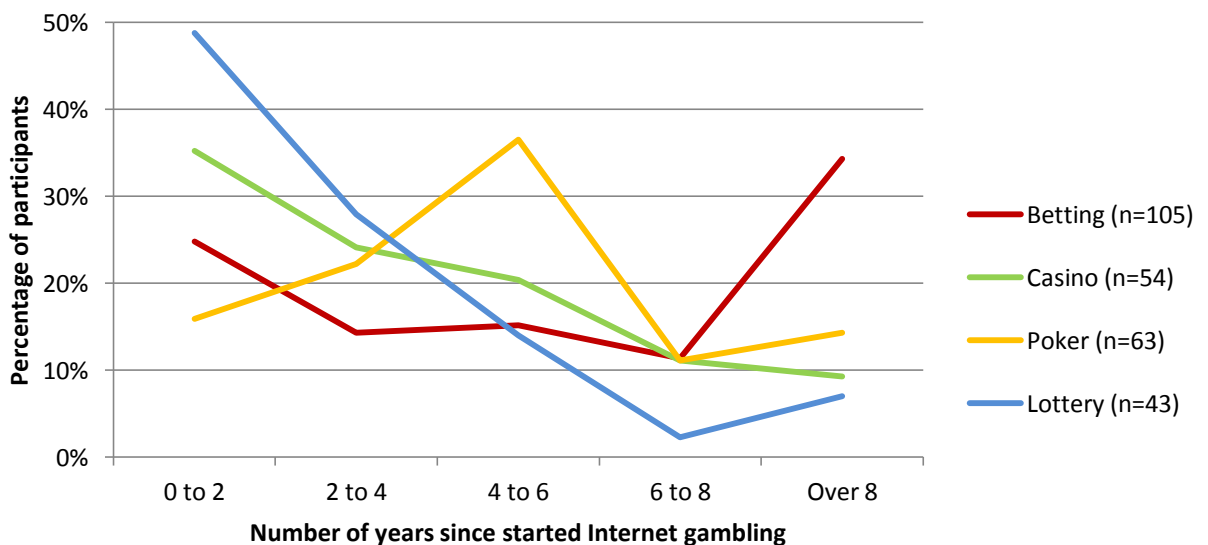
c. Length of time since initiation and gambling level

Figure 9.3 compares the length of time problem and non-problem gamblers had been gambling on the Internet. This shows a higher level of PGs initiating gambling at over 8 years ago, when the overall trend from 0 to 8 years appears to indicate increasing percentages of problem gamblers initiating gambling more recently. This trend also appears in NPGs, but appears less strong. However, a Chi-squared test conducted on the association between length of time since initiating Internet gambling and gambling level was not significant.

Figure 9.3   *Length of time since initiating Internet gambling for problem and non-problem gambling levels*
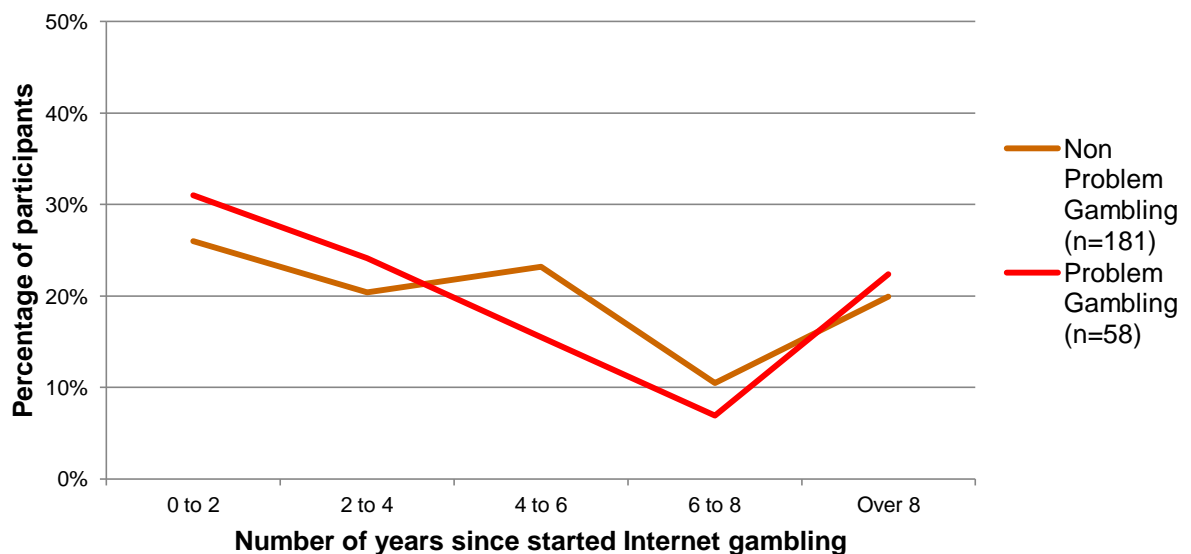
9.1.3 First activity and how started

Participants were asked if they already gambled on their first activity offline before they initiated gambling on it on the Internet (existing activity) or whether they initiated playing a new gambling activity when they first went online (new activity). They were also asked they played for points or virtual money on the Internet on their first activity (virtual stake activity), before they played for money (real stake activity).

Overall 63.4% of the sample indicated they already undertook an existing gambling activity before they first initiated gambling on the Internet, indicating 36.6% were

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undertaking new activities on the Internet. Additionally 37.4% indicated they started gambling on the Internet with a virtual stake before using a real stake.

Of the 36.6% who undertook a new activity when they started on the Internet, 43.3% played with a virtual stake. By comparison, of the 63.4% who undertook an existing activity before they started on the internet, 33.3% played with a virtual stake. However, Chi-squared tests conducted to test the association between new or existing activity and virtual or real stake activity was not significant.

Hypothesis B4: NPGs will be influenced more strongly than PGs to initiate Internet gambling due to a transfer of offline activities.

> Chi-squared tests undertaken to test the associations between new or existing activity and first activity domain, gender and gambling level were not significant, indicating new activities were equally likely to be undertaken by men and women, in any gambling domain and by NPGs and PGs.

Hypothesis B6: Poker players will be more strongly influenced than gamblers from other domains to initiate Internet gambling to practice for live play and to start by playing for points or a virtual stake.

> Chi-squared tests conducted on the association between virtual or real stake and first gambling domain was highly significant, χ^2 (3, n=265) = 74.38, p<.001. A significantly higher percentage of poker players (76.2%) played with virtual stakes when initiating Internet gambling compared to casino players (48.1%), and poker and casino players both played significantly more than lottery players (30.2%) and bettors (11.4%).

9.1.4 Events influencing Internet gambling initiation

Participants were presented with a number of statements containing potential items that may have influenced them to initiate Internet gambling. The statements were based on findings from the qualitative interviews and thematic analysis in the first stage of the research project. Survey participants were asked whether items were not applicable, or, had no influence, a slight influence, a moderate influence or a strong influence on

Internet gambling initiation. The results are shown in Figure 9.4. The exact phrasing of the statements used in the questionnaire can be found in Appendix G.

Figure 9.4   Influences on initiating Internet gambling: Relative relevance and influence of different items for all participants
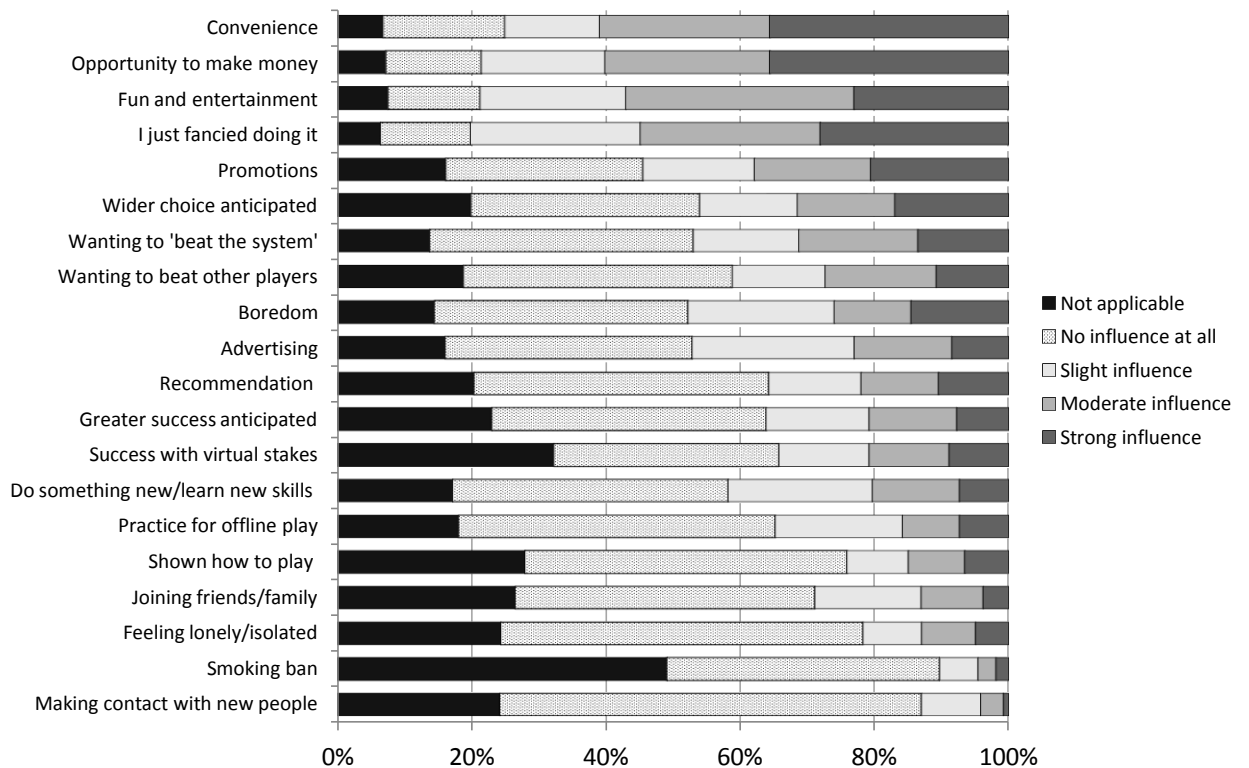
The items rated most influential for initiating Internet gambling were convenience (indicated as either being a moderate or a strong influence by 60.8% of participants), opportunity to make money (60.0%), fun and entertainment (56.9%) and just fancying doing it (54.8%). By comparison, the least influential items were indicated as the desire to make contact with people online (a moderate or strong influence for 4.2% of participants), smoking ban inside gambling venues (4.6%), feeling lonely or isolated (13.0%), watching friends and family play and wanting to join in (13.1%), being shown how to play by other people (14.9%) and practicing play for offline activities by playing on the Internet (15.8%). Advertising had moderately or strongly influenced 23.0% of participants, with promotions having a greater effect, moderately or strongly influencing 37.8%.

There were difference influences between men and women, problem and non-problem gambling and players with different first activity domains. Moderate and strong influence responses were combined to find the most influential items and these were compared by gender, gambling level and first activity (See Appendix I, Table I).

Figure 9.4 indicates four core items appeared to be the most influential when initiating Internet gambling for all groups of participants; convenience, the opportunity to make money, fun and entertainment, and 'just fancying doing it' (reflecting a degree of impulsivity in initiating Internet gambling). The fifth most influential item showed more variation across the participant groups.

Hypothesis B3a: Convenience will be the strongest influence for initiating Internet gambling.

Using Freidman's ANOVA , the relative influence of the initiating factors was found to be different, χ^2 (19, n=258) = 1110.35, p<.001. Wilcoxon tests were used to follow up this finding relating to the convenience of using the Internet. A Bonferroni correction was applied, so all effects are reported at a .002 significance level.

It appeared that convenience was a stronger influence than all other initiation factors other than fun and entertainment, the opportunity to make money and 'just fancying doing it'. The effect sizes for the significant differences of the remaining initiation influences ranged from r= -.25 for being influenced by promotions to r= -.54 for being influenced by the smoking ban. Mean effect size across all significant items r= -.40.

For each item, participants identified various initiation influence items that were not applicable to them. To test differences across each key variable, the 'Not applicable' responses were grouped with 'No influence at all' items as both of these categories indicated the item had no impact on the participant. This enabled statistical analysis of the relative influence of each item across each of the key variables, see Sections a)–c).

a. Events influencing initiation by gender

No gender related effects for initiating Internet gambling were hypothesized. However Mann-Whitney U tests were undertaken across all items and significant, small effect

differences were found between men and women as highlighted in Appendix I, Figures I1 and I2.

Men were influenced significantly more than women to initiate Internet gambling because they anticipated more choice on the Internet (r= -.15), a greater opportunity to make money (r= -.16),

Of marginal significance (p<.05), women were influenced more than men to initiate Internet gambling because of recommendations from other people (r= -.10) and boredom (r= -.12), and men were influenced more than women by wanting to beat the system (r= -.13) and wanting to beat other players (r= -.12).

Full results of Mann-Whitney tests and figures showing relative relevance and influence of different items for men and women are reported in Appendix I.

b. Events influencing initiation by current main gambling domain

Events influencing Internet gambling initiation were analysed for players of different gambling domains, betting (n=84), casino games (n=53), poker (n=72) and lotteries (n=37). Each event was analysed using a Kruskal-Wallis analysis of variance test. Mann-Whitney tests were used to follow up significant findings. A Bonferroni correction for Type I errors was applied so all effects are reported at a .008 level of significance.

Significant differences were found for experimental hypotheses related to first internet gambling domain as reported below. Effect sizes for gambling domains were larger than effect sizes for gender.

Hypothesis B3b: Convenience and choice will be a stronger influence on initiatingInternet gambling for bettors than gamblers in other domains.

'I was already gambling offline and thought I would have more choice on the Internet' was significantly different between players of different activities, H(3) = 30.62, p<.001. Bettors were significantly more likely to be influenced to initiate gambling because of increased choice than lottery players (U = 1227.5, r= -.37), casino players (U = 1796, r = -.30) and poker players (U = 2230.5, r = -.26)

'I thought it would be more convenient to gamble on the Internet than go out to a gambling venue' was significantly different between players of different activities, H(3) = 21.48, p<.001 Bettors were significantly more likely to be influenced to initiate gambling because of convenience than casino players (U = 1869, r = -.27) and poker players (U = 1959, r = -.33), but not lottery players.

Hypothesis B6: Poker players will be more strongly influenced than gamblers from other domains to initiate Internet gambling to practice for live play and to start by playing for points or play money.

'I was interested in offline gambling and I wanted to practice on the Internet' was significantly different between players of different activities, H(3) = 18.93, p<.001. Poker players were significantly more likely to be influenced to initiate gambling because to practice their skills for offline play than lottery players (U = 865.5, r = -.34).

'I was successfully playing for points, so decided to play for money' was significantly different between players of different activities, H(3) = 41.82, p<.001. Poker players were significantly more likely to be influenced to initiate gambling on the Internet because of successful points play than lottery players (U = 879, r= -.31) and bettors (U = 1552, r = -.51). Casino players were also significantly more likely to be influenced to initiate gambling on the Internet because of successful points play than bettors (U = 2068, r= -.26).

Hypothesis B7a: Poker players will be more likely than gamblers from other domains to initiate play to beat other players.

'I wanted to find out if I could be better than other players' was significantly different between players of different activities, H(3) = 38.94, p<.001. Poker players were significantly more likely to be influenced to initiate gambling on the Internet to be find out if they were better than others than bettors (U = 1873, r = -.37), casino players (U = 2364.5, r = -.40) and lottery players (U = 591.5, r = -.51).

Hypothesis B7b: Bettors will be more likely than gamblers from other domains to initiate play to 'beat the system'.

No significant results.

Hypothesis B7c: Poker players and bettors will be more likely than gamblers from other domains to initiate play for skill-related reasons, the opportunity to make money and because they anticipate more success on the Internet.

'I thought it would be interesting to do something new/learn a new skill' was significantly different between players of different activities, $H(3) = 18.93$, p<.001. Bettors (U = 1604, r = -.25) and poker players (U = 754, r = -.42) were significantly more likely to be influenced to initiate gambling on the Internet to learn a new skill than lottery players.

In addition there were a number of items where significant differences were found between first Internet domain and the influence of different reasons for initiating Internet gambling, where findings had not been predicted by a hypothesis.

Casino players were more influenced by advertising than bettors (r= -.21) and lottery players (r = -.30), by boredom than bettors (r = -.34) and lottery players (r = -.30) and by feeling lonely or isolated than bettors (r = -.34). Poker players were more influenced to initiate gambling by fun and entertainment than bettors (r = -.23). and lottery players (r = -.42)

Full results of Kruskal- Wallis and Mann-Whitney tests are reported in Appendix I.

c.   Events influencing by gambling level

Mann-Whitney U tests were undertaken across all items to test differences between problem and non-problem gambling behaviours.   Significant differences were found between problem and non-problem gambling behaviours for gambling level related experimental hypotheses.

Hypothesis B2: PGs will be influenced more strongly than NPGs to initiate Internet gambling due to advertising and promotions.

'I saw an advert for Internet gambling and decided to give it a go', was a significantly stronger influence for PGs (N=58, Mean rank=145.72) than for NPGs (N=181, Mean rank=111.76), U=6741.00, p<.001 (one-tailed), r = -.23

Hypothesis B5: NPGs will be influenced more strongly than PGs to initiate Internet gambling due to recommendations, being shown how to play and joining in Internet gambling activities with friends and family.

No significant results.

In addition there were a number of items where significant differences were found between first Internet domain and the influence of different reasons for initiating Internet gambling, where findings had not been predicted by a hypothesis.

PGs were influenced significantly more than NPGs to initiate Internet gambling because of boredom (r=-.35), feeling lonely or isolated (r = -.46), because of the smoking ban (r = -.19), anticipating greater success on the Internet (r= -.23), wanting to beat the system (r = -.17) and wanting to beat other players (r = -.21).

Of marginal significance (p<.05), PGs were influenced more than NPGs due to anticipating fun and entertainment (r= -.15), wanting to practice offline play (r = -.13), having success with virtual stakes (r= -.13), having greater opportunity to make money (r = -.12) and having more choice on the Internet (r= -.13),

Full results of Mann-Whitney tests and figures showing relative relevance and influence of different items for men and women are reported in Appendix I.

9.1.5 Initiating gambling and the Vulnerability-Compensation effect

The qualitative data suggested that when initiating gambling there may be a relationship between certain types of pre-existing vulnerability, in terms of circumstances and lifestyle, and the expected outcome from undertaking Internet gambling, which may compensate for this vulnerability.

Participants were asked how much they were influenced to initiate gambling (a) i) by feeling lonely or isolated and ii) thinking they might make contact with new people via Internet gambling, and (b) i) by boredom, ii) by the thought IG would be fun and entertaining and iii) by the thought IG would be interesting to do something new or learn a new skill.

A one-tailed Spearman's correlation was undertaken for all participants (n=260).

Hypothesis B8a: For the vulnerability-compensation effect, there will be an association between the influence of loneliness/social isolation and thinking that Internet gambling would provide the opportunity to make contact with other people.

There was a moderate positive relationship between initiating Internet gambling due to feeling lonely and initiating Internet gambling anticipating making new contacts, r_s=..45, p<.001 (one-tailed).

Hypothesis B8b: For the vulnerability-compensation effect, there will be associations between (i) the influence of boredom and thinking that Internet gambling would be fun and entertaining and (ii) the influence of boredom and thinking it would be interesting to do something new or learn a new skill.

There was a moderate positive relationship between initiating Internet gambling due to feeling bored and initiating Internet gambling anticipating it being fun and entertaining, r_s=.33, p<.001 (one-tailed).

There was a weak positive relationship between initiating Internet gambling due to feeling bored and initiating Internet gambling anticipating learning a new skill, r_s=.19, p=.001 (one-tailed).

Additionally, loneliness/isolation and boredom and were highly correlated, r_s=.50, p<.001, two-tailed, with loneliness/isolation accounting for 25% of the variance in boredom.

9.1.6 Events influencing initiation - Factor Analysis

Principal Axis Factoring (PAF) was conducted on the 20 initiation items with orthogonal rotation (varimax). The Kaiser-Meyer-Olkin measure verified the sampling adequacy, KMO=.73 ('good' according to Field (2009)) and for individual items, all KMO > .59, above the minimum acceptable limit of .5 (Field, 2009). Bartlett's test of sphericity χ2 (258) = 1212.26, p< .001, indicated that the correlations between items were sufficiently large for PAF. The analysis found six factors with an Eigenvalue over Kaiser's criterion of 1. In combination these explained 42.53% of the variance.

Table 9.6 shows the factor loadings after rotation. The cluster of items on each factor suggest that initiation reasons for factor 1 represent competitiveness, factor 2 social introduction, factor 3 increased utility, factor 4 alternative social environment, factor 5 value for money and factor 6 needing something to do.

Table 9.6   Summary of exploratory factor analysis results for reasons for initiating Internet gambling

	Rotated Factor Loadings					
Item	Competitive -ness	Social introduction	Increased utility	Alternative social environment	Value for money	Needing something to do
19. Wanting to beat other players	**.652**	.054	.156	.050	.254	.158
13. Do something new/learn new skills	**.596**	.136	.014	-.009	.060	.228
14. Practice for offline play	**.465**	.023	**.443**	.129	.087	.001
16. Success with virtual stakes	**.456**	.049	-.098	.289	.016	.012
3. Recommendation	.038	**.799**	.123	-.004	-.047	.090
4. Shown how to play	.173	**.740**	.005	.118	.039	.040
5. Joining friends/family	.014	**.515**	-.031	.184	.129	.026
6. Wider choice anticipated	.051	.059	**.811**	.011	.040	-.006
7. Greater success anticipated	.298	.101	**.599**	.125	.188	-.034
8. More convenient	-.132	-.037	**.438**	-.051	.042	.190
11. Feeling lonely/isolated	.175	.087	-.073	**.669**	-.043	.138
1. Advertising	-.033	.098	.159	**.500**	.192	.123
12. Making contact with new people	.229	.256	.034	.337	-.017	.100
15. Smoking ban	.263	.231	.039	.307	.033	-.085
17. Opportunity to make money	.081	.023	.093	.013	**.674**	.088
18. Interest in 'beating the system'	.373	.030	.063	.072	**.579**	.110
2. Promotions	-.041	.182	.180	.271	.310	.094
9. Boredom	.063	-.011	-.032	**.523**	.069	**.549**
10. Fun and entertainment	.238	.043	.076	.096	.159	**.538**
20. I just fancied doing it	.056	.079	.060	.086	.043	**.502**
% of Variance	8.55%	8.35%	7.72%	7.22%	5.46%	5.24%
Eigenvalue	1.71	1.67	1.54	1.44	1.09	1.05

Note: Factor loadings over .40 appear in bold

The six factors were further explored by calculating factor analysis scores for each participant. To establish a profile for each factor Chi-squared tests were used to test associations between the highest scoring 20% of participants and gambling survey variables and demographics. This is an arbitrary, 'non-refined' method, as discussed in DiStefano, Zhu and Mindrila (2009). A significance value at $p<.05$ was accepted, as the

association between variables and high scoring participants was largely exploratory. Variables significantly associated with high scorers in each factor are outlined below, with a full table of results in Appendix J.

The 'competitiveness' initiation factor included players wanting to play online to see if they were better than other players, wanting to do something new or learn new skills, using the Internet to practice for offline play, and having success online when playing for virtual stakes. Players with 20% highest 'competitiveness' factor scores were more highly associated with initiating and continuing gambling in the poker domain (45.9%), than with betting (12.9%), casino (13.2%) or the lottery (9.3%). They were also more highly associated with problem gambling (34.5%) than non-problem gambling (16.0%). They were more likely to initially play for points (34.4%) as opposed to not playing for points (11.7%) and most likely to play for 21-30 hours per week (41.7%), or over 30 hours (32.1%) as opposed to under an hour a week (2.7%)

The 'social introduction' factor included players who had initiated gambling due to recommendations from family and friends, they had been shown how to play and they were joining friends or family who already gambled on the Internet. Players with the 20% highest 'social introduction' factor scores were more highly associated with being aged 18-34 (27.2%), rather than being 35-54 (12.8%) or over 55 (6.9%), and being single (28.4%) rather than married/living with a partner (12.4%) or separated/divorced (12.5%). They were more likely to be from an ethnic minority (35.3%) as opposed to having a white/white British ethnicity (17.5%). They were also more likely to have initiated online under 8 years ago (23%) rather than over 8 years ago (7.8%).

The 'increased utility' initiation factor included players who had anticipated wider choice, more success and more convenience when gambling on the Internet. Players with the 20% highest 'increased utility' factor scores were more highly associated with being male (23.7%) rather than female (8.3%). They were more likely to have initiated gambling on the Internet over 8 years ago (37.3%) rather than 2-8 years ago (16.5%) or in the last 2 years (14.9%). They were more likely to have initiated and continued gambling in the betting domain (31.7% and 28.6% respectively), than any other domain, and more likely to be undertaking this activity offline before they started (29.8%) as opposed to not gambling in this domain first (4.1%). They were also less likely to

practice play for points or virtual money before they initiated gambling online (24.7% as opposed to 12.5%).

The 'alternative social environment' initiation factor included players who were feeling isolated or lonely, who responded to advertising, and who anticipated making contact with other people via Internet gambling. It also included players who could no longer smoke at their usual gambling venue. Players with 20% highest 'alternative social environment' factor scores were more likely to have initiated and continued gambling in the casino games domain (43.4% and 32.7% respectively), and were more highly associated with problem (44.8%) than non-problem gambling (9.9%). They were more likely to have initiated IG between 2 and 8 years ago (24.8%) as opposed to in the last 2 years (20.30%) and over 8 years ago (7.8%), being more likely to have played for points or virtual money before initiating Internet gambling (31.2%, as opposed to 13.6% who did not). They were more likely to be from an ethnic minority (32.4%) as opposed to having a white/white British ethnicity (13.9%).

The 'value for money' initiation factor included payers who saw Internet gambling as an opportunity to make money, they were interested in 'beating the system' and responded to promotions offering free stakes or money to play with. Players with 20% highest 'value for money' factor scores were more likely to be male (23.2%) than female (10.0%).

The 'needing something to do' initiation factor included players who were feeling bored, who thought Internet gambling would be fun and entertaining, and who 'just fancied doing it'. Players with 20% highest 'needing something to do' factor scores were more highly associated with initiating gambling in the poker domain (32.8%) than betting (14.9%), casino (20.8%) or the lottery (14.0%). They were also more highly associated with problem gambling (31.0%) than non-problem gambling (15.5%). They were less likely to gamble on their main activity offline before they initiated IG (27.8%), as opposed to those who did already gamble (15.5%), and more likely to be 18-34 (25.8%) as opposed to 35-54 (17.9%) or over 55 (0.0%).

Hypothesis B8c: There will be factor analysis evidence for clusters of initiation groups that support the concept of a vulnerability-compensation effect

Support from the 'alternative social environment' factor and from the 'needing something to do' factor

9.2   Current Internet gambling

In this section, specific hypotheses from the qualitative research (Section 6 Key findings C) are tested and reported. Exploratory results and novel findings are also reported, with tests and Figures contained in the Appendices.

Differences in the frequency of participation in different Internet gambling activities and weekly time spent gambling have been tested across the three key variables using Chi-squared tests. Bonferroni adjustments were undertaken to test the significance of differences of variable levels.

A Factor Analysis has been undertaken on frequency of participation. This identifies clusters of gambling activities that are played together, and the associated gambler profile for each cluster.

Mann-Whitney and Kruskal-Wallis tests (with *post hoc* Mann-Whitney tests) have been used to test experiences and feelings about Internet gambling across the three key variables These report effect sizes of differences, with the r value reported indicating a small effect at .1, moderate effect at .3 and a large effect at .5 (Field, 2009).

9.2.1 Frequency of participation in different IG activities

Each Internet activity was measured on a scale rating the frequency of play as not in the last 12 months, less than once a month, 1-3 times a month, 1 day a week, 2-3 days a week, 4 days a week or more. The relative frequency of play of each of the Internet activities is shown in Figure 9.5

To enable valid comparisons in frequency of participation, the data was reclassified into three grouped frequencies; Not undertaken (not in the last 12 months), Low to Moderate frequency (less than once per month up to 1 day a week) and High frequency (2 days a week or more).

Figure 9.5   Frequency of participation in IG activities
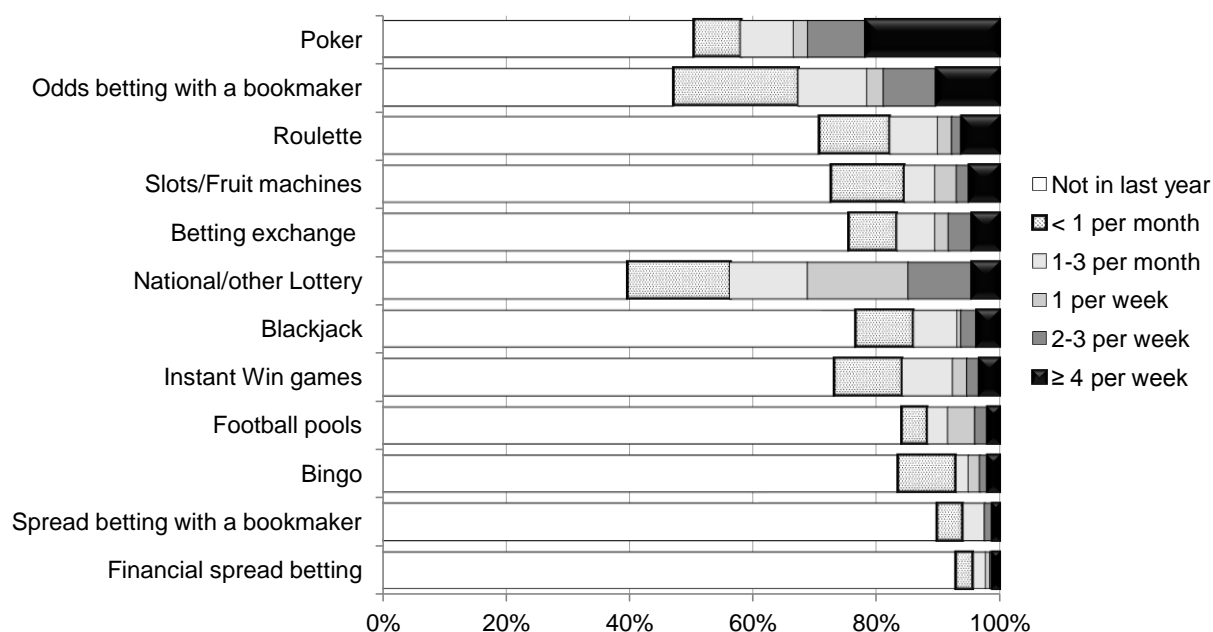
Over the whole sample, the most popular activities to undertake appear to be the National/other lottery (undertaken in the past year by 60.3% of participants), odds betting with a bookmaker (52.8%) and poker (49.4%). Most activities were undertaken less than once a week by those taking part in the last year (past year gamblers), the three exceptions being the lotteries (undertaken once a week or more by 51.4% of past year lottery players, football pools (53.5% past year pools players) and poker (67.2% past year poker players).

Poker was the most frequently undertaken activity, being undertaken 4 times per week or more by 42.5% of past year poker players. The nearest comparisons were roulette, undertaken in the same frequency by 20.9% of past year roulette gamblers, and odds betting, by 19.3% of past year bettors.

a. Frequency of activities by gender

Chi-squared tests were conducted on the association between frequency of play of different activities for men and women. All significant results are shown in Appendix K.

In summary, men were more likely than women to undertake odds betting, betting exchange, and poker, whereas women were more likely to undertake bingo.   Of

marginal significance (p>.05) men were more likely than women to undertake blackjack, whereas women were more likely to undertake instant win games. In terms of high frequency activity, men were more likely than women to undertake high frequency odds betting, betting exchange and poker, whereas women were more likely to undertake high frequency bingo.

There were no significant differences between men and women in the frequency of play of sport spread betting, financial spread betting, football pools, roulette, slots/fruit machines and lotteries.

b. Frequency of activities by current main gambling domain

A number of Chi-squared tests remained invalid due to the low cell counts in the tests. Valid and significant results are reported in Appendix K.

In summary, bettors were significantly more likely than casino, poker and lottery players to undertake odds betting and betting exchange activities and they were more likely to undertake them to a high frequency. Casino players were more likely to play roulette than players in other domains, and more likely to play it to a high frequency. Similarly, poker players were more likely to play poker and play it to a high frequency. Lottery players were more likely to play the lottery than players in other domains, although they were more likely than other players to play it at a low/moderate frequency.

c. Frequency of activities by gambling level

Chi-squared tests were conducted on the association between frequency of play of different activities for Problem and Non-problem gamblers. All significant results are reported in Appendix K.

In summary, PGs were more likely than NPGs to undertake bingo, roulette, slots, instant win games and blackjack. Of marginal significance (p<.05), PGs were more likely than NPGs to undertake football pools and poker. In terms of high frequency activity, PGs were more likely than NPGs to undertake high frequency play across each of these activities.

9.2.2 Frequency of activities - Factor Analysis

Principal Axis Factoring (PAF) was conducted on the 11 different Internet gambling activities with orthogonal rotation (varimax). The Kaiser-Meyer-Olkin measure verified the sampling adequacy, KMO=.68 (0.5-0.7 'mediocre' according to Field (2009)) and for individual items, all KMO > .53, above the minimum acceptable limit of .5 (Field, 2009). Bartlett's test of sphericity χ^2 (246) = 582.12, p< .001, indicated that the correlations between items were sufficiently large for PAF. The analysis found three factors with an Eigenvalue over Kaiser's criterion of 1. In combination these explained 36.51% of the variance.

Table 9.7 contains the factor loadings after rotation. The cluster of items on each factor suggest that frequency of play of different Internet gambling activities for factor 1 represent betting activities, factor 2, chance games, and factor 3, poker and casino activities

The three factors were further explored by calculating factor analysis scores for each participant. To establish a profile for this factor Chi-squared tests were used to test associations between the highest scoring 20% of participants for each factor and gambling survey variables and demographics. This is a 'non-refined' method, as discussed in DiStefano, Zhu and Mindrila (2009). A significance value at p<.05 was accepted, as the association between variables and high scoring participants was largely exploratory. Variables significantly associated with high scorers in each factor are outlined below, with a full table of results in Appendix L.

*Table 9.7   Summary of exploratory factor analysis results for frequency of play of
           Internet gambling activities*

Item	Rotated Factor Loadings		
	Betting activities	*Chance games*	*Poker & casino activities*
a) Odds betting with a bookmaker	**.638**	-.177	.001
d) Betting exchange	**.584**	-.156	-.053
b) Spread betting with a bookmaker	**.577**	.201	.048
e) Football pools	**.449**	.139	.191
c) Financial spread betting	.359	.115	.184
i) 'Instant Win' games	.113	**.743**	.129
h) Slots/Fruit machines	-.006	**.524**	.355
f) Bingo	-.012	**.524**	.015
l) National/other Lottery	.004	.363	.056
j) Black Jack	.189	.268	**.834**
g) Roulette	.181	.231	**.566**
k) Poker	-.013	-.026	**.404**
% of Variance	12.44%	12.39%	11.67%
Eigenvalue	2.90	1.96	1.29

Note: Factor loadings over .40 appear in bold

The 'betting activity' factor represented odds betting, spread betting, betting exchange, football pools and financial spread betting. A total of 47% of players with betting as their current main gambling domain had high scores in this factor. Men (25.3%) were more likely to have high scores in this factor than women (1.8%) as were problem gamblers (30.4%) rather than non-problem gamblers (17.1%). Top scorers were more likely to have initiated IG over 8 years ago (46.9%) as opposed to 2-8 years ago (13.6%) or in the last 2 years (11.9%), and 25.6% did not start by playing for points, as opposed to 9.4% who did. They were more likely to be over 55 (37.9%) rather than 35-54 (24.7%) or 18-34 (14.5%), and were most likely (39.3%) to engage in IG for 11-20 hours per week.

The 'chance games' factor represented instant win games, slots/fruit machines, bingo and the national lottery. A total of 52.9% of players with casino activities as their main domain had high scores in this factor, along with 24.3% of lottery players. Women

(41.1%) were more likely to have high scores in this factor than men (13.4%) as were problem gamblers (37.5%) rather than non-problem gamblers (14.9%). Top scorers were more likely to be 18-34 (25.8%), rather than 35-54 (14.3%) or over 55 (6.9%), and were more likely to be single (26.9%) as opposed to married/living together (12.5%) or separated/divorced (18.8%). They were more likely to be from an ethnic minority (44.1%) as opposed to having a white/white British ethnicity (15.6%).

The 'poker and casino activities' factor represented blackjack, roulette and poker. A total of, 33.3% of players with casino games as their main domain had high scores in this factor, along with 24.3% of poker players. Men (22.6%) were more likely to have high scores in this factor than women (10.7%) as were problem gamblers (39.3%) rather than non-problem gamblers (13.8%). Top scorers were more likely to engage in IG for 30+ hours per week

A Spearman's correlation undertaken between the factor scores showed that there was a weak negative relationship between betting activity and chance games scores, r_s = - 0.20.15, p<.01.

9.2.3 Weekly hours spent Internet gambling

Participants were asked how many hours per week they spent gambling on the Internet. Results are shown in Appendix K.

Comparisons were made between men and women, players of different games and players with different gambling levels. These are shown in Figures 9.6 i)-iii). Chi-squared tests were conducted on the association between number of hours per week spent Internet gambling and gender, main activity and gambling level.

Figure 9.6 i) Comparison of number of hours per week spent Internet gambling by gender
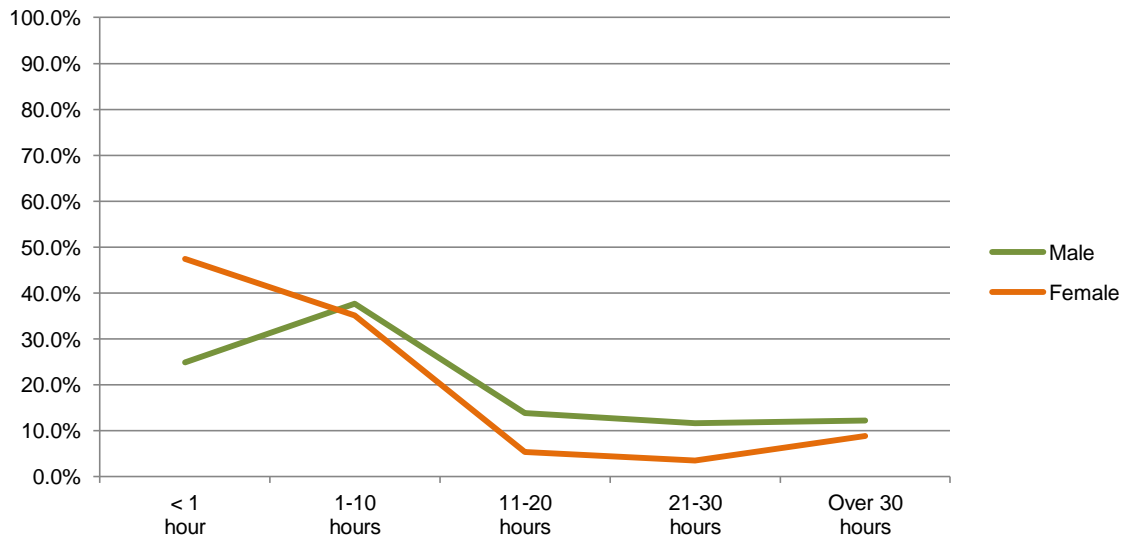
Number of weekly hours spent undertaking Internet gambling was significantly associated with gender, χ^2 (4, n=246) = 13.54, p<.01. Women were more likely to undertake Internet gambling for less than an hour a week (47.4%) than men (24.9%).

Figure 9.6 ii) Comparison of number of hours per week spent Internet gambling by gambling activity
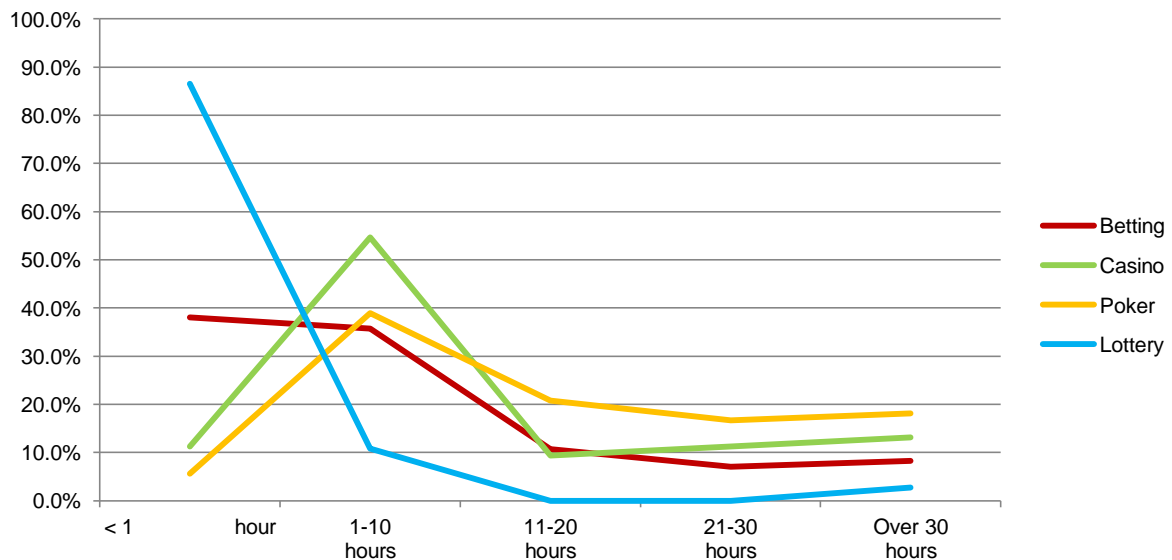
Number of weekly hours spent undertaking Internet gambling was significantly associated with main activity, χ^2 (12, n=246) = 96.64, p<.001. Lottery players were more likely to undertake Internet gambling for less than an hour a week (86.5%) than

bettors (38.1%), and both were more likely to do this than casino players (11.3%) and poker players (1.6%).

Hypothesis C23: Despite the amount of time NPG poker players spend on their gambling activity, PG poker players will spend more time gambling than NPG poker players.

PG poker players (N = 21, Mean Rank = 44.19) spent significantly more time than NPG poker players (N = 48, Mean Rank = 30.98) gambling each week, U = 697.00, p<.01 (one-tailed), r = -.31

Figure 9.6 iii) Comparison of number of hours per week spent Internet gambling by gambling level
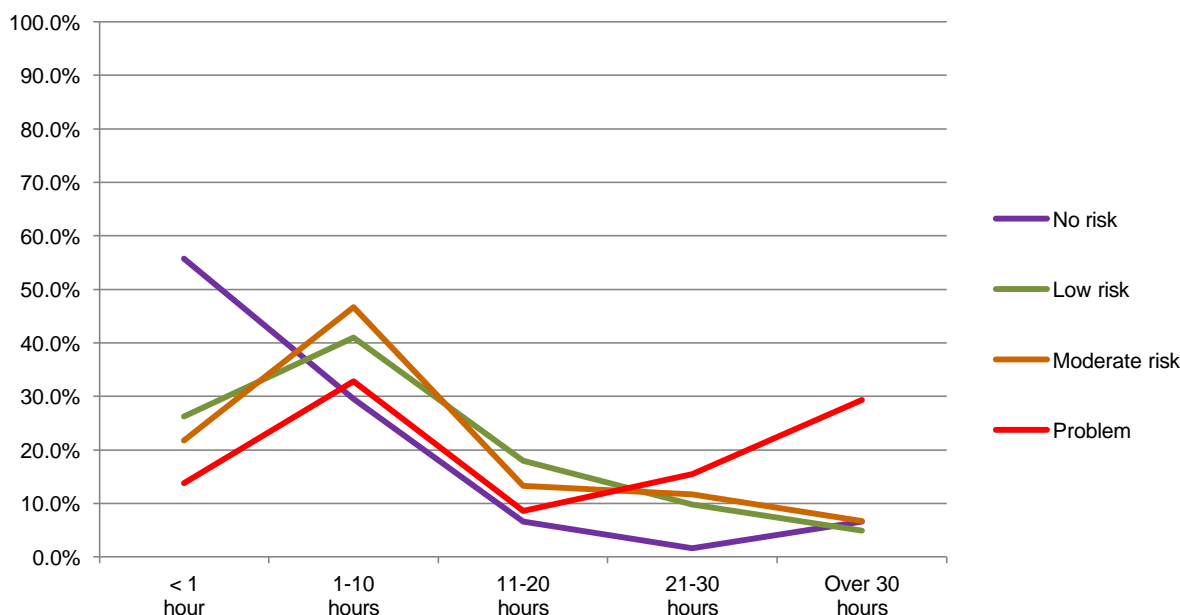
Number of weekly hours spent undertaking Internet gambling was significantly associated with gambling level, χ^2 (12, n=240) = 54.45, p <.001. Non-problem gamblers were more likely to undertake Internet gambling for less than an hour a week (55.7%) than low risk (26.2%), moderate risk (21.7%) and problem (13.8%) gamblers. Conversely, problem gamblers were more likely to undertake Internet gambling for over 30 hours a week (29.3%) than no risk (6.6%), low risk (4.9%) and moderate risk (6.7%) gamblers.

A Spearman's correlation established there was a moderate significant relationship between weekly time spent gambling and PGSI score, $r_s=.41$, $p<.01$, two tailed.

9.2.4 Experiences of and feelings about current Internet gambling

Participants were presented with a series of statements about how they felt when they were gambling on the Internet. Participants rated their degree of agreement or disagreement with each statement on a 5-point Likert scale. The statements were designed to assess the relative importance of feelings about skill, luck, winning, beating others, esteem and disassociation. Results for all participants are shown in Figure 9.7

Figure 9.7   Experiences of Internet gambling
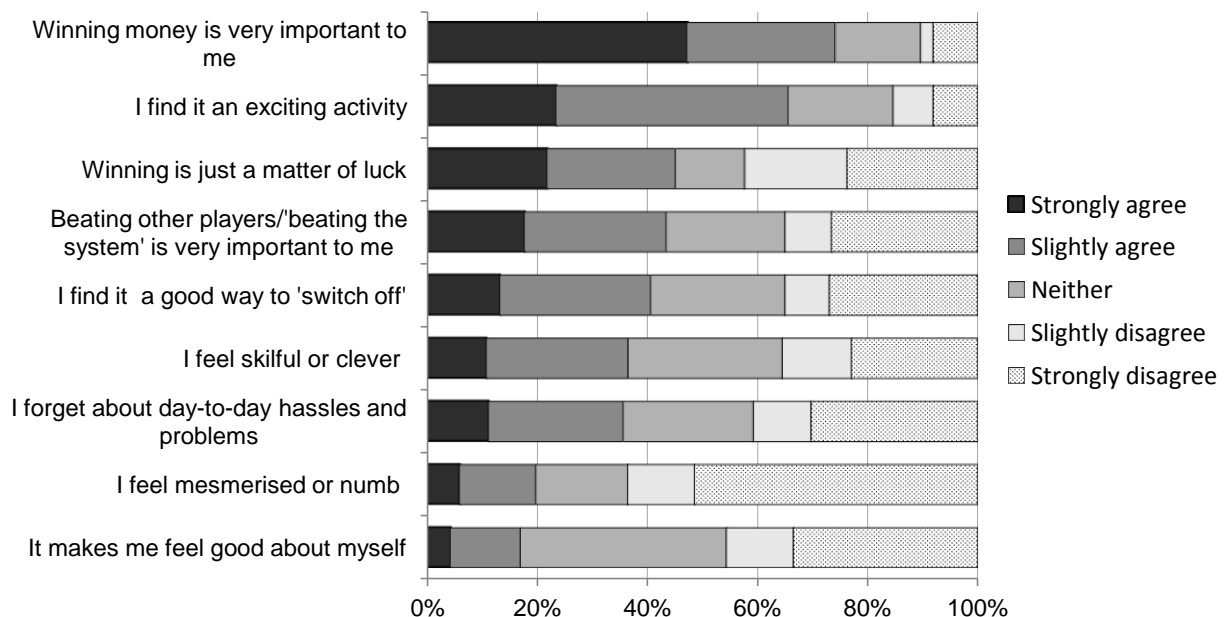
Participants indicated that winning money and excitement were relatively strong experiences of Internet gambling; 74% of participants strongly or slightly agreed that winning money was very important to them, and 65.5% strongly or slightly agreed that they found Internet gambling an exciting activity. By contrast, 43.5% strongly or slightly agreed that beating other players or 'beating the system' was very important to them.

Relatively few participants (17.1%) strongly or slightly agreed that gambling made them feel good about themselves. Relatively few participants (19.9%) strongly or slightly agreed that they felt mesmerised or numb when they gambled on the Internet. More participants (35.8%) strongly or slightly agreed that they forgot about problems and

hassles when they gambled, and slightly more again (40.6%) strongly or slightly agreed that it was a good way to 'switch off'.

Regarding skill and luck, 36.6% of participants strongly or slightly agreed that they felt skilful or clever when they gambled, whilst 35.4% strongly or slightly disagreed. Similarly, 45.2% strongly or slightly agreed that winning was a matter of luck, whilst 42.3% strongly or slightly disagreed.

a. Current experiences and feelings about IG by gender

Experiences of and feelings about current Internet gambling were analysed for men (n=189) and women (n= 57). Mean ratings of current IG experiences are shown in Figure 9.8i) and hypothesis-related Mann-Whitney tests are reported below.

Figure 9.8i)   Mean rating of current IG experiences by gender
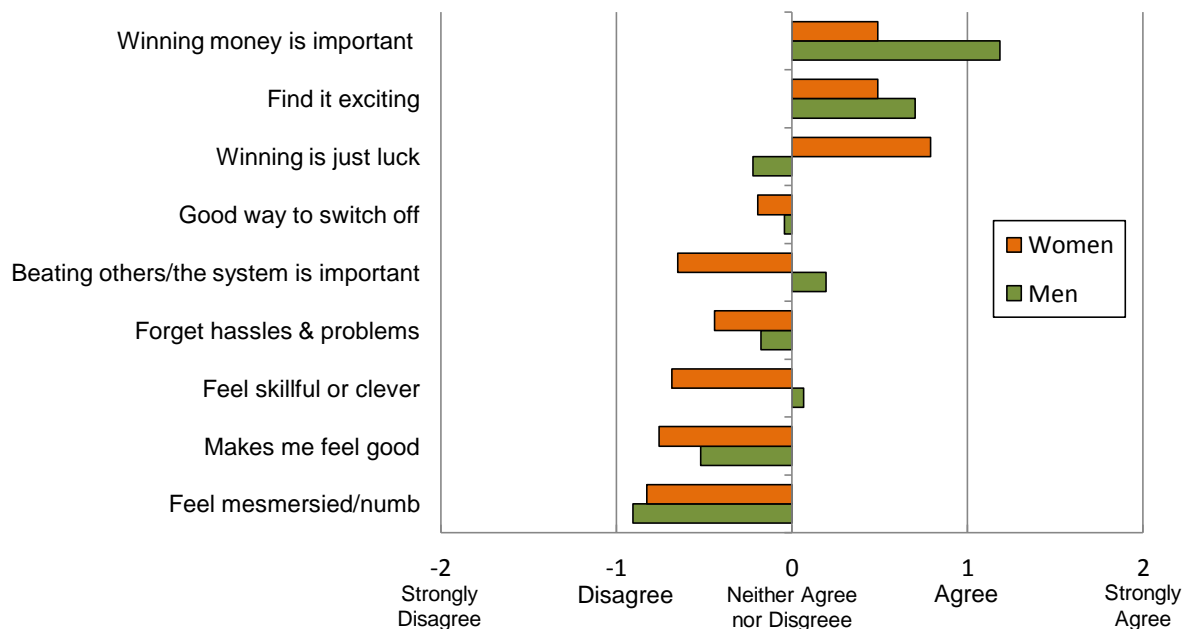
Hypothesis C13: Men and poker players will show more interest than women and players of other domains in playing for skill and skill validation reasons.

Men agreed (N=189, Mean Rank=131,48) significantly more than women (N = 57, Mean Rank = 97.04), that winning money was very important, U = 3878.5, p<.001 (one-tailed), r = -.22.

Men agreed (N = 189, Mean Rank = 133.04) significantly more than women ((N = 57, Mean Rank = 91.85) that beating other players or 'beating the system' was very important, U = 3582.50, p<.01 (one-tailed), r = -.25

Men (N = 189, Mean Rank = 132.9) agreed significantly more than women (N = 57, Mean Rank = 92.33) that they felt skilful or clever when gambling on the Internet, U = 3610.00, p<.01 (one-tailed), r = -.25.

By comparison, women (N = 57, Mean Rank = 159.08), agreed significantly more than men (N = 189, Mean Rank = 112.77) that winning was just a matter of luck, U = 3358.50, p<.01 (one-tailed), r = -.28

There were no significant differences between men and women on any of the other current Internet gambling factors.

b. Current experiences and feelings about IG by current main gambling domain

Experiences of and feelings about current Internet gambling were analysed for players of different gambling domains, betting (n=84), casino games (n=53), poker (n=72) and lotteries (n=37). Each item was analysed using a Kruskal-Wallis analysis with significant results followed up using Mann-Whitney tests. A Bonferroni correction for Type I errors was applied so all effects are reported at a .008 level of significance. Mean ratings of current IG experiences can be found in Figures 9.8ii), with hypothesis-related results for each main current gambling domain with reported below.

Hypothesis C13:   Men and poker players will show more interest than women and players of other domains in playing for skill and skill validation reasons.

There was no significant difference between players of different activities in the importance players placed on winning money.

The importance of beating other players or 'beating the system' was significantly different between players of different activities H(3) = 42.44, p<.001. Poker players agreed that beating others/the system was very important, significantly more than bettors (U = 1915, r = -.32), casino players (U = 1186.5, r = -.33) and lottery players (U = 441.5, r = -.56). In addition, bettors (U = 1009, r = -.29) and casino players (U = 648.5, r = -.30) agreed with the statement significantly more than lottery players.
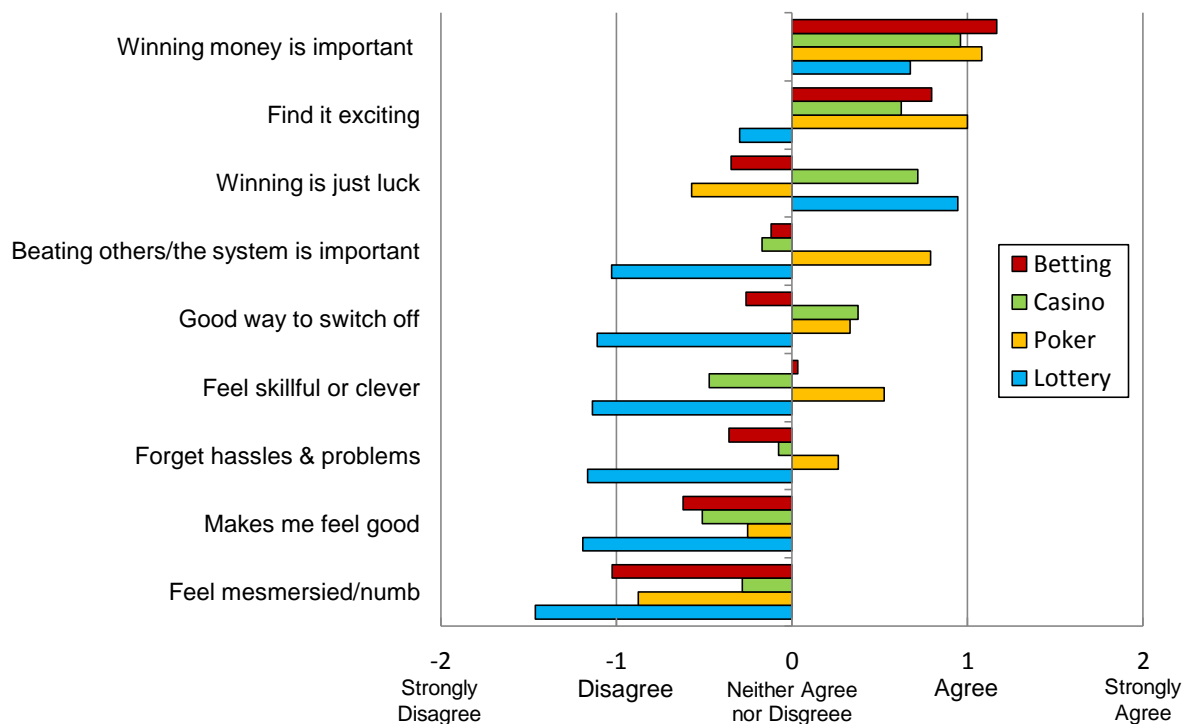
Feeling skilful or clever when gambling on the Internet was significantly different between players of different activities H(3) = 44.00, p<.001. Poker players agreed that they felt skilful or clever, significantly more than both casino (U = 1108, r = -.37) and lottery players (U = 391.5, r = -.56). In addition, bettors also agreed that they felt skilful or clever significantly more than lottery players (U = 767, r = -.42)

Believing winning is just a matter of luck was significantly different between players of different activities H(3) = 42.44, p<.001. Both lottery players and casino players agreed that they believed winning was a matter of luck significantly more than bettors (lottery: U = 787, r = -.24, casino:U = 1305.5, r = -.36) and poker players (lottery: U 552, r = -.46 casino: U = 975.5, r = -.43).

Feeling good about oneself while gambling on the Internet was significantly different between players of different activities H(3) = 16.25, p<.001. Poker players (U= 728, r = -.39) agreed that they felt good about themselves when they were Internet gambling significantly more than lottery players.

In addition there were a number of items where significant differences were found between current experiences of IG and main current gambling domain, where findings had not been predicted by a hypothesis. Full results of Kruskal- Wallis and Mann-Whitney tests are reported in Appendix K.

Poker players, bettors and casino players agreed that they found Internet gambling exciting significantly more than lottery players (r = -.47, r = -.37, r = -.34 respectively).

Casino players and poker players agreed that they found Internet gambling a good way to switch off significantly more than bettors (r = -.24, r = -.23 respectively).   Additionally, casino players, poker players and bettors found it a good way to switch off significantly more than lottery players (r = -.48, r = -.24, r = -.29 respectively)

Poker players, casino players and bettors agreed that they forgot about daily hassles when they were Internet gambling significantly more than lottery players (r = -.50, r = -.36, r = -.28 respectively).   In addition, poker players agreed with the statement significantly more than bettors (r = -.24)

Casino players agreed that they felt mesmerised or numb significantly more than bettors (r = -.24) and lottery players (r = -.40).

c. Current experiences and feelings about IG by gambling level

Experiences of and feelings about current Internet gambling were analysed for non-problem gambling (NPG, n=182) and problem gambling (PG, n= 58). Mean ratings of current IG experiences are shown in Figure 9.8iii), with Mann-Whitney tests reported below.

Hypothesis C15c: PGs will be more likely than NPGs to use Internet gambling to switch off, and forget about day to day hassles and problems

PGs agreed (N = 58, Mean Rank = 146.31) significantly more than NPGs (N = 58, Mean Rank = 112.27) that they found internet gambling a good way to switch off, U = 6775, p<.001 (one-tailed), r = -.22.

Figure 9.8 iii) Mean rating of current IG experiences by gambling level
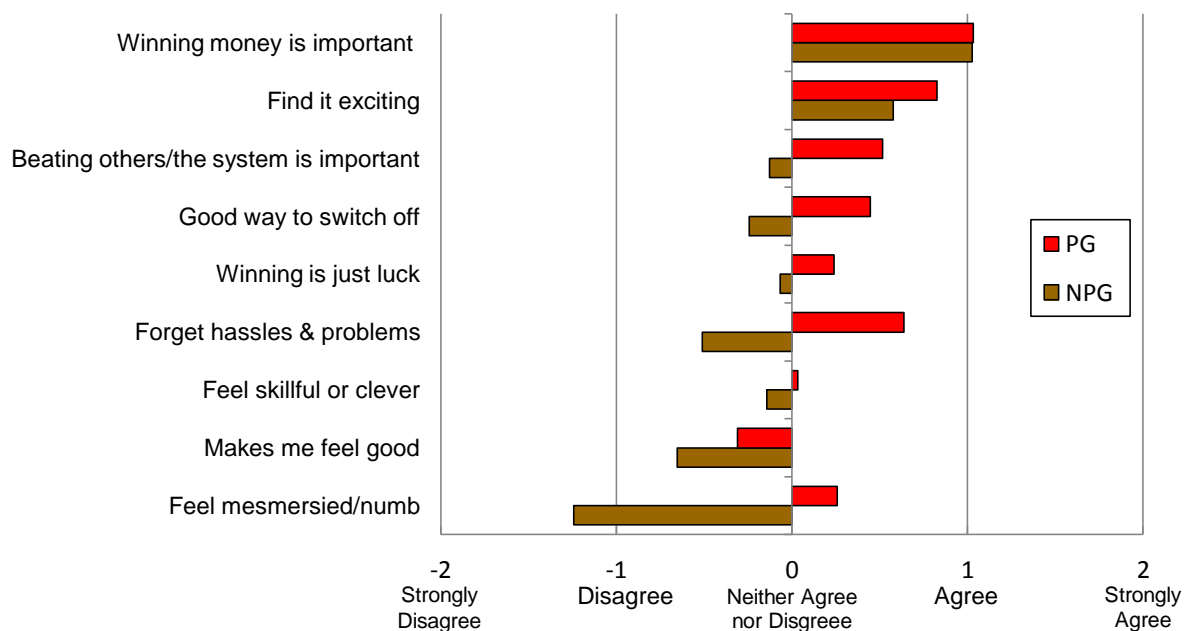
PGs agreed (N = 58, Mean Rank = 162.61) significantly more than NPGs (N = 182, Mean Rank = 107.08) they forgot about day to day hassles and problems when they gambled on the Internet, U = 7720.5, p<.001 (one-tailed), r = -.35.

Hypothesis C15d: PGs will be more likely than NPGs to feel detached from everyday life when Internet gambling.

PGs agreed (N = 58, Mean Rank = 173.52) significantly more than NPGs (N = 182, Mean Rank = 103.60) that they felt mesmerised of numb when they played, U = 8353.5, p<.001(one-tailed), r = -.47

In addition there was a significant difference between PGs and NPGs as follows. Although the finding had not been predicted by a hypothesis, the result is reported for completeness.

PGs agreed (N = 58, Mean Rank = 142.09) significantly more than NPGs (N = 182, Mean Rank = 113.62) that beating other players or 'beating the system' was very important, U = 4026, p<.01 (one-tailed), r = -..18

9.3   Events influencing increases and decreases in gambling

This section considers the influence of various experiences and events on increasing and decreasing gambling activity. Participants (N=240) were presented with a number of statements about various events over the last 12 months of their gambling activity. They were asked to identify 1) if the event had happened to them or not, and 2) if it had, whether they believed their gambling had increased, decreased or stayed the same as a result of the event.   This was measured on a 5-point Likert scale ranging from decreased a lot to increased a lot.

Specific hypotheses from the qualitative research (Section 6 Key findings C) are fully reported.   Exploratory results and novel findings are also reported, with tests and Figures reported in Appendix N.

Differences in the influence of each event across the three key variables have been tested using Chi-squared tests. Bonferroni adjustments were undertaken to test the significance of differences of variable levels. Tests were firstly undertaken to establish differences in whether the event had happened or not, i.e. whether there were differences in who actually experienced the event, by gender, gambling domain and gambling level. Tests were then undertaken to establish differences in the influence of each event experienced. The majority these secondary tests on influence were not statistically valid due to insufficient numbers in categories of interest.

The overall impact of each event on increasing or decreasing gambler involvement over the entire gambler group of interest are reported for each hypothesis, where relevant, and for all events in Section 9.3d.

Results for all participants (N=240) are presented in Figures 9.9a and 9.9b. The number of participants reported in the Figures reflects the number who experienced the event and rated the increase, decrease or no change in gambling involvement they attributed to the event. The actual number of participants who responded that the event had happened to them was slightly higher than reported in the Figures, as there was a small drop-out rate for some items between the first and second survey items (0-2.6%).

Figure 9.9   Events influencing increases and decreases in Internet gambling

a) Biggest effects on increasing gambling
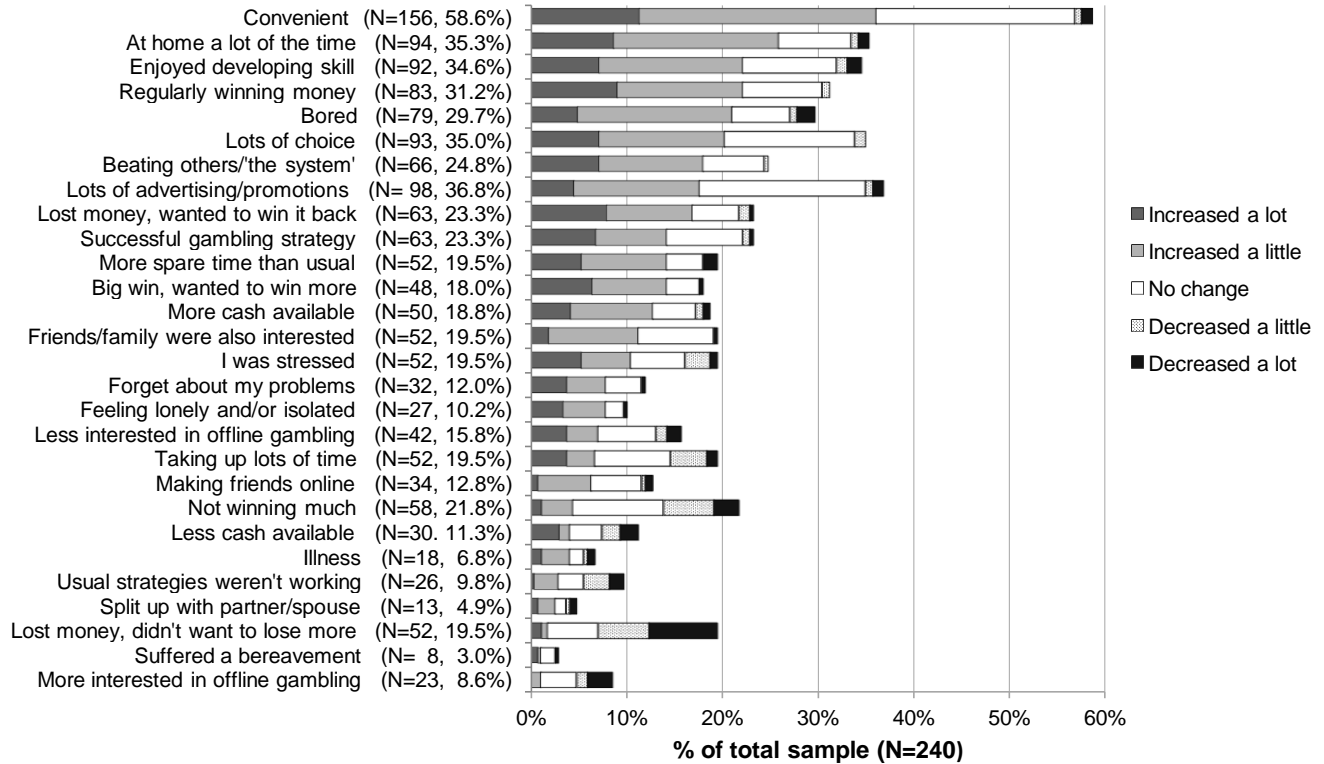
b) Biggest effects on decreasing gambling
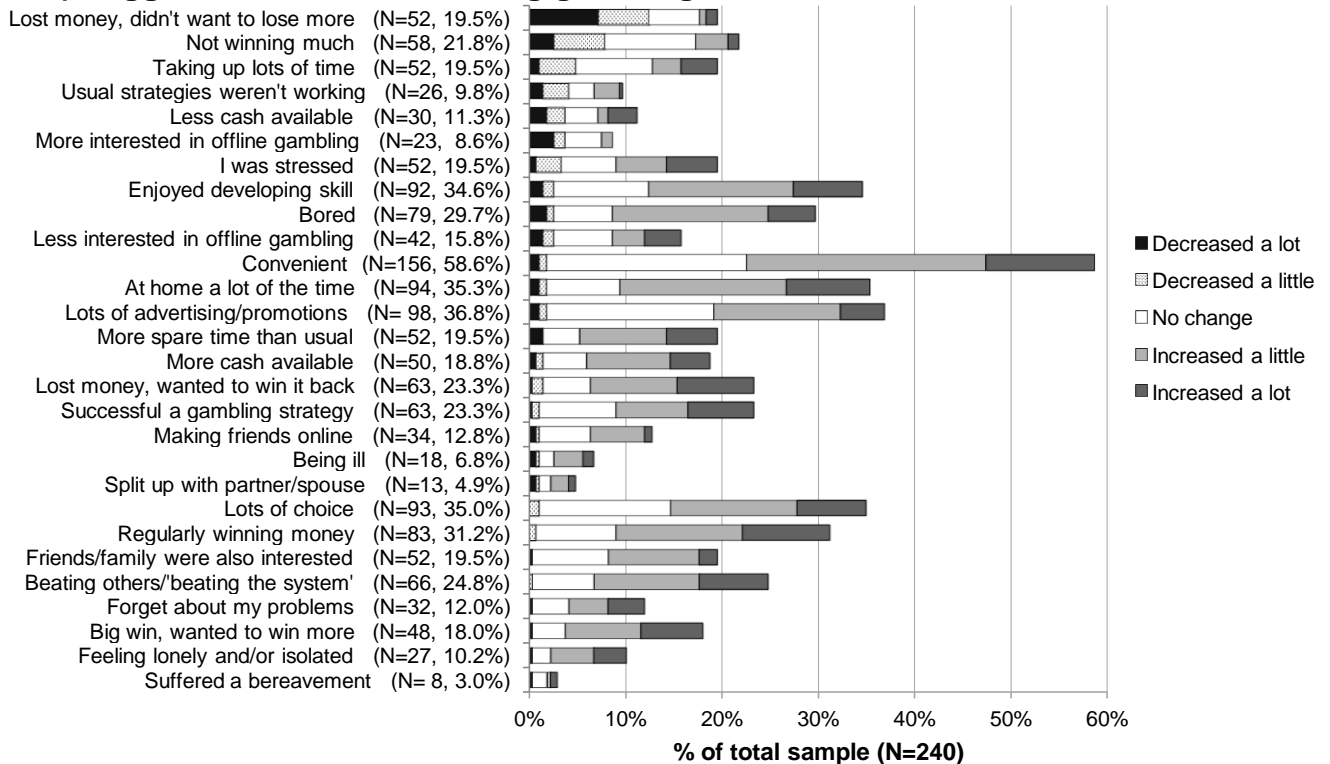
The events that were most commonly experienced during the last 12 months of gambling on the Internet were finding it convenient to gamble on the Internet

(experienced by 61.3%% of participants), seeing lots of advertising and promotions about Internet gambling (38.0%), being at home a lot of the time (37.6%), having lots of choice when gambling on the Internet (36.5%) and enjoying developing a skill (35.0%). Least commonly experienced events were suffering a bereavement (4.1%), splitting up with a partner (5.6%), being ill (7.9%), becoming more interested in offline gambling (8.6%) and usual gambling strategies not working (11.3%).

Hypothesis C18: More participants will indicate they had experienced the convenience of Internet gambling than any other feature of IG

Using Freidman's ANOVA, the relative experience of events influencing IG activity levels was found to be different, χ^2 (28, n=240) = 757.034, p<.001. Wilcoxon tests were used to follow up this finding relating to the convenience of using the Internet. A Bonferroni correction was applied, so all effects are reported at a .002 significance level. These indicated that that convenience was experienced significantly more often than all other events.

In terms of increasing gambling (Figure 9.9a), the events having the largest impact on influencing Internet gambling to increase, either a little or a lot, over the whole sample, were; convenience (influencing an increase in 36.1% of participants), being at home a lot of the time (26.0%), enjoying developing a skill (22.2%), regularly winning (22.2%) and being bored (21.1%). The impact of each event on those who had experienced it (see Figure 9.10) showed, 35.4% had 'increased a lot' due to experiencing a big win and wanting to win more, 33.9% due to losing money and wanting to win it back, 33.3% due to experiences of feeling lonely and/or isolated, and 31.3% due to experiences of forgetting their problems whilst they gambled.

In terms of decreasing gambling (Figure 9.9b), the events having the largest impact on influencing Internet gambling to decrease, either a little or a lot, over the whole sample, were; losing money and not wanting to lose more (influencing a decrease in 12.4% of participants), not winning much (7.9%), taking up lots of time (4.9%) and usual gambling strategies not working (4.1%). However the impact of each event on those who had experienced it (see Figure 9.10) showed , 36.5% had 'decreased a lot' due to losing money and not wanting to lose more, 30.4% due to an increasing interest in offline gambling, 16.7% due to having less cash available and 15.4% due to splitting up with

partner /spouse. Note, however, that having less cash available and splitting up with partner/spouse also influenced some participants experiencing these events to increase their gambling a lot (26.7% and 15.4% respectively).

Figure 9.10   Influence of each event experienced by participants

Influence on gambling involvement for participants experiencing each event
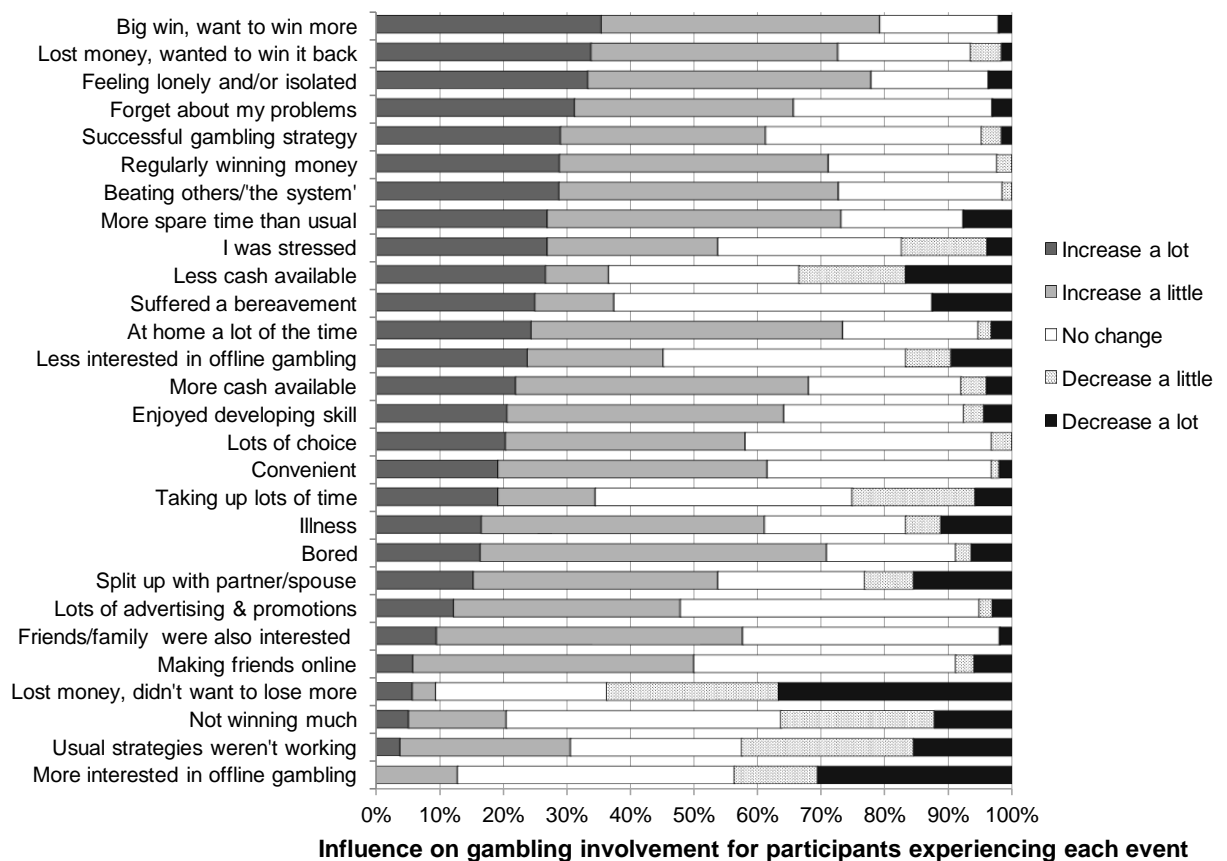
a. Events influencing change by gender

Experiences and events influencing change were analysed for men (n=185) and women (n= 55). Differences, in whether the events were experienced or not, were tested and hypothesis-related Chi-squared tests are reported below. Tests and descriptives for all events experienced are included in Appendix N, Table N1. No valid statistical results were obtained for differences between men and women in the influence of these events on increasing or decreasing gambling activity.

Hypothesis C13: Men and poker players will show more interest than women and players of other domains in playing for skill and skill validation reasons.

Men (47.0%) were significantly more likely to experience enjoying developing a skill than women (10.9%), χ^2 (2, n=240) = 23.30, p<.001.

Hypothesis C16a: Female casino games players will be more likely to experience, and be influenced to increase IG, by new social relationships made online, than men and players of other gambling activities.

Test for female and male casino games players invalid due to low sample numbers.

No significant difference in gender alone. Women did not experience making friends online more often than men.

Hypothesis C16b: Male bettors and poker players will be more influenced by existing 'live' relationships and social groups than women and players of other gambling activities.

Tests for female and male bettors and poker players were invalid due to low sample numbers. No significant difference in gender alone. Men did not experience interest from friends and family more often than women.

In addition to these hypothesis-related findings, there were a number of items where significant differences were found between men and women where findings had not been predicted by a hypothesis.

Men were more likely than women to experience success with a gambling strategy, lots of choice online, being less interested in land-based gambling, having strategies that weren't working, beating others/'beating the system' and regularly winning money. On the other hand, women were more likely than men to experience generally feeling bored.

b. Events influencing change by current main activity

Experiences and events influencing change were analysed by main gambling activity, betting (n=82), casino (n=52, poker (n=69), and lottery (n=37). Differences, in whether the events were experienced or not, were tested and hypothesis-related Chi-squared tests are reported below. Tests and descriptives for all events are included in Appendix N, Table N2. No valid statistical results were obtained for differences between main

gambling activity in the influence of these events on increasing or decreasing gambling activity, so descriptives are reported where relevant to the hypothesis.

Hypothesis C5: NPG poker players will have more regular wins than PG poker players and NPG players in other gambling domains.

A Chi-squared test conducted on the association between NPG main IG activity and experiencing regular wins was highly significant, χ^2 (3, n=240) = 61.76, p<.001. NPG poker players (58.3%) were more likely to experience regular wins than NPG bettors (29.4%) and NPG lottery players (8.8%), but not NPG casino players (40.6%).

Hypothesis C13: Men and poker players will show more interest than women and players of other domains in playing for skill and skill validation reasons.

A Chi-squared test conducted on the association between main IG activity and enjoying developing a skill was highly significant, χ^2 (3, n=240) = 46.04, p<.001. Poker players (69.6%) were more likely to experience enjoyment of developing a skill than bettors (34.1%), casino players (26.9%) and lottery players (8.1%).

Hypothesis C16a: Female casino games players will be more likely to experience, and be influenced to increase IG, by new social relationships made online, than men and players of other gambling activities.

Tests for female and male casino players were invalid due to low sample numbers.

A Chi-squared test conducted on the association between main IG activity and making friends online was highly significant, χ^2 (3, n=240) = 22.12, p<.001. Poker players (30.4%) were more likely to experience making friends online than bettors (8.5%) and lottery players (0%), but not casino players (15.4%). Casino players (15.4%) were more likely to experience making friends online than lottery players (0%)

New social relationships online influenced 66.7% casino players, 57.1% poker players, and 14.3% of bettors to increase their gambling.

Hypothesis C16b: Male bettors and poker players will be more influenced by existing 'live' relationships and social groups than women and players of other gambling activities.

Tests for female and male bettors and poker players were invalid due to low sample numbers.

Of marginal significance, a Chi-squared test was conducted on the association between main IG activity and friends and family interest in IG, χ^2 (3, n=240) = 8.12, p<.05. Poker players (31.9%) were more likely to experience interest from family and friends than lottery players (8.1%), but not bettors (23.2%) or casino players (17.3%). Casino players were more likely to than lottery players.

Friends and family interest in IG influenced 88.9% casino players, 66.7% lottery players, 57.1% poker players, and 42.1% of bettors to increase their gambling.

In addition there were a number of items where significant differences were found between players of different games where findings had not been predicted by a hypothesis.

Casino players were more likely than players playing in some other domains to experience losing money and not wanting to lose more, general boredom, forgetting about problems whilst gambling, having a big win and wanting to win more. Poker and casino players were more likely than bettors and lottery players to experience IG was time consuming and more likely than lottery players to be at home a lot of the time.

Poker players were more likely than players playing in all other domains to experience beating others and/or beating the system. Bettors, casino players and poker players were more likely than lottery players to experience IG offered more choice

Of marginal significance, casino players were more likely than lottery players to experience lots of advertising and promotions and more likely than bettors to feel lonely of isolated. Also of marginal significance, pokre player were more likely to develop a winning strategy than lottery players and were more likely to have friends and family interested in play that lottery players.

   c. Events influencing change by gambling level

Experiences and events influencing change were analysed for non-problem gamblers (n=182) and problem gamblers (n=58). Differences, in whether the events were experienced or not, were tested and hypothesis-related Mann-Whitney tests are

reported below. Tests and descriptives for all events are included in Appendix N, Tables N3. A few valid statistical results for influence of these events on increasing or decreasing gambling activity are reported; otherwise descriptives are reported where relevant to the hypothesis.

Hypothesis C3: PGs and NPGs will both reduce their IG when they have less money available, and escalate their IG when they have more money available, with PGs escalation stronger then NPGs.

Of marginal significance, PGs (29.3%) were more likely to experience having less cash available than NPGs (8.8%), χ^2 (2, n=240) = 15.62, p<.001. Having less cash available influenced 35.7% NPGs and 31.3% PGs to reduce their gambling. It also influenced 14.3% NPGs and 56.3% PGs to increase their gambling.

There was no significant difference between PGs and NPGs experiencing having more cash available. Having more cash available influenced 58.8% NPGs and 87.5% PGs to increase their gambling.

Hypothesis C5: NPG poker players will have more regular wins than PG poker players and NPG players in other gambling modes.

No significant difference between NPG poker players and PG poker players experiencing regular wins.

Hypothesis C6: PGs will be more likely than NPGs to escalate their gambling due to a big win and wanting to win again

PGs (32.8%) were significantly more likely to experience having a big win and wanting to win more than NPGs (16.5%), χ^2 (2, n=240) = 7.17, p<.01.

Having a big win and wanting to win more influenced 69.0% NPGs and 94.7% PGs to increase their gambling.

Hypothesis C8: PGs and NPGs will be equally likely to reduce gambling if they had lost money and did not want to lose more.

PGs (37.9%) were significantly more likely to experience having lost money and not wanting to lose more than NPGs (19.2%), χ^2 (2, n=240) = 8.49, p<.01.

Losing money and not wanting to lose more influenced 68.8% NPGs and 55.0% PGs to reduce their gambling. It also influenced 3.1% NPGs and 20.0% PGs to increase their gambling.

Hypothesis C9: PGs will be more likely than NPGs to escalate their gambling due to chasing losses.

PGs (44.8%) were significantly more likely to experience having losing money and wanting to win it back than NPGs (15.9%), χ^2 (2, n=240) = 53.74, p<.001.

Losing money and wanting to win it back influenced 51.9% NPGs and 88.6% PGs to increase their gambling

Hypothesis C15a: PGs will be likely to experience more difficult life events than NPGs.

Of marginal significance, PGs (15.5%) were more likely to experience illness than NPGs (6.6%), χ^2 (2, n=240) =4.38, p<.05.   Tests relating to experiencing bereavement and separating from partner/spouse were not valid due to low sample size.

Hypothesis C15b: PGs will be more likely than NPGs to escalate their Internet gambling after experiencing a difficult life event

Illness influenced 45.5% NPGs and 85.7% PGs to increase their gambling. Bereavement influenced 33.3% NPGs and 50.0% PGs to increase their gambling. Separating from partner/spouse influenced 50.0% NPGs and 57.1% PGs to increase their gambling

Hypothesis C15c: PGs will be more likely than NPGs to use Internet gambling to switch off, and forget about day to day hassles and problems

PGs (44.8%) were significantly more likely to forget about their problems than NPGs (4.9%), χ^2 (2, n=240) =56.16, p<.001.   Forgetting about problems when gambling influenced 44.4% NPGs and 73.9% PGs to increase their gambling

Hypothesis C15e: PGs will be more likely than NPGs to experience stress and escalate their gambling due to feeling stressed.

PGs (65.5%) were significantly more likely to experience stress than NPGs (15.9%), χ^2 (2, n=240) =53.24, p<.001.   PGs (74.2%) were also significantly more likely to

increase their gambling due to stress than NPGs (23.8%), χ^2 (2, n=52) = 24.60, p<.001, whereas NPGs (66.7%) were more likely than PGs (3.2%) to have stable gambling, neither increasing nor decreasing, when experiencing stress.

Hypothesis C21: PGs will be more likely than NPGs to escalate their gambling due to advertising and promotions

No significant difference in the likelihood of experiencing advertising and promotions. Advertising and promotions influenced 40.8% NPGs and 66.7% PGs to increase their gambling

Hypothesis C22: PGs and NPGs will both reduce their IG when they had less time available, and escalate their IG when they had more time available (not fully tested).

PGs (37.9%) were significantly more likely to have more time available than NPGs (19.8%), χ^2 (2, n=240) = 7.91, p<.01.

Having more time available influenced 57.6% NPGs and 100.0% PGs to increase their gambling

Hypothesis C23: Despite the amount of time NPG poker players spend on their gambling activity, PG poker players will spend more time gambling than NPG poker players.

PGs (50.0%) were significantly more likely to experience IG taking up lots of time than NPGs (14.8%), χ^2 (2, n=240) = 30.4, p<.001. A Chi-squared test conducted on the association between poker gambling levels and IG taking up lots of time was not significant.

In addition there were a number of items where significant differences were found between PGs and NPGs where findings had not been predicted by a hypothesis.

PGs were more likely then NPGs to experience feeling lonely and/or isolated, being at home a lot of the time, being bored, that gambling strategies weren't working and that they became less interested in land-based gambling. Of marginal significance, PGs were more likely that NPGs to find that there was lots of choice on the Internet.

PGs (52.9%) were also more likely than NPGs (7.3%) to increase their gambling when they were not winning much, χ^2 (2, n=58) = 15.3, p<.001.

        d.   Relative impact of events on increasing/decreasing gambling across all variables

The overall impact of each event considers the increase and decrease of gambling involvement for each event across all participants, both those who experienced it and those who did not. The impact for men, women, players of different games and NPGs and PGs is summarised below, with a full table across the three key variables reported in Appendix N, Tables N4 and N5, showing the relative impact of each event for each participant group.

Men (n=185) were most likely to increase their gambling due to the convenience of IG (42.2%), being at home a lot of the time (30.8%) and enjoying developing a skill (30.3%). Women (n=55) were most likely to increase their gambling due to the convenience of IG (32.7%), being bored (29.1%, and being at home a lot of the time (21.8%)

Bettors (n=82) were most likely to increase their gambling due to the convenience of IG (45.1%), having lots of choice online (29.3%) and seeing lots of advertising and promotions (24.4%). Casino players (n=82) were most likely to increase their gambling due to the convenience of IG (44.2%), being bored (36.5%) and being at home a lot of the time (34.6%). Poker players (n=69) were most likely to increase their gambling due to enjoying developing skill (52.2%), beating others/'beating the system' (47.8%), and regularly winning and being at home a lot of the time (both 42.0%). Lottery players (n=37) were most likely to increase their gambling due to the convenience of IG (21.6%) and being at home a lot, being bored and feeling stressed (all 10.8%).

NPGs (n=182) were most likely to increase their gambling due to convenience (36.8%), enjoying developing a skill (23.6%) and regularly winning money. PGs (n=58) were most likely to increase their gambling due to chasing losses (53.4%), convenience(50%) and being at home a lot of the time (50%).

Reasons for decreasing gambling generally applied to smaller percentages of participants. Losing money and not wanting to lose more, not winning much and IG taking up too much time were the prime reasons for reducing gambling.

Chi-squared tests were undertaken across all variables to test difference in the overall impact of different events in influencing a change in gambling across the all participants (N=240) in the three key variables. Due to the small sample sizes, only three tests were valid, as reported below.

> There was no significant difference in the influence of enjoying developing skill between of NPGs and PGs. Enjoying developing skill was equally likely to influence an increase in gambling for NPGs (23.6%) and PGs (27.6%).
>
> Men (30.3%) were more likely than women (5.5%) to increase their gambling due to enjoying developing skill, χ^2 (3, n=240) = 22.31, p<.001
>
> PGs (15.5%) were more likely than NPGs (1.6%) to increase their gambling due to not winning much, χ^2 (3, n=240) = 18.40, p<.001

Note that Tables N4 and N5 in Appendix N, which identify the impact of events on increasing and decreasing gambling involvement, also identifies the which events correspond to the seven categories of change, namely; Financial interests and concerns; Enjoyable leisure activity; Skill development; Life events, emotions and escape; Social influence; Utility of Internet gambling features; and, Time, as defined and explained in Chapter 6.

9.4 Summary of Hypothesis support

Hypotheses were tested by a variety of means across the survey. Results relating to Internet gambling initiation are summarised in Table 9.8a, and relating to seven categories of change in gambling involvement in Table 9.8b.

Table 9.8a: Summary of support for hypotheses relating to initiating Internet Gambling

B2: PGs will be influenced more strongly than NPGs to initiate Internet gambling due to advertising and promotions.	**Supported**
B3a: Convenience will be the strongest influence for initiating Internet gambling	**Some support** Convenience was a stronger influence than all initiation reasons other than fun and entertainment, the opportunity to make money and 'just fancying doing it'.
B3b: Convenience and choice will be a stronger influence on initiating Internet gambling for bettors than gamblers in other domains.	**Mostly supported** Bettors were influenced more by convenience than casino players and poker players, but not lottery players. Bettors were influenced more by choice than gamblers in all other domains.
B4: NPGs will be influenced more strongly than PGs to initiate Internet gambling due to a transfer of offline activities.	**Rejected.**
B5: NPGs will be influenced more strongly than PGs to initiate Internet gambling due to recommendations, being shown how to play and joining in Internet gambling activities with friends and family.	**Rejected**
B6: Poker players will be more strongly influenced than gamblers from other domains to initiate Internet gambling to practice for live play and to initiate by playing for points or play money.	**Partially supported.** Poker players were more likely to play to practice for live play than lottery players. Poker players were more likely to play for points/ play money then gamblers in all other domains. They were more likely to initiate gambling after successful play for points/play money than bettors and lottery players.
B7a: Poker players will be more likely than gamblers from other domains to initiate play to beat other players.	**Supported**
B7b: Bettors will be more likely than gamblers from other domains to initiate play to 'beat the system'.	**Rejected**
B7c: Poker players and bettors will be more likely than gamblers from other domains to initiate play for skill-related reasons, the opportunity to make money and because they anticipate more success on the Internet.	**Some support, mostly rejected** Poker players and bettors were more likely to be influenced by learning a new skill than lottery players.
B8a: For the vulnerability-compensation effect, there will be an association	Supported

between the influence of loneliness/social isolation and thinking that Internet gambling would provide the opportunity to make contact with other people.	
B8b: For the vulnerability-compensation effect, there will be associations between (i) the influence of boredom and thinking that Internet gambling would be fun and entertaining and (ii) the influence of boredom and thinking it would be interesting to do something new or learn a new skill.	**Supported**
B8c: There will be factor analysis evidence for clusters of initiation groups that support the concept of a vulnerability-compensation effect.	**Supported**

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Table 9.8b: Summary of support for hypotheses relating to seven categories of stability and change in Internet gambling Involvement

Financial Interests and Concerns	
C3: PGs and NPGs will both reduce their IG when they have less money available, and escalate their IG when they have more money available, with PGs escalation stronger then NPGs.	**Not fully tested. Some support** PGs were more likely than NPGs to experience having less cash available Descriptives indicated NPGs and PGs similarly likely to reduce gambling when less cash available, but PGs more likely than NPGs to increase their gambling. No difference between PGs and NPGs experience of having more cash available. Descriptives indicated PGs more likely to increase gambling if have more cash available.
C5: NPG poker players will have more regular wins than PG poker players and NPG players in other gambling domains.	**Some support** No difference between NPG and PG poker players NPG poker players more likely to experience regular wins than NPG bettors and lottery players, but not NPG casino players
C6: PGs will be more likely than NPGs to escalate their gambling due to a big win and wanting to win again	**Not fully tested. Some support** PGs were more likely than NPGs to experience a big win and want to win again Descriptives indicated PGs more likely than NPGs to increase gambling
C8: PGs and NPGs will be equally likely to reduce gambling if they had lost money and did not want to lose more.	**Not fully tested. Some support** PGs more likely than NPGs to experience having lost money and not wanting to lose more Descriptives indicated NPGs were more likely than PGs to decrease their gambling, whereas PGs were more likely than NPGs to increase gambling
C9: PGs will be more likely than NPGs to escalate their gambling due to chasing losses.	**Not fully tested. Some support** PGs more likely to experience having losing money and wanting to win it back than NPGs Descriptives indicated PGs were more likely than NPGs to increase their gambling
Skill development	
C13: Men and poker players will show more interest than women and players of other domains in playing for skill and skill validation reasons.	**Supported**
Life events, emotions and escape	
C15a: PGs will be likely to experience more difficult life events than NPGs.	**Not fully tested. Some support** PGs were significantly more likely to experience illness than NPGs
C15b: PGs will be more likely than NPGs to escalate their Internet gambling after experiencing a difficult life event	**Not fully tested.** Descriptives indicated Illness , bereavement and separating from partner/spouse was more likely to influence an increase in gambling in PGs than NPGs
C15c: PGs will be more likely than NPGs to use Internet gambling to	**Supported**

switch off, and forget about day to day hassles and problems	
C15d: PGs will be more likely than NPGs to feel detached from everyday life when Internet gambling.	**Supported**
C15e: PGs will be more likely than NPGs to experience stress and escalate their gambling due to feeling stressed	**Supported**
Social influence	
C16a: Female casino games players will be more likely to experience, and be influenced to increase IG, by new social relationships made online, than men and players of other gambling activities.	**Not fully tested. Some rejection**. Gender differences rejected Main activity differences rejected
C16b: Male bettors and poker players will be more influenced by existing 'live' relationships and social groups than women and players of other gambling activities.	**Not fully tested. Some rejection**. Gender differences rejected Main activity differences rejected
Utility of Internet gambling features	
C18: More participants will indicate they had experienced the convenience of Internet gambling than any other feature of IG.	**Supported**
C21: PGs will be more likely than NPGs to escalate their gambling due to advertising and promotions.	**Not fully tested** Descriptives indicated advertising and promotions were more likely to influence an increase in gambling in PGs than NPGs
Time	
C22: PGs and NPG will be both reduce their IG when they had less time available, and escalate their IG when they had more time available	**Not fully tested. Less time available not tested.** PGs were more likely than NPGs to experience having more time available Descriptives indicated PGs more likely then NPGs to increase gambling if have more time available.
C23: Despite the amount of time NPG poker players spend on their gambling activity, PG poker players will spend more time gambling than NPG poker players.	**Mixed findings** There was no difference between PG and NPG poker players' experience of Internet gambling taking up lots of time PG poker players were likely to spend more hours gambling per week than NPG poker players

Note - 'Not fully tested' indicates events that could not be statistically tested due to low numbers of participants in the gambling categories of interest

9.5   Preliminary discussion – Quantitative survey

This discussion identifies how the quantitative findings confirm and support the qualitative findings. It integrates the findings from both elements of the research, and considers these in the context of existing research.

The quantitative findings confirmed the initiation phase was characterised by gamblers having multiple reasons for initiating gambling. The strongest influences on IG initiation were convenience, the opportunity to make money, fun and entertainment, and acting on an impulse to initiate Internet gambling. The role of the convenience of the Internet as a motivator for Internet gambling was identified as being key in the qualitative research and is widely documented in existing literature, (e.g. Griffiths & Barnes, 2008; McCormack & Griffiths, 2012a). Monetary reasons for initiating gambling were highly apparent in the qualitative findings in terms of wanting to win money, better opportunities to make money and greater value for money. Monetary motives for gambling are also widely supported in research literature (e.g. McCormack & Griffiths, 2014; Dechant & Ellery, 2011; Wardle et al., 2008, 2010). Clarke et al. (2007), specifically supports monetary reasons as being a prime motivator for initiating gambling.

Advertising and promotions were seen as key qualitative factors for influencing gambling initiation. Promotions were the fifth strongest influence on IG initiation of the twenty tested, and advertising was the tenth, supporting the qualitative view that adverting and promotions have different influences on gambling initiation, with promotions influencing the value for money and monetary motive, and advertising influencing more broad knowledge about accessibility and availability of IG. The findings confirm the key motivators identified 'for gambling' in existing research apply to motivation for IG initiation, with an added dimension of an impulsive reaction to start.

Quantitative findings confirmed that men were more likely than women to initiate IG due to increased gambling choice available online, opportunity to make money and wanting to beat the system/others. Women were more likely than men to initiate IG due to recommendations from others and boredom. Men were more likely to initiate and remain playing in betting and poker domains whereas women were more likely to initiate and remain in the casino and lottery domains. Men were more likely to have been

gambling on the Internet for longer than women, with women more likely to have initiated IG in the past 2 years. Men generally appeared to have more competitive, skill-related and practical influences for initiating IG than women whereas women appeared to have more social, mood and luck-oriented influences than men. This supports findings by Lloyd et al. (2010b) which highlight that amongst a sample of Internet gamblers, women were more motivated to gamble for mood regulation whereas men were more motivated by monetary objectives and enjoyment. Stewart and Zack (2008) also found PG women scored more highly on coping and social motives, and PG men scored more highly on enhancement motives, where positive emotions were increased. It seems therefore that men and women have different motives for initiating IG which are similar to motives for gambling found in other research, whether men and women were land-based or Internet gamblers, PGs or non-problem gamblers (NPGs) (e.g. McCormack, Shorter & Griffiths, 2012: Heater & Patton, 2006: Grant & Kim, 2002; Potenza et al., 2001; Trevorrow & Moore, 1998).

The research findings support the view that these motivations play a role in gambling initiation, and are not necessarily effects of IG on individuals, motivating IG continuation, but are potentially more of an effect of pre-existing gender differences. This has implications for future gambling research in that due to these fundamental differences, men and women should not be treated as a homogenous IG research group and gender comparisons are relevant as a fundamental consideration when undertaking gambling research.

Supported hypotheses also confirmed that bettors were more influenced than poker, casino and lottery players to initiate IG for the additional choices and convenience that the Internet offered. Bettors were more likely to have been gambling for eight years or more than players from other domains. These findings are comparable to the findings for men, and reflect that, for the sample in the quantitative research as well as in the sample for the qualitative research, betting was a highly male-dominated activity, with choice and convenience being particularly strong motivators for IG initiation in experienced offline gamblers.

Poker players were more likely than players in other domains to play with points or play money and to initiate gambling after they had experienced some success. They were

also more likely to be influenced to initiate IG because they wanted to beat other players, and for fun, entertainment and skill motivations. There is little existing research that analyses the differences between gamblers in terms of their main gambling activity, and even less that specifically considers IG initiation. However, existing research does confirm that choice and convenience are important structural characteristics that underpin Internet gambling (McCormack et al., 2014; McCormack & Griffiths, 2012a; Griffiths & Barnes, 2008), that bettors are typically long term gamblers (Lloyd et al., 2010b) and that poker players view poker as a highly skilled, competitive game (Bouju et al., 2013; McCormack & Griffiths, 2012b; Parke & Griffiths, 2011a; Griffiths & Barnes, 2008). Additionally, considering IG initiation differences, Casino players were more influenced to initiate IG than players in other domains by advertising, loneliness and boredom. The casino domain includes a higher proportion of PGs than other domains, and for PGs these three influences were significantly higher than for NPGs and had the three largest effect sizes. It is likely that there is an interaction between Casino players, gambling level and gambling initiation due to advertising, loneliness and boredom.

PGs were more influenced than NPGs to initiate IG due to advertising and promotions, recommendations, boredom, feeling lonely or isolated, anticipating fun and entertainment, because of the smoking ban, wanting to practice offline play, having success with virtual stakes, having greater opportunity to make money, anticipating greater success on the Internet, having more choice on the Internet, wanting to beat the system and wanting to beat other players. This level of multiple influence was not evident in any of the other groups tested. Multiple motivations for gambling by PGs have been apparent in other research; for example, Stewart and Zack (2008) found that PGs scored higher on each scale of their Gambling Motives Questionnaire than NPGs. Clarke et al. (2007) and Lloyd et al. (2010b) both found that motivations for gambling amongst PGs were not necessarily different to NPGs, just that PGs' motivations were usually rated more highly and were therefore considered to be stronger; a quantitative rather than qualitative difference. This greater causality and motivation for gambling experienced and reported by PGs may reflect that PGs by some circumstance do experience multiple motivations for taking up gambling, perhaps being more sensitive to influences than NPGs. Alternatively, as this is a retrospective self-report study, as are the vast majority of studies on gambling motivation, PGs may have identified multiple explanations for their out-of-control gambling. This may be particularly true for problem

gamblers undergoing treatment who are encouraged to soul-search and identify cause-and-effect relationships in an attempt to understand their gambling behaviour.

Quantitative findings identified that reasons for initiating Internet gambling could be grouped into six factors, namely; *competitiveness, social introduction, increased utility, alternative social environment, value for money* and *needing something to do*. The *competitiveness* factor and the *needing something to do* factor were associated most strongly with poker players and PGs, whereas the 'alternative social environment', factor was associated with casino games players and PGs. 'Increased utility' was associated most strongly with men, bettors, longer term gamblers initiating gambling over eight years ago and gamblers transferring their gambling activities from land-based to the Internet. The 'value for money' factor was also associated most strongly with men. 'Social introduction' was associated most strongly with players in the 18-34 age bracket and players from ethnic minorities. The quantitative factors cut across the qualitative sub-categories of gambling initiation identifying how particular aspects of advertising, the utility of IG, social introductions, thinking about winning and counteracting loneliness and boredom were linked together. These factors are novel findings and could be used to identify different groups of gamblers at the outset of gambling to predict their probability of problem gambling development, and target relevant responsible gambling interventions.

From the qualitative analysis, continuation, reduction and escalation of IG involvement was influenced by a number of events, analysed into seven categories; *Financial interests and concerns; Enjoyable leisure activity; Skill development; Life events, emotions and escape; Social influence; Utility of Internet gambling features*; and *Time*. Elements of a continuing vulnerability-compensation effect were seen within these factors. Testing of hypotheses within the seven event categories influencing stability and change of gambling involvement was split into firstly identifying differences in whether events within the category had been experienced, and, secondly, if they had, whether they had influenced a change in gambling involvement. As the survey questions were framed in terms of 'did you experience this event?' followed by 'did your gambling involvement increase, decrease or stay the same as a result of this event?', some causality is implicit within the question framing. A combination of the experience and its influence gave an indication of the relative impact of categories over Internet

gamblers. The testing was conducted in this way as occurrence of events could be satisfactorily statistically tested for most groups, however the change in gambling involvement was less successfully tested due to low numbers of participants experiencing some events. The impact of events tested within each category is therefore a descriptive indicator in the majority of cases. Little empirical work has been undertaken on comparing reasons for increasing and decreasing gambling involvement in different groups of gamblers, making these findings novel.

Financial interests and concerns. This category reflected the role of money in gambling in terms of the availability of funds, setting limits and winning and losing. PGs were more likely than NPGs to experience, having less cash available, a big win and wanting to win again, losing money and not wanting to lose more, and losing money and wanting to win it back. Descriptives indicated PGs were more likely to increase their gambling due to these experiences than NPGs. Losing money and wanting to win it back was the top impact item for increasing gambling in PGs, supporting existing research on the role of chasing losses being one of the key markers of problem gambling (e.g. Rogers, 1998; Turner, 1998).

Men were more likely than women, and poker players were more likely than bettors and lottery players, to experience regularly winning money. This suggests men and poker players have the most financial success at Internet gambling, although it has to be considered that the gambler's fallacy, as described by Kahnemann and Tversky (1982), and Toneatto (1999), may have a role to play here. Regularly winning money was in the top three impact items for increasing gambling in men, NPGs and poker players. Not winning much was in the top three impact items for decreasing involvement in men and NPGs, and across all main gambling domains. Losing money and not wanting to lose more, was the top impact item for decreasing involvement for PGs, NPGs, men, women, bettors and casino players, and was in the top three for decreased involvement in poker and lottery players. Overall, men appeared more likely to be influenced by financial interests than women.

These findings gave support for the central role of Financial interests and concerns in influencing both increases and decreases in gambling involvement, which included influencing PGs' involvement in different ways to NPGs'. As suggested by Braveman

and Shaffer, 2010, behaviour related to financial aspects of Internet gambling may provide the best markers for predicting later problem gambling behaviours.

Enjoyable leisure activity. This category included the view of IG in terms of the enjoyment it could provide which maintained IG involvement, and how it changed over time, with the experience of enjoyment often decreasing as gambling became problematic. This was a late emerging category and was not directly tested in the questionnaire. Enjoying developing skill was the most representative item of Enjoyable leisure activity in the scale, reported as part of the Skill development category.

Skill development. Skill development provided interest and enjoyment in gambling, and skill was validated by wins. Skill development as a motive was dominated by men and poker players. Poker players were most likely believe that beating others/the system was important, and to feel skilful and clever when they gambled. In addition, men and poker players were more likely to actually experience beating others/'the system' and experience the enjoyment of developing a skill. This reflects findings in existing research on IG poker players. (Bouju et al., 2013; McCormack & Griffiths, 2012b; Parke & Griffiths, 2011a; Griffiths & Barnes, 2008). Men were more likely to believe that beating others/the system, winning, and feeling skilful and clever when they gambled, were important, whereas women were more likely to believe winning was just a matter of luck. This supports previous findings on skill, luck and gender (e.g. McCormack et al., 2012; Wardle et al., 2010; Heater & Patton, 2006: Grant & Kim, 2002; Potenza et al., 2001; Trevorrow & Moore, 1998). Descriptives indicated gambling for skill motivations was the top impact item for increasing involvement in poker players and the second impact item for increasing involvement in NPGs.

These findings gave some support for skill development, including skill validation, being a key feature influencing gambling involvement for men and poker players, and less so, NPGs. However, the findings for NPGs are mixed, as whilst skill development was in the top three impact items for increasing involvement of NPGs, there was a similar rate of increase in PGs, but this was not in their top three impact items, as other items had a stronger influence.

Life events, emotions and escape. This qualitative category reflected how everyday hassles, problems and life events could affect IG. In many cases difficult events and circumstances resulting in negative emotional states, could be put to one side, ignored or escaped from while undertaking IG. PGs were more likely to experience illness, stress, boredom and loneliness than NPGs. PGs were also more likely than NPGs to switch off, forget day-to-day hassles and problems, and feel mesmerised or numb when they gambled on the Internet, with effect sizes increasing the more detached a PG felt. This is similar to existing research findings on the role of escape (e.g. Canale et al., 2015; Wood & Griffiths, 2014, 2009; Wardle et al., 2010; Stewart & Zack, 2008)

In terms of increasing and decreasing involvement, PGs were more likely than NPGs to increase their gambling due to stress. Descriptives indicated that illness, boredom and loneliness, had more impact on increasing gambling in PGs than NPGs. However, none of these life events and circumstances were in the top three impact items for PGs or NPGs. Stress was in the top three impact items for decreasing gambling in PGs. Stress appeared to have a varied impact on PGs, with the actual impact on increasing gambling involvement being higher than the impact on decreasing, but not in the top three impact items for increasing as other items had a stronger influence. This pattern was also seen in women and poker players. Understanding how stress can both increase and decrease gambling involvement in PGs may be of further research interest.

Women experienced more boredom than men and descriptives indicated that boredom was in the top three strongest impact items for increasing involvement in women. In addition, Casino game players were more likely to experience boredom than bettors and lottery players, with descriptives indicating this was in the top three strongest impact items for increasing involvement in Casino players.

These findings provided some support for the role of the Life events, emotions and escape category in influencing change in involvement, in particular for PGs, and to a lesser extent, women and casino gamblers. Evidence for the influence of stress on both increasing and decreasing gambling involvement was particularly notable.

Social influence. This category captures how Internet gamblers were influenced by social relations and interactions with other people both in person and online. Poker players were more likely to experience making friends online than bettors and more likely to have friends and family interested in online play than lottery players.   This reflects the social element of poker where players regularly playing and interacting with other during play, and discuss games and develop skills in poker forums, as found in other research (Parke & Griffiths, 2011a). Descriptives indicated that for poker players the impact of both of these events on increasing involvement was higher than for players in other domains. However, for all gambling groups, the impact of this category was not in the top three and its effect on influencing change was moderate to low.

Whilst social influence appeared in this research to have a role in initiating Internet gambling, it appears to have a much lesser role in change of gambling involvement. Qualitative findings supported this, indicating the Social influence category was more related to stable maintenance and continuation of gambling involvement, rather than influencing change. This is supported by Ocean and Smith (1993) suggesting that social facilitation may have role in the uptake of gambling, as suggested by this research, and Griffiths (1990) suggesting social facilitation may not have a role in problem gambling as problem gambling is more likely to be associated with gambling in a solitary way.

Utility of Internet gambling. The findings provided some support for the role of the Utility of Internet gambling in influencing change in gambling involvement. The role of convenience and choices available in Internet gambling is well-documented in other research (e.g. Griffiths & Barnes, 2008: McCormack & Griffiths, 2012a: Gainsbury et al., 2012).

The utility of IG included the features that affected how IG was undertaken. This included features of the Internet in general, of IG sites, and of different IG activities. Convenience was the event experienced by more gamblers than any other event, as found in existing research by McCormack et al., 2012.   Descriptives indicated convenience had the strongest impact on increasing gambling in men, women, NPGs, bettors, casino and lottery players, and had the second strongest impact on PGs. Having lots of choice was experienced more by men than women, more by bettors,

casino and poker players than lottery players, and more by PGs than NPGs. Descriptives indicated that choice was in the top three impact items for increasing involvement in bettors. Advertising and promotions were experienced more often by casino players than lottery players and descriptives indicated it was in the top three strongest impact items for increasing involvement in bettors, influencing increases at a similar rate to casino players, although not in their top three impact items as other items had a stronger influence.

Time. Qualitative research identified that time had two interactive aspects to it; firstly how the availability of time influenced IG and secondly, how IG influenced the availability of time. PGs were more likely than NPGs to have more spare time available, to be at home a lot of the time and to experience Internet gambling taking up lots of time. Poker players and casino gamblers were more likely than bettors or lottery players to find Internet gambling was taking up lots of time and more likely than lottery players to be at home a lot of the time. Descriptives indicated that that being home a lot of the time was in the top three impact items for increasing gambling in men, women, poker, casino and lottery players, and PGs. This provided some support for the role of Time in influencing change in gambling involvement, although having less spare time available was not tested.   Research from the BGPS- 2010, support the role of having more time available as a reason for increasing gambling involvement, although friends and family, wanting to gamble more, having more money and having more opportunities to gamble were rated by more gamblers as influencing an increase (Wardle et al., 2010).

Overall some support was found for each of the seven stability and change categories from the qualitative research, but due to the nature of the questionnaire and the limits of the sample, support was not as robust as it could have been. Whilst factor analysis could have provided additional support, it was not possible to undertake, due to low numbers of participants experiencing some of the events. A larger sample or restructuring the survey questions may make this achievable in future research.

CHAPTER 10
DISCUSSION

The aims of this research were to examine the routes in and out of problem Internet gambling; to identify similarities and differences between male and female Internet gamblers, between players of different Internet gambling games and between problem and non-problem Internet gamblers; and, to compare findings with land-based gambling research, models and theory. The thesis has explored the antecedents, motivations for, and experiences of Internet gambling using a mixed-methods design, comprising first a qualitative interview-based form of data collection, followed by a quantitative survey. In this discussion section, the qualitative and quantitative findings are integrated and the provisional qualitative model has been reviewed and updated to form a final integrated model of Internet gambling. Findings are summarised, to provide an overview of the routes in and out of problem Internet gambling to support the model, with specific findings relating to the gambling groups of interest remaining in the preliminary discussions. Comparison is made with existing gambling theory, and novel findings are highlighted. The potential impact and applications of the research are also discussed along with limitations of the research and potential directions for future research.

10.1 The integrated model of Internet gambling

The provisional model of the route in and out of problem Internet gambling derived from qualitative findings was presented in Section 7.2 along with a description of how an individual case fitted with the model. The final integrated IG model is presented in Figure 10. The provisional model has been updated to include more detail from qualitative sub-categories and to integrate the results from both qualitative and quantitative findings. An explanation and discussion of this model follows in Sections 10.2-10.5.

The provisional model has been updated into the integrated model in five ways. Firstly the route that pre-existing Individual factors and pre-existing gambling activities influence IG has been included in the model by addition of the relevant sub-categories from the qualitative findings. Secondly, rather than pre-existing Individual factors and

pre-existing offline gambling experience just influencing initiating gambling as in the provisional model, it is more accurate to reflect that they influence all of the other elements of the model as well. Thirdly, initiating gambling now includes the influencing factors derived from the factor analysis of initiation reasons. Fourthly, rather than indicating that after initiating IG, gamblers either continue or do not continue IG, it is more accurate to reflect that after initiating IG, due the factors that influence stability and change of gambling involvement, gamblers either continue, increase or decrease their IG involvement. Finally, acknowledging that this research is primarily concerned with the conscious awareness of individuals' experience of Internet gambling, an additional element has been added to reflect the unconscious influences of cognitive bias and structural characteristics that may also influence the stability and change of Internet gambling behaviour, but were not mentioned in the personal reports of participants.

*Figure 10   Routes in and out of problem Internet gambling - The integrated IG model
based on qualitative and quantitative findings*
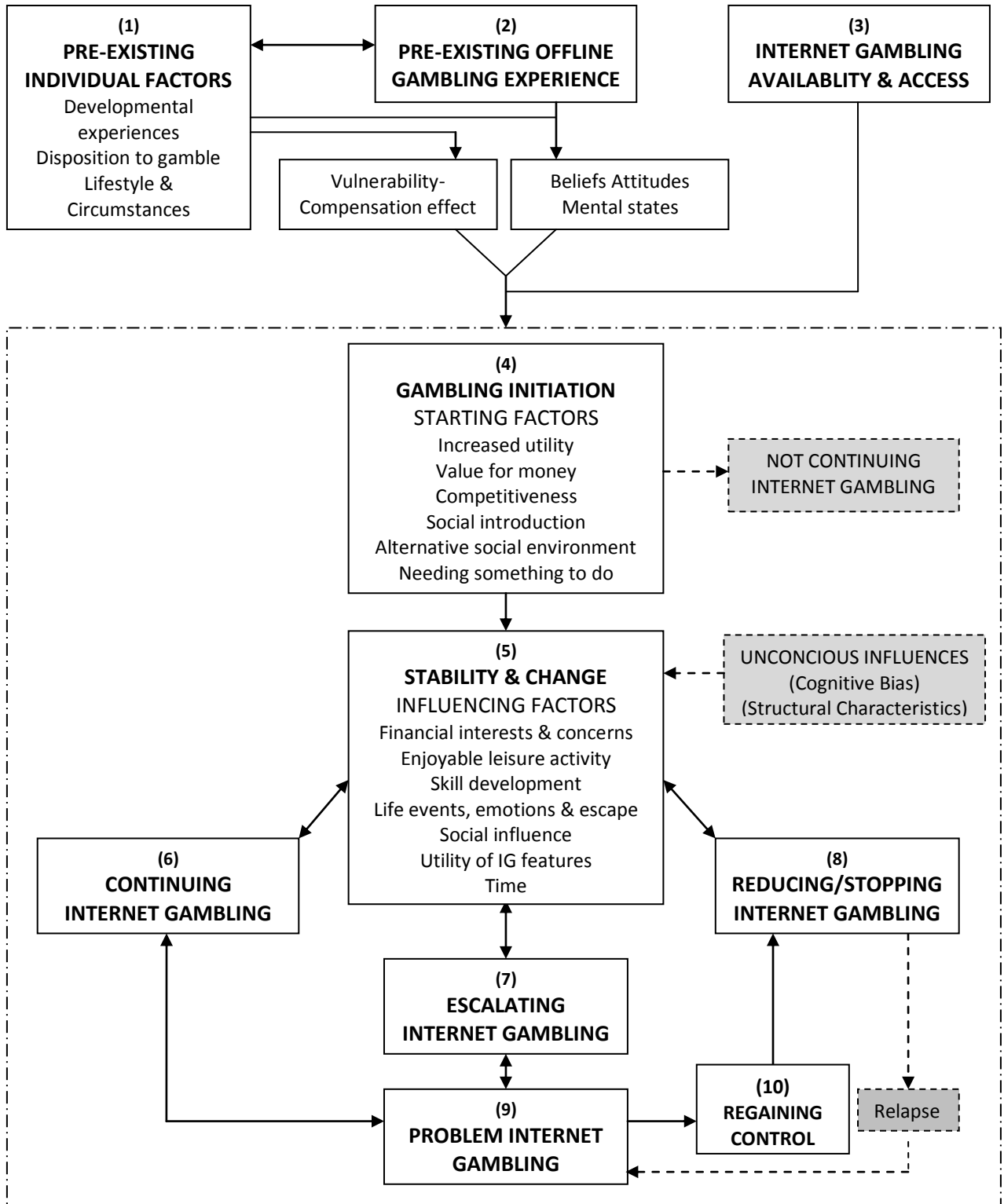
10.2 The transition to Internet gambler: Antecedents and motivations for initiation

Results from the qualitative phase of the research indicated there were a number of phases in a gamblers' pathway into and out of problem Internet gambling. This section focuses on the phase where Internet gambling (IG) was initiated, in relation to the integrative model shown in Figure 10.

Internet gambling initiation appeared to be based primarily on two elements which were already in place as antecedents to Internet gambling (See Figure 10). These were (1) pre-existing individual factors and (2) and pre-existing offline gambling experience. Pre-existing individual factors (1), namely disposition, developmental experiences, and circumstances and lifestyle, contributed to gamblers general beliefs, attitudes and mental state which existed just prior to initiating Internet gambling. Pre-existing offline gambling activity (2) consisted of pre-existing gambling experiences, whether they were developmental experiences as gamblers were growing up, or experiences of gambling as adults. These influenced attitudes to and beliefs about gambling, and could also directly or indirectly, via attitudes and beliefs, influence mental state. Together, individual factors (1) and pre-existing offline gambling experience (2) provided a formative context for initiating IG, and later IG behaviours were also perceived by gamblers as being shaped by these pre-existing factors.

Initiating IG was reliant on (3) IG being available and accessible. All participants interviewed were UK based where IG is widely available and all had access to the Internet. Multi-cultural research may find this a more relevant element of the model to explore in future research.

The Gambling Initiation element of the model (4) pertains to when these pre-existing influences, along with current influences, were acted upon and IG activities were initiated. For some gamblers, the combination of pre-Internet developmental experiences, disposition, and circumstances and lifestyle could influence how IG initiated through the 'vulnerability-compensation effect'. This occurred when it was consciously perceived by non-Internet gamblers, shortly before initiating Internet gambling, that deficits or difficulties in everyday life (e.g. boredom, loneliness) could potentially be lessened by taking up IG. Pre-Internet offline gambling may be

transferred to the Internet, mainly for the increased convenience, choice and opportunities offered by the Internet. Current influences, such as advertising, friends participating in Internet gambling and thinking about winning, could also influence IG initiation. At the point of initiating IG, new Internet gamblers often appeared to be unaware of the differences between land-based and Internet gambling in terms of different ways to gamble and different risks.

The quantitative findings confirmed the initiation phase was characterised by gamblers having multiple reasons for initiating gambling. The most likely reasons for initiation were convenience, the opportunity to make money, fun and entertainment and acting on an impulse to initiate Internet gambling. Quantitative findings identified that reasons for initiating IG could be grouped into six factors, namely; competitiveness, social introduction, increased utility, alternative social environment, value for money and needing something to do. The preliminary discussion of the quantitative findings addresses how these findings and factors are influenced by gender, gambling activities and problem or non-problem gambling, and how they relate to existing research (see Section 9.5)

Two of the quantitative factors, 'alternative social environment' and 'needing something to do', supported the concept of a Vulnerability-Compensation effect found in qualitative research. 'Alternative social environment' showed associations between feeling lonely and isolated, advertising, making contact with new people and the smoking ban. This factor, disproportionately including more PGs and casino gamblers, could be interpreted as suggesting that those who were feeling lonely and isolated, perhaps also being excluded from their usual gambling activities due to the smoking ban, were influenced by advertising to initiate gambling in the casino domain in anticipation of making contact with new people. 'Needing something to do' showed associations between feeling bored, thinking IG would be fun and entertaining and fancying doing it. This factor, disproportionately including more PGs, poker players and gamblers aged 18-34, could be interpreted as an impulsive reaction to feeling bored and using IG, poker in particular, to relieve boredom. The Vulnerability-Compensation effect seen in the IG initiation phase highlights that vulnerability to problem gambling, whilst including disorders such as depression, anxiety, personality disorders, substance abuse, alcoholism, impulsivity and sensation-seeking (e.g. Lloyd et al., 2010b; Clarke, 2005;

Stewart & Kushner, 2005; Abbot, Volberg, Belringer & Reith, 2004; Blaszczynski & Steel, 1998), also includes what could be viewed as more commonplace, everyday mental states, such as feeling lonely and isolated, or bored. This widens the view of vulnerability and being at-risk of problem gambling, and raises the question about where social responsibility in the Internet gambling industry starts and ends.

10.3   Internet gambling trajectories: Continuation, escalation or reduction

The integrated IG model (see Figure 10) reflects the qualitative findings indicating that after initiating IG, the experience and outcome of their first Internet gambling encounter had led new IG gamblers to carry on with IG. However, it is likely some individuals, not included in this research, may have initiated IG and chosen not to carry on. New IGs carrying on with IG indicated there were a number of events. organised into seven qualitative categories, which influenced their gambling involvement (5). There were three possible gambling involvement trajectories; continuation (6), escalation (7) or reduction (8). The phases could occur in any order and could be repeated a number of times in a gambling trajectory, as influenced by the seven event categories.

A continuation trajectory was one where gambling involvement did not change or fluctuate to any significant degree; a phase that represents maintenance of gambling behaviour at a particular level of involvement, whether low, moderate or high. An escalation phase occurred where gambling involvement increased, and a reduction phase, where gambling involvement decreased. Repeated or continuous escalation phases could result in problem gambling (9), although for some, particularly highly self-controlled knowledgeable poker players, repeated or continued escalation resulting in problem gambling was not always a foregone conclusion. Continuation, reduction and escalation trajectories were influenced by a number of events (5), analysed into seven categories; *Financial interests and concerns; Enjoyable leisure activity; Skill development; Life events, emotions and escape; Social influence; Utility of Internet gambling features*; and *Time*. Elements of a continuing vulnerability-compensation effect were seen within these factors, although this was different from the IG initiation Vulnerability-Compensation effect. There was now a degree of real-life experience that undertaking gambling could actually compensate for a vulnerability, as opposed to just anticipating that compensation in the IG initiation phase. There was a degree of interaction between the categories. For example, *Skill development* provided enjoyment, and skill-related gambling could become an *Enjoyable leisure activity. Financial interests and concerns*, in the form of significant losses or debt, could affect *Life events, emotions and escape* via stress. Spending a lot of time gambling could impact on *Life events, emotions and escape*, for example, as normal family duties and activities were interrupted and life became chaotic. Support for these categories and

their differential impact on stable, increasing and decreasing gambling involvement in different gambler groups was found from the quantitative findings as outlined in the preliminary discussion of the quantitative survey (see Section 9.5).

The Gambling Motives Questionnaire and its successors support the existence of five of these seven categories (Stewart & Zack, 2008). The GMQ is based on three prime motivation domains; coping, enhancement and social motives. Dechant and Ellery (2011) added a monetary motive which enhanced and strengthened the questionnaire. The GMQ was developed further into the Reasons for Gambling Questionnaire, which when factor analysed, suggested five motives existed: enhancement, recreation, social, coping and money (Wardle et al., 2010). These five factors are similar to the qualitative categories underpinning stability and change in gambling involvement identified in this research, namely; *Skill development* (enhancement), which includes skill validation and impact on self-esteem; *Enjoyable leisure activity* (recreation); *Social influence* (social); *Life events, emotions and escape* (coping); and *Financial interests and concerns* (money). The *Time* category is arguably addressed to some extent by an element of the 'Recreation' factor from RGQ, where the motivation is to undertake gambling as a hobby or pastime to fill up one's time. However, the *Time* and *Utility of Internet gambling features* are not fully covered by the GMQ and RGQ motivational measures. As Wardle et al., (2010) points out, the RGQ is based on existing research on motivations, which means it does not necessarily include specific IG motivations, as these are often not covered in existing, older research. It also does not include reasons for gambling that are more specific to problem gambling.

Considering the *Utility of IG features*, some aspects described by participants, such as payment intervals, payment method, payout ratio, win schedules, free games, reflect situational characteristics of different IG activities, as in existing research (McCormack & Griffiths, 2014, 2013; Parke & Griffiths, 2007; Griffiths et al., 2006; Griffiths, 2003). This category also reflected the use and usefulness of features of Internet ganbling, including records of wins, losses, spends, withdrawals and account balances, promotions and advertising as separate features, each with different influences and serving different purposes, and new opportunities that IG could provide. Learning and cognitive theory suggests that players' interactions with different games involves gambling behaviour being changed, as it is influenced by rewards and schedules of

reinforcement and distorted cognitions are formed (Czery et al., 2008: Blaszczynski & Nower, 2007; Parke & Griffiths, 2007; Turner et al., 2006; Orford, 2001). This is evident throughout the research and has been reported in preliminary discussions. However, some of these influences may be unconscious and therefore, their impact on gambling involvement and motivations for gambling may not be fully reflected in self-report qualitative research and surveys. To ensure unconscious influences on gambling behaviour are fully represented, the Integrated IG model includes an Unconscious Influences element as a relevant factor impacting on gambling involvement, although it was not fully tested in this research due to the use of qualitative analysis based on self-reports guiding the quantitative stage.

10.4   <u>Problem Internet gambling and protective factors</u>

In the integrated IG model (see Figure 10), problem Internet gambling (9) is theoretically a result of a series of escalations. The escalations may be interspersed with periods of continuation, and periods of reduction, or may be continuous. Ultimately the escalation phases are persistent and dominant, and problem gambling levels are reached. Players may or may not be aware of risks, but these are overridden, gambling limits are breached and problem gambling behaviour is developed. Problem gambling behaviour is often recognised by gamblers, and may be reduced or stopped if the outcome to a gambler seriously threatens the things they do not want to lose or things they do not want to do under any circumstances (e.g. risks to their children, losing relationships, committing crime). However it may need the involvement of an external factor, like the extent of debts being discovered, to force the gambler to recognise their gambling has to change. Gamblers then develop control strategies (10) either to continue gambling but regain control, or to stop gambling, and gambling reduces (7). These strategies may be internal or external to the gambler. Gambling may escalate again as stability and change factors influence gambling involvement again. Relapse may also occur, which is reflected in the IG integrated model although not fully investigated in this research.

Problem Internet gambling (9) was described by both by gamblers who had experienced some problematic gambling behaviour themselves, ranging from occasional and mild to persistent and severe, and gamblers who had seen problem gambling in others. Risk awareness for problem gambling was explored with gamblers. Many new Internet gamblers did not consciously consider there may be risks when gambling on the Internet, and previous land-gambling gamblers rarely considered that land-based and Internet gambling may be different. If they did, many thought their previous experience would be sufficient to protect them from any additional risks. NPGs appeared more likely to weigh-up anticipated risks prior to initiation, and some considered, after experience, that Internet gambling presented no different or additional risks than land-based gambling. However, other Internet gamblers identified additional risks on the Internet for increasing gambling to problematic levels, such as additional accessibility, the time it could take up, the anticipated wins on the Internet being overestimated and the use of virtual money. Risk awareness at the point of gambling initiation has not

been explored in previous IG research, although in-play risk rules have been used to raise players' awareness of long play times and financial limits being reached with some effect on reducing effective play (Auer et al., 2014; Wohl et al., 2013, Auer & Griffiths, 2013).

Problem gambling on the Internet, as described in this research, reflected many of the characteristics of problem gambling, defined by pathological gambling based on land-based gambling in DSM IV, and gambling disorder defined in DSM-5, which includes more IG research (APA, 2000; 2013b). The only key difference in this research was that Internet gamblers identified the impact on time as being a feature of problem Internet gambling. In DSM the nearest time-related criteria is 'pre-occupation', where gamblers are having persistent thoughts about past gambling experiences, planning the next gambling venture and thinking of ways to get money. However, with the Internet, there is no need to take any time away from gambling to simply think about gambling, as gambling is available at home 24/7, and this appears to be having an impact on time. Spending a lot of time on IG affected many participants in that they would spend time gambling where they had responsibilities elsewhere. Gamblers with children often gambled when the children were not present, putting household and family responsibilities to one side. When children came home from school, IG parents who gambled when their children were not at home were often disorganised, had less time to complete multiple tasks and family life became pressured and stressful. Others carried on gambling when children were present and as well as pressure and stress, additionally interaction with their children was much reduced. Some gamblers gambled regularly through the night, impacting on their functioning during the day. Other gamblers who were at home a lot of the time due to being unemployed found that they used their time gambling instead of prioritising looking for work. This amount of time spent gambling was sometimes related to elements of escape, skill development, wanting to win, and a leisure activity, and may not necessarily be related to an increased gambling spend. Potentially, time may be a relevant diagnostic criterion for problem Internet gambling, due to the risks of harm that it involves. Additionally in relation to DSM criteria, just under half of problem Internet gamblers in this sample indicated they had experienced suicide ideation. This is in line with percentages of suicide ideation in gamblers in treatment reported in DSM-5 (APA, 2013b).

Resilience to problem Internet gambling and safe ways of gambling online was identified throughout the qualitative research, mostly by NPGs and poker players. Resilience and safe play was underpinned by certain characteristics and beliefs which participants believed helped them to remain in control, and minimised the risk of slipping out of control. Characteristics included being disciplined, focussed and patient, having a sense of financial responsibility and responsibility to others, being risk averse or low risk, and being self-aware of own behaviour, ability and risk limits. Beliefs included staying within the limits of disposable income, avoiding debt, and gambling being undertaken primarily for pleasure rather than profit. Some Internet gamblers identified these traits as being part of their general characteristics they developed in childhood or as a maturing adult, others, particularly poker players, that they had consciously developed these characteristics to help them be successful at Internet gambling.

10.5   <u>Regaining control</u>

In terms of regaining control (9), and routes out of problem IG, change could be imposed on problem gamblers as financial limits were reached or the extent of their gambling was revealed, or they could want to change themselves, as their bottom-line limits were under threat. Their bottom-line limit was the point at which there was something they were not prepared to do (e.g. deceive their partner, commit a crime) or not prepared to lose (e.g. financial, relationship, job). This was a phenomenon also found by Valentine and Hughes (2008), described in the form of a 'bottom-line loss'. The gambling, financial and emotional situation was sometimes described as 'critical' at this point. Events and emotions could be fairly dramatic, particularly as the true extent of the problem and/or deceit was discovered or disclosed. Although friends and family could be deeply hurt and angry, for most problem Internet gamblers, regaining control was usually supported by friends and family in the first instance, with some turning to using online services, helplines, counselling and in-patient facilities for additional support. As found by Orford (2003) and Hodkins and El-Guebaly (2000) for land-based gambling, problem Internet gambling did not necessarily need pro-active external treatment for recovery to occur.

Internet gamblers wishing to completely abstain from gambling found it particularly relevant to controlling access to the Internet and IG sites. Removing computers from the home was an option undertaken by some, however, this had impacts on other areas of life, e.g. online shopping and banking, and impacted on others using the computer in the household. Gambling blockers were available which had different degrees of success, depending on the robustness of the packages and how determined the gambler was to circumnavigate them. Self-exclusion was also helpful, but regarded as less successful due to the ease of lifting self-exclusion and opening new accounts with non-excluded sites. Putting others in financial control and putting limits on Internet gambling accounts was useful for those wishing to restrict their Internet gambling rather than abstaining completely. These types of external controls were useful to support internal controls such as will-power, controlling thoughts and diversion techniques.

Relapse has not been specifically investigated during this research although it is included in the integrated IG model for completeness. In the context of this research

and the IG model, it remains debateable whether relapse is a separate phenomenon in its own right or whether it has similar motivations underpinning it as those underpinning gambling escalation.

10.6 The integrated IG model in the context of existing gambling theory and models

The integrated IG model in Figure 10 has separate motivations for initiating gambling (competitiveness; social introduction; increased utility; alternative social environment; value for money; needing something to do) and for continuing, escalating and reducing gambling involvement (financial interests and concerns; enjoyable leisure activity; skill development; life events, emotions and escape; social influence; utility of Internet gambling features; time). The model provides specific reasons for why individuals first visit an Internet gambling website with the purpose of initiating IG. This has not been previously researched for Internet gambling, with most research of gambling motivations focussed on 'reasons for gambling' as a generic motivation at any stage in gambler's gambling journey (e.g. Hanss et al., 2015; Cole et al., 2011; Wardle et al., 2010; Walker et al., 2008; Pantalon et al., 2008; Lee et al., 2007; Rockloff & Dyer, 2007).

While there are similarities between motivators at different stages, there are also differences, not only in how motivators appeared in different IG groups, but how the motivators appeared at different stages in a qualitative way. For example, social motivation was important as an influence for initiating IG, particularly for women who, perhaps through loneliness or boredom, wanted to join gambler friends and enhance these real social relationships, or join an IG social group to increase social contact and a sense of belonging with new virtual friends online. After initiation, social influences continued to be a motivator for women. This was in terms of maintaining gambling involvement, rather than increasing or decreasing involvement. The motivation to continue was due to the desire to maintain, or not risk the loss of, online social relationships and a sense of belonging, based in an IG environment. There was also a feeling they would let friends down if they withdrew from the IG environment. These findings have subtle different implications, for example, if social contact initiated through IG with virtual friends was maintained outside the IG environment, theoretically the social motivation to maintain IG would lessen, though the social need for group belonging may still persist. The concerns over withdrawing from the IG environment were not so apparent for those gambling online with real friends whose friendships would be maintained away from IG. Their social motivation for maintaining IG was therefore arguably a less strong.

The integrated IG model suggests the motivators for stable, increasing and decreasing IG involvement overlapped, interact, can become more or less salient at different times in a gambler's journey and, at different times, can influence either stable continuations, increases or decreases in IG involvement in the same individual. The research findings portrayed a constantly changing landscape of gambling motivation, with different relative strengths of motivators in different Internet gambler groups, and a combination of motivations influencing individual stability and change in gambling involvement at different points in time. This is different to the way motivations have been explored in other gambling research. Motivations are usually measured at one point in time across a gambling cohort and in terms of their relative strengths in different groups, most usually NPGs and PGs, sometimes men and women, and rarely, if at all, across players of different gambling activities (e.g. Canale et al. 2015; Cole et al., 2011; Wardle et al., 2010; Pantalon et al. 2008; Stewart & Zack, 2008; Walker et al., 2008, Wulfert et al., 2008; Wood & Grffiths, 2007b). Relative motivation strengths have thus been measured, but have not yet been associated with changes in gambling involvement. To do this a more longitudinal view of motivation and gambling involvement is needed.

The model's multi-faceted view of IG motivations and their influence on changes in gambling involvement, sit well with Orford's (2001) Excessive Appetites model, which takes a formative, longitudinal view on understanding the development of problem gambling over time. Orford considers how multiple interacting social and individual determinants, including learning and cognitions, influence the degree of involvement with an appetitive object, a view which this research also supports. The biopsychosocial approach of Griffiths and Delfabbro (2001) also takes a broad theoretical view to understanding and explaining gambling behaviour.

Another aspect of Orford's work that has resonance with this research is the view that excessive behaviour changes in response to changes in life circumstances. This was evident in the qualitative category of *Life events, emotions and escape*, where Internet gamblers described how their IG involvement was influenced by changes in and impacts upon their lifestyle and circumstances. Conscious events which influence IG involvement are arguably an area which may have more resonance with Internet gamblers than unconscious learning and cognitive bias, in terms of identifying and understanding risks in their lives that may impact on their gambling involvement. It is

also an area where social responsibility can do more to raise awareness in how changes in lifestyle and circumstances may impact on risk of harm and adversely affect IG behaviour outcomes.

In the integrated IG model, considering the influence of different theoretical approaches, biological influences are implied but not explicit in the model. Theoretically they underpin dispositions and mental states, for example, anxiety, depression and stress, (Lloyd et al., 2010b; Matthews et al., 2009; Zangeneh et al., 2008; Clarke, 2005; Stewart & Kushner, 2005; Abbot et al., 2004; Blaszczynski & Steel, 1998), which were present in some individuals before they initiated IG, and these pre-existing dispositions and mental states impacted upon gambling involvement.

Behavioural learning theory (e.g. Shao et al., 2013; Blaszczynski & Nower, 2007; Orford, 2001) and faulty cognitions (e.g. Czery et al., 2008; Toneatto, 1999; Langer, 1975) appeared both and explicit and implicit drivers behind various events that influenced stability and change in gambling involvement. For example, there were reward elements to learning a new skill, escaping from day-to-day problems and experiencing relief from boredom, and gambling involvement could be maintained and increased by regular wins and reduced by lack of wins. Some individuals were aware that these rewards and cognitions were driving their gambling behaviour, others less so.

Of conceptual importance when considering the impact of reinforcement and learning at different times in an IG pathway, is that IG initiation was based on perceived or speculative outcomes from IG involvement. Rewards and reinforcement were anticipated rather than real. In later stages of IG, outcomes were more concrete and gambling behaviour was being shaped by realised reward and reinforcement, whether the same or different to those initially anticipated. Interestingly, from a biological viewpoint, Shao et al. (2013) showed a different trend in that when initiating gambling, reward systems were activated by a win, and over time, watching reel spins became second-order conditioned learning, where anticipating a win involved more rewarding brain activity than an actual win. It therefore appears that reward and reinforcement subtly alter at various points along the gamblers' journey. This makes the argument for research on motivators and learning theory being measured at different points in a gamblers pathway more central to understanding the development and change in levels

of IG involvement over time. What may have little impact at one point in a gambler's journey may have a bigger or different impact at a different time, and differentially influence the development to problem gambling levels. For example, in this research, as well as in existing research, it is documented that a relatively big win, early in a gamblers' journey, can distort cognitions and lead to unrealistic estimates of winning, fuelling increasing gambling involvement in anticipation of winning more, or more often (e.g. Corney & Davis, 2010a; Czerny et al., 2008; Toneatto, 1999; Langer, 1975). Potentially a win of this nature would not have the same impact on gambling involvement, if experienced later in a gambler's journey. This type of finding lends support for the relevance of research into structural characteristics particularly those characteristics relating to stake size, bet frequency, win frequency and payout ratios, which are different for different IG activities, and, from findings in this research, may impact differently at different points in a gambler's experience (McCormack & Griffiths, 2014, 2013; Parke & Griffiths, 2007; Griffiths et al., 2006; Griffiths, 2003).

From a cognitive theoretical view point, faulty cognitions were present in the initiation and continuation stages of IG, for example, as new Internet gamblers anticipated winning more on the Internet or Internet gamblers had been influenced to increase gambling involvement by wins that gave big returns on small stakes. It is possible to argue that these types of thoughts about wins, particularly about stake-to-prize ratio, may not be faulty cognitions per se. There may actually be higher stake-to-prize ratios on the Internet than offline, due to the wider variations of structural characteristics within Internet gambling activities, and the differences in online and offline gambling regulations. However there is no evidence to support or refute the reality of these ratio differences between online and offline gambling (McCormack & Griffiths, 2013), although real or unreal, when combined with skewed expectations of win frequency, they become faulty cognitions. This emphasises and supports the importance on understanding more about structural characteristics and their impact on gambling involvement.

Similar to other gambling models, the integrated IG model from this research has taken a broad approach to understanding gambling and problem gambling behaviours, accepting that there are multiple explanations for gambling behaviour and multiple trajectories over time. It has focussed on IG undertaken by gamblers who solely use

the Internet or use the Internet in conjunction with land-based gambling. It has captured some interaction between land-based and Internet gambling at the point when existing land-based gambling activities are transferred to the Internet when initiating Internet gambling. However, the research has not specifically considered the continuing interaction between land-based and Internet gambling. The integrated model's focus is primarily on how Internet gambling and problem Internet gambling develop and change over time. In that respect it is perhaps more limited than some other models, such as Orford's (2001) Excessive Appetites Model and Griffiths (2005) Components Model of Addiction, which both explain all addictive behaviour.

In consideration of Griffiths' (2005) Components Model of Addiction, some evidence was found in the qualitative research for salience, mood modification, tolerance, withdrawal, conflict (where engaging in the behaviour causes interpersonal and intrapersonal conflict) and relapse. The strongest evidence was found for mood modification and conflict, which is reflected in reported findings in the Life events, emotions and escape category, influencing stability and change of gambling involvement. This category was dominated by PGs rather than NPGs reflecting the importance of the mood modification and conflict components of the model. Evidence of salience was found in the amount of time Internet gamblers put into their activity, not only whilst directly undertaking gambling online, but also in terms of time invested studying and planning their chosen gambling activity, and analysing outcomes. However, not all of the gamblers showing signs of salience in terms of time consumption were rated as problem gamblers, particularly poker players playing at low financial levels, but indulging in long tournaments and developing their play strategies, and bettors planning their bets and developing betting systems. This indicated salience is perhaps a less strong component of the model when it comes to IG, or perhaps time consumption is not a sufficient marker for salience. Tolerance was not specifically apparent in the research perhaps as the research was based on a conscious level of awareness so was not immediately obvious to participants. Withdrawal and relapse were mentioned by a small number of PGs who had attempted to give up gambling.

Parke and Griffiths (2007) taxonomy of characteristics aims to systematically identify situational and structural characteristics of different IG activities which influence the maintenance and development of gambling participation. Situational characteristics,

e.g. the availability and accessibility of Internet gambling (Griffiths, 2003: Griffiths, Parke, Wood & Parke, 2006; Parke & Griffiths, 2007), were evident in the Utility of Internet gambling features category, in the form of the convenience of the Internet. This had a strong influence on increasing gambling involvement. A number of situational characteristics were apparent, for example, free practice games, stake-to-win ratios, the way money is dealt with online, event duration and methods of tracking account activities, and these were differentially relevant for different gambling activities, and influenced gambling involvement. However, many structural characteristics in the taxonomy, arguably should have been be more visible, for example, continuity of play, multiple game play, bonus features, winner information, as they were rated as having a higher impact in online gambling than offline gambling (McCormack & Griffiths, 2013). These should have been captured in the Utility of Internet gambling features category, but were not represented in the integrated IG model. Equally some IG characteristics which were capturef in the Utility of IG features category, appeared potentially relevant as structural characteristics, but were not yet in the taxonomy, for example, novielty, account information (monetary and performance), league tables and leaderboards, and promotions and incentives.   The structural characteristics that were not mentioned by Internet gamblers was likely to be due to how the integrated IG model was constructed. It relied upon on self-report from gamblers, when it is likely that many structural characteristics would influence gambling behaviour in small ways without conscious awareness. This unconscious effect of structural characteristics has been included in the integrated IG model for future consideration. However, what was interesting, as already mentioned previously, was that some structural characteristics that were described by Internet gamblers appeared to have different effects on individuals at different points in their gambling journey. This potentially broadens the scope of future research into structural characteristics.

Orford's model is both comprehensive and broad and it can account for a diversity of addictive behaviour. The model, similar to the integrated IG model from this research, acknowledges that the degree of involvement with an appetitive object has multiple interacting determinants, such as an individual's character or personality, socioeconomic, ecological and cultural factors, normative social impacts, and opportunities for the activity. These determinants appear at the start of Orford's model and serve numerous personal functions. This stage is followed by developing

attachment to the object, mediated by learning theory, then strong attachment (when addiction takes place), then experiencing cost conflicts, making a decision resolution and finally, potentially acting to change (Orford, 2001). Precisely how strong attachment relates to problem gambling is unclear, as most of the theoretical explanation centres around attachment to drugs and alcohol use. In the integrated IG model from this research, the factors that influence the degree of involvement with IG are central to the model, and arguably, problem gambling, rather than being an issue of attachment, is an issue of increasing gambling involvement to problem levels as defined by problem gambling scales, with PGSI being used in this research (Ferris & Wynne, 2001). The measured behaviour defines problem gambling, rather than the theoretical concept of 'attachment'. Orford's model is interesting in that it represents strong attachment to gambling as offering a positive experience for the gambler or a negative experience, with the negative experience associated with gambling related harm and contemplation of change of gambling attachment. In the integrated model, the reason for change of problem gambling behaviour was identified as a threat to a bottom-line limit, or a change imposed on a problem gambler. Negative experiences were involved, but the threat to a bottom-line limit, whatever form that would take for the individual gambler, was the point at which action to reduce IG was taken. Further definition of a bottom-line limit, how it is set and how changes over time, would add to the integrated IG model.

Orford's model, whilst comprehensively defined and broad, in that it covers all addictive behaviours does not make any specific predictions and is therefore hard to test. The integrated model, whilst less comprehensive, lends itself to systematic testing. The relative influence of different factors within the model offers the potential to predict outcomes for and make comparisons between different groups of gamblers.

Blaszczynski and Nower's (2002) Pathways Model also identified factors from different perspectives that could influence problem gambling behaviour. However, the Pathways Model is based more on the susceptibility of different gambler characteristics to those factors. They identified three sub-types of problem gambler, behaviourally conditioned, emotionally vulnerable and antisocial impulsivist, suggesting that each sub-type had different motives for gambling, were therefore differentially affected by the influencing factors and this resulted in three discrete pathways into problem gambling. The

integrated IG model cannot offer support or refute the Pathways model, as this was not the focus of this research, however, the model is constructed in such a way that it can test how different types of gambler are influenced by different factors. It has provided evidence that different gamblers, by gender, main activity and gambling level, are influenced to initiate gambling, and to continue, increase or decrease IG involvement, by different factors in different ways. This research therefore supports the view that different types of problem gambler exist and are influenced differently. However, full systematic testing is ahead of the current ability of the integrated model. With a revision and improvement to the measures in the integrated model (as discussed in Section 10.8) it would be possible to test Blaszczynski and Nower's three types of gambler, providing there were also suitable measures to distinguish between the three gambler types included in the research. More realistically, further testing of the Pathways model relies on it being able to resolves its position as a model based on problem gambling as an impulse disorder, when current thinking identifies problem gambling as an addition.

10.7 Applications of findings

This research has applications in a number of domains. Findings can be used to generally understand ways in which Internet gambling is similar and different to land-based gambling. More specifically, findings can be used to strengthen, challenge and enhance existing gambling theory, to identify new directions for research, and to strengthen socially responsible gambling strategies. This section presents some of the applications of the research findings.

10.7.1 Applications for future research

This research has in general supported that IG is in many respects similar to land-based gambling. The choices that men and women have made in terms of the gambling activities they wish to play and their motivations for initiating and continuing gambling are generally similar to findings in existing gambling literature (e.g. Lloyd et al., 2010b, Wardle et al., 2010: Clarke et al., 2007). Gambling activities initiated online tend to remain in the same activity domain, with PGs being the gamblers most likely to diversify, similar to the Lloyd et al. (2010b) finding of diverse activities amongst Internet PGs. Casino games, as luck-oriented gambling activities, appear to have the strongest associations with problem gambling, again as suggested by existing gambling literature (e.g. Wardle et al., 2010, 2007; Potenza et al., 2001). Gambling for financial reasons and for escape were evident throughout the research, and chasing losses was identified as one of the strongest reasons for gambling escalation, as found in existing literature (e.g. Wood & Griffiths, 2007b; Clarke et al., 2007; Rogers, 1998; Turner, 1998).

However, this research has highlighted that reasons for initiating Internet gambling and for continuing, increasing or decreasing gambling are different in subtle ways. This suggests that research focussing on motivations 'for gambling' are likely to be picking up a combination of initiating, continuing, escalating and reducing motivations, where findings from this research suggest different motivations have a different impact depending on the point a gambler is at in their route into or out of Internet gambling. Some motivations have a role to decrease gambling involvement, others to increase involvement, and some have a dual role, increasing involvement in some, and decreasing it in others. In this research, stress is a particularly strong example of this duality of a motivational factor. Motivations studied in this research also highlighted that

vulnerabilities in aspects of daily life could be compensated for by rewards and reinforcement from engagement with IG, and distinct groups of gamblers emerged from the research for which this was apparent. Findings from this research therefore have the potential to broaden gambling motivation research to consider which motivations are most relevant and influential at different points in gamblers' routes in or out of gambling.

Continuing on the subject of motivation, it should be borne in mind that conceptually the motivation domains from the RGQ (Wardle et al., 2010), and the change and stability categories from the integrated IG model, are different   The IG model has an additional two motivators that drive IG behaviour, namely the Utility of IG features, including some features similar to Grffiths' structural and situational characteristics (e.g. McCormack & Griffiths, 2013; Parke & Griffiths, 2007) and the impact of Time. Motivation domains and factors from existing research are designed to measure motivational drives and reasons 'for gambling', whereas the qualitative categories from this research are analysed to capture the motivations and their quantitative influence on stability and change in gambling involvement. If there is greater motivation to gamble, theoretically there will be a corresponding increase in gambling involvement, so there is an overlap, which this research has begun to explore. Theoretically, changes in gambling involvement are a more observable and reliably measured metric, which may be useful for future motivational research, particularly research taking a longitudinal perspective.

The integrated IG model offers a simple approach to problem Internet gambling. It posits that problem Internet gambling is a result of escalation of Internet gambling involvement. This arises from a number of motivational factors influencing different gamblers, to levels where gambling behaviour and adverse consequences associated with undertaking gambling are defined as being a problem, by measurement against a problem gambling scale, such as the PGSI used for this research (Ferris & Wynne, 2001). At present there are a number of models, motivations and perspectives that explain various aspects of Internet gambling, and the gambling research field largely acknowledges that there are biological, social and psychological levels of explanation for problem gambling. There is no clear single framework for organisation of this research and it is difficult to systematically compare and assess the relative contributions from each research strand to the overall development of problem gambling. The integrated IG model is also not able to do this, as it works primarily on a

conscious level and, as such, is limited by the self-awareness and perceptions of Internet gamblers. However, it does have the potential to compare and contrast the perceived relative effects of different conscious events on maintaining, increasing and decreasing levels of involvement, and identify those gamblers who may be at risk of harm. It identifies six factors for initiating IG and seven categories of motivational influence that underpin stable continuation, escalation and reduction of IG behaviour. These appear from initial quantitative research, to influence different broad categories of gambler in different ways and to different degrees. The model offers the potential to systematically organise and test these different categories to identify where the greatest risks lie and which gamblers would be most vulnerable to the risks of problem Internet gambling. The model could be adjusted to show the relative importance of different factors to different groups of gamblers, for example, emphasising the strength of skill motivation for men and poker players, and adding elements relevant to specific groups, for example, the deliberate adjustment of attitudes and beliefs by NPG poker players involved in skill development. The model also offers the potential to provide a framework to systematically collect details of a gambler's history for clinical assessment and identify where interventions may need to be targeted. More research is needed to establish the utility of the model in this way.

In terms of differences between IG and land-based gambling, particular differences were found in the role of time, and in the way poker was undertaken. For Internet gamblers, having more time available, or being at home a lot of the time meant it was easier to gamble online, and many Internet gamblers increased their gambling involvement when more time or more time at home were available. Gamblers indicated this could be mediated by other factors such boredom and loneliness. Equally, IG could impact heavily on time consumption even for those who had little time available. Poker tournaments could involve games lasting for many hours due to the number of gamblers participating. Poker players often considered poker was not gambling as it was skill-based rather than luck-based and some poker players were controlled and skilled, achieving steady wins over time, as found in existing research (e.g. Bouju et al., 2013; McCormack & Griffiths, 2012b;Griffiths et al., 2010; Wood et al., 2007). Shead et al. (2008) also researched the role of skill in poker for both land-based and Internet players, and also considered time may be a marker for problem gambling in the poker domain, across both land and Internet poker players. However, this research suggests

time may be a marker for problem gambling in the Internet domain across a number of Internet activities, rather than just relating to poker. The role of time as a potential additional marker specifically for problem Internet gambling may be relevant for further research.

The design of this research involved the selection of four gambling domains of interest, based on previous research finding differences between chance and skill gamblers (e,g. Myrseth et al., 2010; Stevens & Young, 2010; Shead et al., 2008; Wardle et al., 2007; Chantal & Vallerand, 1996), and the research need to undertake more detailed analysis of the newly emerging poker-playing Internet gambler. The four gambling domains were also needed to combine similar gambling activities with low sample numbers in some cases, to enable valid statistical comparisons to be made. However, a factor analysis undertaken across all Internet gambling activities suggested there were three factors representing gambling activity; *betting activities*, for all forms of betting, including financial spread betting; *chance games*, for instant wins, slots, bingo, lotteries; and *poker and casino activities*, for poker, blackjack and roulette. The link between poker, blackjack and roulette is of interest in that poker players in this research mostly presented themselves as highly self-controlled and skilled individuals, yet in the quantitative phase, with a different sample, factor analysis indicated poker players were also associated with two forms of high-risk, chance gambling. This was an unexpected finding. Previous research by Lloyd et al. (2010b), with a much larger sample of Internet gamblers, found clusters of activities where poker was undertaken as a sole activity, poker was undertaken as an additional activity to sports betting, or poker was undertaken by more disordered gamblers who undertook all forms of gambling. However, the finding does resonate somewhat with research by Radburn and Horsley (2011) who identified poker 'mavericks'; poker players who played poker with control, but had problems with gambling in other gambling modes. This precise relationship between poker, roulette and blackjack appears to warrant further research and clarification. .

10.7.2 Applications for gambling Industry and policy stakeholders

The amendments to the Gambling Act (2005), in the form of the Gambling (Licensing and Advertising) Bill (2014), have recently resulted in a newly defined form of socially

responsible gambling which must be adhered to by all Internet gambling operators providing IG to UK residents (Gambling Commission, 2014). This policy aims to protect the young and all those who may be vulnerable to problem gambling. The reasons that a person may be vulnerable are not defined. Notable in motivations for Internet gambling initiation, is the Vulnerability-Compensation effect found in this research. This was apparent in lonely, bored and socially isolated individuals, whose vulnerability was moderated by online social contact and developing interest and skill in gambling activities. This leads to the question of defining how vulnerable is 'vulnerable' when it comes to socially responsible Internet gambling, and raises questions about the legal strength of the social responsibility Codes of Practice introduced in 2014. Nevertheless, whatever the definition of vunerability, according to the Codes of Practice, generic advice must be offered to Internet gamblers on each licensed gambling site about how to gamble responsibly and how to recognise problem gambling. The exact form this has to take and its prominence is not defined. In situations where a life event or individual circumstances, such as relationship breakdowns, losing a job, loneliness and boredom, are the potential cause of a general negative mood state, which, as identified by Matthews at al. (2009), is in itself a marker for problem Internet gambling, an early intervention may impact on risk of harm. Responsible gambling strategies, as identified by players themselves, include not gambling when they are in a negative mood. Due to the likely widespread prevalence of loneliness and boredom, with, for example, UK population prevalence rates measured at 6% for being lonely all or most of the time, and 21% some of the time (Victor & Yang, 2012), it would perhaps be helpful for at-risk gamblers, to include in the generic advice reference to times when it is less safe to gamble, i.e. when feeling lonely or bored, when particular life events or circumstances are at play in a gambler's life or when a gambler has a negative mood state. This is particularly relevant considering many new Internet gamblers, but particularly current PGs indicated they did not consider IG risks when initiating gambling.

Under the current social responsibility Code of Practice (Gambling Commission, 2014), "Licensees must have and put into effect policies and procedures intended to promote socially responsible gambling" (p30). Licenses must also advise customers of any measure they have in place to enable customer the opportunity to monitor or restrict the duration of play. However, there appears to be a loophole in that the Code of Practice does not state licensees are specifically required to put these kinds of measures in

place in the first place. This research found that some gamblers lost track of time when they undertook IG and none of the gamblers in this research said that they set time limits. They gambled until they got bored, felt satisfied with the amount they had won, they reached their financial limit or they had something more pressing to do. Time was a feature of problem and problematic Internet gambling that was often mentioned in terms of the time that could be and was spent gambling on the Internet, intruding on day to day responsibilities and affecting daily functioning. Research by Auer and Griffiths (2013) found spend and duration of play reduced significantly in intense poker players who set voluntary time limits. More protection from the effects of unchecked prolonged play may be offered to vulnerable gamblers by the use of a mandatory requirement for licensees to make voluntary time restrictions available to Internet gamblers, should they wish to use them.

The research findings have shown that many events have influenced the escalation of Internet gambling involvement, but the events tested appeared to have had less impact on reduction of involvement. It could be argued that different events to those included in the survey have influenced reduction, or that participants recall of escalation is more pronounced, with a period of escalation followed by a 'return to normal' and as such not recognised or rated as a reduction, just a maintenance of reality. However, bearing this in mind, some events were indicated to result in a reduction of gambling involvement, albeit not as marked as the escalation. These findings, in conjunction with the findings for resilience to problem Internet gambling, have the potential to be developed further into a template of controlled or safe gambling. Rather than a focus on the markers of being at-risk of problem gambling, there is potential to develop a focus more oriented towards the criteria of safe play to be used online as part of a social responsibility strategy. Safe play appears to have only been studied in one piece of existing research, Wood and Griffiths (2014) research into positive play.

Safe play and resilience appear to warrant additional research. They have the potential to impact on the new social responsibility Code of Conduct requiring gambling licensees to provide information about how to gamble responsibly (Gambling Commission, 2014). Research into safe play gambling behaviours would be useful and, additional research about safe play and resilient attitudes would also be useful. Identifying and explaining how an individual can develop safe play and resilient behaviours and attitudes would be

the most useful. This kind of information could prove helpful as part of a Social Responsibility agenda for vulnerable or problem Internet gamblers who wish to learn how to control their gambling, rather than abstain completely, without having to learn more slowly from experience of the downside of Internet gambling.

10.8   <u>Limitations of this research</u>

The applicability of findings from this research is limited by methodological issues such as the research design, the recruited samples, and the timing of the different phases of the research. This section aims to outline some of the issues relating to the quality of this research and the limitations and generalisability of research findings.

In terms of the quality of research methods, this research has been led by the initial qualitative phase and as such, is vulnerable to the debate over how qualitative research should be assessed for quality. Mays and Pope (1995, 2000) suggest that qualitative research can be assessed using similar criteria to quantitative research, namely validity and reliability. They suggest that methods and analysis are transparent and therefore the quality is transparent. On the other hand, Yardley (2000) suggested the novelty and diversity of qualitative methods requires that a new set of criteria for assessment are needed, and that these should include four characteristics; sensitivity to context, commitment and rigour, transparency and coherence, and impact and importance. Central to the quality of this research is transparency. The aim throughout has been to provide sufficient detail that the research and analytical processes, rigour and logic applied, and coherence of different research stages and elements, are clearly stated and can be reviewed using a variety of qualitative criteria, as the reader sees fit.

Specifically considering the Yardley (2000) criteria, 'transparency and coherence' has been addressed by detailing, for example, the recruitment processes and materials used, the processes of Grounded Theory Method followed and presenting excerpts of the textual data to support the patterns of data reported in findings, a level of detail that should be apparent in any good research. To ensure coherence was transparent, emergent categories of data were summarised into key points, and the key points linked to hypotheses taken forward into the quantitative survey. Reflexivity was also provided in the form of a personal statement in the introductory chapter. The 'commitment and rigour' criterion was met by ensuring the data collection and analysis was thorough. Firstly, by engaging with a number of participants, who undertook different forms of Internet gambling to different levels of involvement to provide all the data needed for a comprehensive analysis, and secondly, by adapting interviews to ensure categories of interest were fully saturated. It is likely two minor categories, developmental

experiences and disposition to gamble, were not fully saturated and this is highlighted in the qualitative results (see Section A1 and A2, Chapter 5). All other categories achieved data saturation at around 50 interviews and data collection continued to 62 participants to ensure participant variability was fully represented and whilst looking for further confirmations and exceptions.

Taking a broad view of the Yardley (2000) 'sensitivity to context' criteria, by using Grounded Theory the sensitivity to context in this research has leant more towards the context within the data itself rather than using the context provided by existing literature and used as a vehicle for interpreting the data. This has resulted in simple model of Internet gambling, which has been contextualised by comparison with existing research after analysis and the qualitative findings were fully completed, rather than as the analysis was underway. The 'sensitivity to context' criteria was met on an individual participant basis, for example, by using a series of challenging questions during interviews to move the data beyond normative cultural understanding to focus more on participant's own understanding of and interaction with Internet gambling. Considering the 'impact and importance' criteria, this research provides a broad overview of gambling activity on the internet, including the motivation for initiating, continuing, escalating and reducing play. It appears to be a novel piece of research in this respect. The emerging model has the potential to provide a structured way to study the key elements that influence Internet gambling and problem gambling.

Whilst quality has been addressed in the qualitative phase, limitations still remain in that the qualitative research is limited to understanding the gambling journey just with respect to the individuals who volunteered to participate. The generalisability of the findings to a larger population therefore depends on how representative the qualitative participants were of that larger population. The fact that they self-selected to participate automatically suggests they are in some way different to others who were invited to participate, but chose not to (Corbin & Strauss, 2008; Bryant & Charmaz, 2007). They were recruited from variety of sources to obtain a breadth of participants to ensure each key gambler category was represented in the research. This does not mean they were stratified to ensure they reflected actual numbers in each gambler category in the same proportions they would appear in the whole gambler population, so in this respect care should be taken with generalising findings. The representative recruitment approach

was mostly achieved, although whilst the research included women who bet on the Internet, women with betting as their main domain were scarce and were underrepresented. Participants' accounts were retrospective, which leaves them vulnerable to reinterpretation, as later events, such as counselling or regaining control, may result in earlier events being analysed more deeply and reinvented somewhat to sit with current thinking about gambling. A real-time longitudinal approach would be more reliable.

In terms of mixed-method integrated design, the timing of the phases of this research was not ideal. The recruitment for the qualitative phase and the accompanying analysis were lengthy, particularly as the analysis involved Grounded Theory. For the sake of the research timescale, the quantitative survey was designed before all interviews had been undertaken and before the analysis was fully complete. As such, the questions on the survey could have been more closely aligned with the finalised seven categories of change and stability in gambling involvement. This problematised the validity criterion of coherence in a minor way. At present the survey should be considered as a pilot design which has been tested in this research. The survey would benefit from a redesign if it were to be re-run, firstly to fit the survey items more closely with the seven categories of change and stability, and secondly, to design the survey in such a way it would enable factor analysis. Designing, validating and standardising measures for each stage of the model would also strengthen the ability of the model to undertake systematic testing.

The quantitative sample was drawn largely from two populations, those who worked or studied at university, and those who participated in Internet gambling-related forums. Forums where problem gamblers were likely to be were particularly targeted so that this sub-group was of sufficient size to allow statistical testing. Arguably the sample as a whole would be non-representative of an Internet gambling population, as there are likely to be differences between the student and forum populations, and the IG population as a whole, many of whom will not be students or use forums,. As such, the quantitative research is also limited in its generalisability to a larger IG population. There were differences between participants from the two populations, university and forums, as reported, however, as a combined sample, the characteristics found across the sample, 76.7% male, 54% under 34 years old, 45.1% married or living with a partner, 47.2% single, 33.5% educated to degree level, were comparable to those

reported in other research. From the 2007 BGPS data, Griffiths et al (2009) found 74% of Internet gamblers were male and 55% were under 34 years old, Internet gambling prevalence was highest amongst those participants that had a degree. Lloyd et al. (2010) in one of the largest surveys of European Internet gambling with 4125 participants, found 79% were male, with a mean age of 35.5 years; 52.8% were married or living with a partner, 41.4% were single and 41.8% were educated to degree level or above. There are some similarities between the general demographics of the qualitative sample for this research and samples of Internet gamblers in larger IG populations. However, comparisons on other key gambling variables were not possible as the data on these variables was broken down in different ways.

The quantitative research required participants to retrospectively recall what motivated their gambling and how events influence increases and decreases in gambling involvement. As this is a retrospective self-report it can include recall bias, and has limited reliability and validity. Similarly to the qualitative research a real-time longitudinal approach may address some of these limitations in future research. The quantitative research was limited in that the sample and sub-groups were not of sufficient size to undertake full statistical analysis. Some reported results are limited to descriptives only, reported as indicators to identify where future hypotheses and research may be targeted. A larger qualitative sample would be required to undertake full analysis of similarities and differences between different categories of gambler, particularly when considering reasons for increasing and decreasing gambling involvement. However, recruitment of this larger sample may not be straightforward as the aim was to research a UK population to control for extraneous cultural variables. Additionally, in the quantitative sample, the use of a prize draw incentive for completion of the survey should be reconsidered on ethical grounds. In retrospect, offering a chance to win a prize for completion of the survey, whilst encouraging full participation, appears to be at odds with the needs of those who may be trying to avoid gambling situations. A donation to charity for each questionnaire completed would arguably be more ethical.

10.9   Conclusion

In final summation of the thesis, the research indicates the multiple reinforcements and motivations for IG change over a gambler's journey, and are influenced by changes in the lifestyle and circumstances of the gambler, as well as by individual factors. This supports the formative, longitudinal view of Orford (2001) Excessive Appetites model. How motivations for initiating IG differ from those of continuing, increasing and decreasing IG warrant further research, as do the features of gambling activities that the Internet can provide via structural characteristics and reinforcement (Parke & Griffiths, 2007).

The integrated IG model developed from integrated qualitative and quantitative findings, can provide a systematic vehicle for further research into increasing and decreasing gambling involvement in different groups of gamblers by considering motivations, in the form of specific events, for changes in gambling involvement. The model can potentially provide a new way of conceptualising the processes, and their relative effects, that influence the acquisition of gambling involvement that reaches problem gambling levels. It can also provide a framework for intervention, and for educating internet gamblers on the possible paths their journey may take and what the likely influences on these paths would be.

Finally, this research has found that safe gambling on the internet has identifiable patterns that provide an important counterpoint to the issue of problem gambling. Analysis of the qualitative and quantitative data has resulted in identifying patterns of play, characteristics, beliefs and attitudes, which appear to offer some protection from harm from Internet gambling. It seems that this resilience to gambling-related harm can be learned from a young age and also developed later in life, by a natural maturing process, and by deliberate plans to develop greater safety during play. This has the potential to reframe gambling behaviour in more nuanced terms and develop new ways to protect Internet gamblers vulnerable to problem gambling.

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APPENDICES

Appendix A: Problem Gambling Severity Index (PGSI, Ferris & Wynne, 2001)

Think back over your online gambling activities in the last 12 months, including playing poker, casino games, bingo, betting, slots, lotteries, scratch cards etc. Please read each question carefully and mark your response.

Thinking about the past 12 months, how often have you bet more than you could really afford to lose? Would you say

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Thinking about the past 12 months, how often have you needed to gamble with larger amounts of money to get the same feeling of excitement?

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Thinking about the past 12 months, how often have you gone back another day to try to win back the money you lost?

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Thinking about the past 12 months, how often have you borrowed money or sold anything to get money to gamble?

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Thinking about the past 12 months, how often have you felt that you might have a problem with gambling?

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Thinking about the past 12 months, how often have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Thinking about the past 12 months, how often have you felt guilty about the way you gamble, or what happens when you gamble?

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Thinking about the past 12 months, how often has your gambling caused you any health problems, including stress or anxiety?

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Thinking about the past 12 months, how often has your gambling caused any financial problems for you or your household?

Never ☐ Sometimes ☐ Most of the time ☐ Almost Always ☐

Appendix B: Examples of Qualitative Recruitment Messages

B1   Posts on Facebook gambling interest groups and gambling businesses

Hi. I am a postgrad researcher at Uni of Greenwich conducting ethically approved research into UK internet gambling (e.g. betting, poker, bingo, lottery, slots, casino games). If you are from the UK, over 18, have experience of gambling online, playing monthly, weekly, daily or have recently stopped, and are willing to talk to me aI would love to hear from you. Thanks.

For more info, including research aims, what you will be asked to do and participation incentives, please contact me or check out my Facebook notes and website link. (Link to PIS and more info)

B2   Posting on Gamcare forum

Hi all,

Janette Davis, a psychology post-graduate at the University of Greenwich is carrying out research into:

> "Routes into and out of problem internet gambling: the role of gender and type of game played."

The research is funded by the Responsible Gambling Fund (RGF). You can read more about the research by clicking on the link below:

http://www.gamcare.org.uk/new…t_gambling_seeks_participants

Janette is looking for a representative cross-section of individuals to be interviewed, including those who have given up or reduced their gambling in the past year. No names of individuals will be published and any identifying information will be removed from the transcripts.

The research will be completed by October 2011 and will be made available through the RGF's website.

If you'd like to help, please get in touch with Janette at j.m.davis@gre.ac.uk 020 8331 7577

Best regards

Rob

B3   Email to University staff and students

Dear All

I am a PhD student at Greenwich University conducting a research project on UK internet gambling. I am contacting fellow students as I am looking for participants to take part in the project, and I wondered if you could help.

The research I am doing focuses on adults who gamble on the internet, investigating how they become involved and the impact it has on their lives. I would like to speak with individuals who participate in any type of online gambling (e.g. betting, poker, bingo, fruit machines, casino games), playing between once a month and every day, or having recently given up.

The research consists of a confidential telephone interview and a short questionnaire about gambling levels.

The study is funded by the Responsible Gambling Fund and has received ethical approval from the University of Greenwich Research Ethics Committee.

If you gamble on the internet, or have gambled on the internet in the past, and are interested in taking part in this study, you can talk to me confidentially on 0208 331 7577, email me at J.M.Davis@gre.ac.uk or write to me at Bronte Hall, Avery Hill Road, London SE9 2UG and I will get back to you.

If you do not gamble on the internet yourself, but maybe know someone who does, it would be of great help if you were willing to pass this email on.

For more information follow the link to
http://www.gre.ac.uk/data/assets/pdf_file/0005/454505/JanD-Participant-Information.pdf

Thankyou.

Janette Davis

PhD student
Dept of Psychology and Counselling
University of Greenwich
Tel 0208 331 7577
Supervised by Professor Roslyn Corney

Appendix C: **Qualitative Participant Information Sheet**

School of Health and Social Care
Department of Psychology and Counselling
Southwood Site
Avery Hill Campus
Avery Hill Road
Eltham
London SE9 2UG

RESEARCH INFORMATION SHEET

This information is provided to explain what the research is about and what you will be asked to do should you agree to participate. If you have any questions please contact me. I will contact you in the next few days to ask if you are willing to participate in the research, and if so, we can arrange an interview.

Thankyou
Janette Davis

* * * * * * *

This study is being undertaken as part of a three year PhD project about internet gambling. It is being conducted in the Department of Psychology & Counselling, School of Health & Social Care, at the University of Greenwich. It is sponsored by the Responsible Gambling Fund, an independent charity funding research into gambling in the UK. The project has received ethical approval from the University of Greenwich Research Ethics Committee.

As a participant in this study, you would be asked to complete an interview about internet gambling, followed by a short questionnaire. The interview would focus on your gambling history, both internet and non-internet (for example, when and how you started gambling, what games you play) and the effects of gambling on your life (for example, how often and how long you play, what you like/don't like about it). It would also cover some general information about your lifestyle and circumstances (for example, marital status, work life, social life). When the interview is complete, you would be asked to fill in a short questionnaire about the level of your gambling. This would take about 10 minutes. To reimburse you for your time you would be offered a £20 voucher for a high street shop, or a £20 donation to charity can be made in your name.

The interview could take place over the phone or at the University of Greenwich, whichever you prefer, and it is expected to last no longer than an hour. You may decline to answer any questions you wish and you may end the interview at any time. To ensure accuracy the interviews would be recorded. Quotes from the interview may be used in the results of the research, and these results may be published or reported, but your name will not be associated in any way with any published results. Additionally, to ensure confidentiality and anonymity, any names mentioned during the interview will be changed, and any information that could be used to identify you will be removed. The interview will be put into a written form, and a copy of this can be sent to you.

The post interview questionnaire is a standard questionnaire consisting of nine items relating to the effects of gambling. This would be given to you after the interview or sent to you in the post or via email.

You may withdraw your data at any stage prior to the report is written, anticipated as being December 2010. Data will be held on disc or computer (without names or other identifying information) for a maximum of 10 years, at which point it will be destroyed.

Your interview along with others would be used to look at how and why people are gambling on the internet.   During the next few years, further research into internet gambling will be undertaken and combined with your research to identify the risks of internet gambling, considering both gender and different types of internet game. Ultimately it is anticipated that via the Responsible Gambling Fund, this research will inform the Gambling Commission who are the regulators of the Gambling Industry in the UK.

If you have any questions about this study before you consent to participate, please ask the researcher or supervisor.

| Researcher | Janette Davis | J.M.Davis@gre.ac.uk | 0208 331 7577 |
| Supervisor | Roslyn Corney | R.H.Corney@gre.ac.uk | 0208 331 8926 |

*   *   *   *   *   *

If you have any other queries or concerns about the issues raised by this study, you may speak in confidence with the researcher or supervisor. However, this is a research study only and, as such, it is not be possible to offer ongoing support, advice or help. There are a number of agencies who are able to provide these services, as follows:

Responsible Gambling Fund - *An independent charity funding gambling related treatment, research and education programmes in the UK.*
Office contact: 020 7397 8710 or via www.rgfund.org.uk

GamCare - *Provides information, advice and counselling to individuals and families concerned about problem gambling.*
Helpline: 0845 6000 133 or via www.gamcare.org.uk

The Gordon House Association - *Provides accommodation, therapy and rehabilitation for compulsive gamblers.*
Contact: 01384 241292 or via www.gordonhouse.org.uk

Gamblers Anonymous UK - *A self-help fellowship of gamblers wanting to address their gambling problems.*
Helplines: London 020 7384 3040 or via www.gamblersanonymous.org.uk

National Debtline - *Provides free confidential advice on how to deal with debt problems.*
Helpline: 0808 808 4000 or via www.nationaldebtline.co.uk

Appendix D: Interview schedules

D1   Interview guide for the women 1-25

1) Their experiences of gambling (both outside and inside the home) and their gambling history/personal story (including if and when it became a problem). This included their first experiences of gambling right up to their current situation.

2) They were asked what types of gambling they did, including when and where. They were asked their motivations and how it made them feel – giving both the positives and negatives. They were also asked whether they felt in control.

3) They were asked about the impact on their life- health, mental health, finances, social life, work, family and relationships.

4) They were asked whether they perceived problems with their gambling; if they had sought help and the barriers to help-seeking. Helpseeking included informal help from friends, partners or family, as well as non specific or specific organisations.

5) Those who had tried to give up gambling were asked about the process and outcome.

D2   Interview guide for men 1-6

1) Introduction self/project . Verbal consent - participants were asked if they had read the information sheet, if there was anything they would like to ask and withdrawal, anonymity & confidentiality were discussed.

2) General information through the interview was gathered including age, sex, any children, marital status, working, what sort of work, how active social life

3) Gambling experience prior to Internet – when, how start, activities, frequency, spending?

4) Experience of starting Internet gambling – when, how start, activities, attraction of game, frequency, duration, spending?

5) Continuing internet gambling - Why keep playing? Have levels changed? What made you gamble more? What made you gamble less? Have effects changed? When? How have they changed? What made them change? Debts?

6) Problem gambling (if offered by participant) - What made you think you had problem gambling? What did you do about it? What other routes did you think about? Why did you chose that particular route? How successful was your action?

7) Risks – assessed prior to starting IG? How keep control?

8) Interview closure - Anything else? cgpi questionnaires Contact re voucher/ charity donation? Post address. Can i contact you at a later date if i need to clarify anything

Deepening questions
Can you be more specific about….
What did you mean when you said….
Can you give me an example…..
Can you tell me a bit more about….
Anything else you would like to tell me about…

D3   Interview guide for men 7-16 and woman 26

1) - 2) as previous, 3) kept briefer to allow time for extending 4) - 6)

4) Experience of starting Internet gambling – when, how start, activities, attraction of game, frequency, duration, spending?
Age when start
Did you think about what would happen/have a plan? looking for resilience and control strategies.
Feelings - good/bad experience?
What was going on in your life at the time? Home life – Work - Relationships
Starting Phase - next few times you went back to internet gambling .... What made you continue? Time spans – frequency – time of day – duration - wins/losses - feelings/frustrations. What did you get out of it? What was good/bad?

5) Maintenance/continuing
 After this starting phase, how did your play continue?
Describe a typical session... Time spans– frequency – time of day – duration - wins/losses - feelings/frustrations. What did you get out of it? What was good/bad?

Escalation / Reduction
Looking back have you had phases where you have played more/less or has it remained the same? Tell me about when you gamble more frequently/stay online longer/play for higher stakes/add new activities....Tell me about when you have played less often, for lower stakes, shorter sessions, dropped activities.

Effects
Looking back over your internet gambling - tell me about the impact of internet gambling on your life….family, finances, time etc

Open questions to deepen where needed
Can you recall a particular time when had a very good/bad experience of internet gambling?...
Can you describe what happened – how did you feel?
Can you be more specific about….
What did you mean when you said….
Can you give me an example…..
Can you tell me a bit more about….
Anything else you would like to tell me about…

6) Problem gambling
Would you say your gambling has ever been a problem to you?
Would you say your gambling has ever been perceived as a problem by others?

Pg's only - What made you think there might be a problem? What did you do about it? What made you decide to deal with it this way? How successful was your action? Others – what would ring alarm bells? What do you do to stay in control?

7) 8) as previous

D4   Interview guide for men 17-31 and women 27-31

Sense of time throughout – describing the 'route' or 'pathway', what influences it, over what time, what going on in life, how gambling influences life and life influences gambling

1) - 4) as previous

5) as previous
plus
Escalation / Reduction
Motivations – what makes this happen – fish for examples and links
Conscious decisions? Look for decisions/cognitions, how they arrive at them, how they influence gambling behaviour

Open questions to deepen where needed
Can you recall a particular time when you had a very good/bad experience of internet gambling? Can you describe what happened – how did you feel? Did this affect the way you gambled next time? In what way?

6) as previous

7) Risks - Were you aware of any risks when you started gambling? Can you describe how you saw these risks when you first started? As you continued gambling how did this view change? Did you take any action to counter or control these risks – what did you do? Resilience/control

8) as previous
Plus
How do you see your gambling at the moment? How do you think it will continue?

Appendix E: Qualitative debriefing materials

E1   Post Interview email to participants

Dear

Thank you very much for speaking with me today. I appreciate you telling me about your experiences with Internet bingo and your input is very useful for the research.

As mentioned, I am sending a questionnaire about gambling levels which I would be grateful if you can complete and return. I am also sending a post interview information sheet which just reiterates what will happen to your data and provides contact details for gambling agencies should you wish to contact them.

As discussed during our interview, as reimbursement for your time I will send a £20 online voucher for Amazon.

Thank you again - I very much appreciate your time and effort today.

Best wishes

Janette

--
Janette Davis
PhD Student
Department of Psychology and Counselling
University of Greenwich
Avery Hill
London SE9 2UG
Tel 0208 331 7577

E2   Post interview information sheet

Thankyou very much for taking part in the research into internet gambling in the UK.   Your input is valuable and very much appreciated

Your interview along with others is being used to look at how and why people are gambling on the internet.   During the next few years, further research into internet gambling will be undertaken and combined with your research to identify the risks of internet gambling, considering both gender and different types of internet game. Ultimately it is anticipated that via the Responsible Gambling Fund, this research will inform the Gambling Commission who are the regulators of the Gambling Industry in the UK.

Just to remind you, quotes from the interview may be used in the results of the research, and these results may be published or reported, but your name will not be associated in any way with any published results. Additionally, to ensure confidentiality and anonymity, any names mentioned during the interview will be changed, and any information that could be used to identify you will be removed. The interview will be put into a written form, and a copy of this can be sent to you.

You may withdraw your data at any stage prior to the report being written, anticipated as being December 2010. Data will be held on disc or computer (without names or other identifying information) for a maximum of 10 years, at which point it will be destroyed.

If you wish to speak with me about the interview or the research, or have any other queries or concerns about the issues raised by this study, you may speak in confidence with me or my supervisor.

Researcher	**Janette Davis**	J.M.Davis@gre.ac.uk	0208 331 7577
Supervisor	**Roslyn Corney**	R.H.Corney@gre.ac.uk	0208 331 8926

Dept of Psychology & Counselling, University of Greenwich, Avery Hill Rd, Eltham, SE9 2UG

Thankyou
Janette Davis

For your reference, should you wish to contact any gambling related services, there are a number of agencies who provide specialised gambling support and advice, as follows:

Responsible Gambling Fund - An independent charity funding gambling related treatment, research and education programmes in the UK.
Office contact: 020 7397 8710 or via www.rgfund.org.uk

GamCare - Provides information, advice and counselling to individuals and families concerned about   problem   gambling.
Helpline: 0845 6000 133 or via www.gamcare.org.uk

The Gordon House Association - Provides accommodation, therapy and rehabilitation for compulsive   gamblers.
Contact: 01384 241292 or via www.gordonhouse.org.uk

Gamblers Anonymous UK - A self-help fellowship of gamblers wanting to address their gambling problems.
Helplines: London 020 7384 3040 or via www.gamblersanonymous.org.uk

National Debtline - Provides free confidential advice on how to deal with debt problems.
Helpline: 0808   808   4000   or   via   www.nationaldebtline.co.uk

Appendix F: Examples of Quantitative Recruitment

F1   Email to University staff and students

Hi

I am a postgraduate research student at the University of Greenwich conducting research into UK Internet gambling. I would like to invite you to participate in a survey about adult Internet gambling. The survey asks a series of multiple choice questions about how people start gambling on the Internet for money and how Internet gambling changes over time. It takes about 15 minutes to complete and completed entries are entered into a prize draw for an Apple Ipod Touch.

The survey is open to adults living in the UK who gamble for money on the Internet on any type of game (e.g. betting, poker, bingo, lottery, slots, casino games), either occasionally, regularly, frequently or very frequently. You may also have gambled on the Internet in the past and have recently stopped.
If you are over 18, live in the UK, gamble on the Internet for money and are willing to answer some questions about your Internet gambling activities, please follow the link to the survey

 http://university-of-greenwich1279202525.InternetGamblingSurvey.sgizmo.com/s3/

Full details of the research and data protection can be found via this link, or please contact me directly for further information.

Thankyou.

Janette Davis

J.M.Davis@gre.ac.uk
Department of Psychology & Counselling
School of Health & Social Care
University of Greenwich
Tel 0208 331 7560

This research is funded by the Responsible Gambling Fund, an independent charity set up to distribute funds for gambling research, education and treatment.
The project has received ethical approval from the University of Greenwich Research Ethics Committee.

F2   Letter to Gambling Magazine

I am writing to Gambling Magazine to ask readers if they would take part in a short survey about Internet gambling in the UK. The survey asks a series of questions about Internet gambling activity and how it changes over time. It takes about 15 minutes to complete and completed entries are entered into a prize draw for an Apple Ipod touch.

To take part, you need to be over 18, live in the UK and gamble on the Internet for money, either now or in the past, on any type of game, e.g. betting, poker, bingo, lottery, fruit machines, casino games.

The survey and further details about the research are available at

<div align="center">http://sgiz.mobi/s3/Internet-Gambling-Survey</div>

If you would like any further information, please contact me at the email address below.

Thankyou.

Janette Davis
J.M.Davis@gre.ac.uk
University of Greenwich

(This project has received ethical approval from the University of Greenwich Research Ethics Committee and is funded by the Responsible Gambling Fund.)

F3　Post on a gambling forum

I am posting to ask forum members if they would take part in a short survey about Internet 'gambling' in the UK. It takes about 15 minutes to complete and completed entries are entered into a prize draw for an Apple Ipod touch.
To take part, you need to be over 18, live in the UK and gamble on the Internet for money, either now or in the past, on any type of game, e.g. betting, poker, bingo, lottery, fruit machines, casino games.
The survey and further details about the research are available at
http://university-of-greenwich1279202525.InternetGamblingSurvey.sgizmo.com/s3/

Thankyou.
JainieD
PhD Researcher
University of Greenwich

(This project has received ethical approval from the University of Greenwich Research Ethics Committee.)

Appendix G:Quantitative Survey (incl. Participant Information and Debrief)

Internet Gambling Survey
Introduction to the Survey

Welcome to the Internet gambling survey!

Are you an adult who gambles for money on the Internet? Maybe you bet, or play bingo, blackjack, poker or roulette. Whatever game you play on the Internet, whether you gamble a few times a year, once a month, or every day, it will be much appreciated if you take part in this survey. All completed entries will be entered into a prize draw for an Apple IPod Touch.

The survey consists of multiple choice questions about past and present Internet gambling activities and reasons for playing in different ways. Please answer all questions as honestly as you can, reflecting on your own experiences of Internet gambling. There are 5 sections in the survey and it will take about 15 minutes to complete. Your responses will be combined with others to look at how and why people are gambling on the Internet.

At the end of the survey, you will be asked for your email address or telephone number so that you can be entered into a prize draw for an Apple Ipod Touch. Initially there will be one Apple IPod in the draw. If over 200 completed responses are received a second Apple IPod will be added to the draw. I will contact you by email by October 2011 if you have won the prize. Your contact details will not be used for any other purposes.

The survey is being conducted by Janette Davis at the University of Greenwich and has been approved by the University of Greenwich Research Ethics Committee. All responses will remain anonymous and confidential, will not be linked to you personally and will be stored under the Data Protection Act. During the survey you will be asked to input the last 4 digits of your phone number. You may withdraw your data at any time after completing the study by emailing me with this code.

You can find further information about the research by following the link below.
http://surveygizmolibrary.s3.amazonaws.com/library/92937/InformationSheet.pdf

If you have any questions or comments, please email me at
J.M.Davis@greenwich.ac.uk.

Thank you. Your help is greatly appreciated.

I am over 18 years of age *

- ○ Yes
- ○ No

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I am resident in the UK *

- ○ Yes
- ○ No

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Consent Confirmation *

- ☐ I have read and understood the above information and the Further Information sheet
- ☐ I consent to participate in this survey

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Please enter the last 4 digits of your phone number. This will be your personal code and you can use this could should you wish to withdraw your data from the research at a later date *

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What is your gender? *

- ○ Male
- ○ Female

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Please click the 'NEXT' button to move to the next section of the survey.

| Next |
| 0% |
| Save and continue survey later |

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Please take a moment to think back to the <u>very first time</u> that you used an Internet gambling website to gamble <u>for money</u>.

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1. Approximately when did you first start gambling on the Internet for money? *

- ○ In the last year?
- ○ 1 to 2 years ago?
- ○ 2 to 4 years ago?
- ○ 4 to 6 years ago?
- ○ 6 to 8 years ago?
- ○ More than 8 years ago?
- ○ I haven't gambled on the Internet for money

2. What was <u>the very first</u> Internet gambling activity that you tried for money? *

- ○ Odds betting with a bookmaker
- ○ Spread betting with a bookmaker
- ○ Financial spread betting
- ○ Betting exchange
- ○ Football pools
- ○ Bingo
- ○ Roulette
- ○ Slots/Fruit machines
- ○ 'Instant Win' games
- ○ Black Jack
- ○ Poker
- ○ National/other Lottery
- ○ Other (Please state)

3. Did you already gamble on this activity offline e.g. in a bookmakers, bingo hall, casino, pub etc? *

- ○ Yes
- ○ No

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4. Did you try this gambling activity on the Internet for points or virtual money before you started playing for real money? *

- ○ Yes

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- ○ No

5. How much do you think each of the following influenced you to gamble on the Internet <u>for money,</u> <u>for the very first time</u>? *

	Strong influence	Moderate influence	Slight influence	No influence at all	Not applicable
• I was successfully playing for points, so decided to play for money	○	○	○	○	○
• I wanted to find out if I could be better than other players	○	○	○	○	○
• My friends or family were doing it and I wanted to be a part of it	○	○	○	○	○
• I thought I might make contact with new people via Internet gambling	○	○	○	○	○
• I was feeling a bit lonely or isolated	○	○	○	○	○
• I saw Internet gambling as an opportunity to make money	○	○	○	○	○
• I was interested in offline gambling and I wanted to practice on the Internet	○	○	○	○	○
• I just fancied doing it	○	○	○	○	○
• I was feeling bored	○	○	○	○	○
• I thought it would be more convenient to gamble on the Internet than go out to a gambling venue	○	○	○	○	○
• I saw a promotion offering free stakes or money to play with	○	○	○	○	○
• I saw an advert for Internet gambling and decided to give it a go	○	○	○	○	○
• I thought it would be interesting to see if I could 'beat the system'	○	○	○	○	○
• I was already gambling offline and thought I would be more successful on the Internet	○	○	○	○	○
• Someone recommended that I try it	○	○	○	○	○
• I thought it would be fun and entertaining	○	○	○	○	○
• I could no longer smoke at my usual gambling venue so I moved my gambling activities	○	○	○	○	○

	Strong influence	Moderate influence	Slight influence	No influence at all	Not applicable
to the Internet					
• I thought it would be interesting to do something new/learn a new skill	○	○	○	○	○
• I was already gambling offline and thought I would have more choice on the Internet	○	○	○	○	○
• Someone showed me how to play on the Internet	○	○	○	○	○

Please click the 'NEXT' button to move to the next section of the survey.

Next   Back

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Internet Gambling Survey
Section Two - Current Internet gambling activities

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6. Please tell me about your current Internet gambling activity *

- ○ I am currently gambling on the Internet
- ○ I am not currently gambling on the Internet - I stopped in the last 12 months
- ○ I am not currently gambling on the Internet - I stopped over 12 months ago

The rest of the questions on this page are about your Internet gambling the last 12 months.

If you have currently stopped Internet gambling, please answer the questions thinking about your Internet gambling the 12 months prior to stopping.

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7. What has been your main Internet gambling activity in the last 12 months, or 12 months prior to stopping. *
Note: 'Main' activity is the activity most often played, with most money spent and/or most time spent doing.

- ○ Odds betting with a bookmaker
- ○ Spread betting with a bookmaker
- ○ Financial spread betting
- ○ Betting exchange
- ○ Football pools
- ○ Bingo
- ○ Roulette
- ○ Slots/Fruit machines

- ○ 'Instant Win' games
- ○ Black Jack
- ○ Poker
- ○ National/other Lottery
- ○ Other
- ● I have two or more equal 'main' activities

'Other' response

Please state which is your main Internet gambling activity *

[   ]

'I have two or more equal 'main' activities' response

Please indicate which are your two or more equal 'main' Internet gambling activities. *

- ☐ Odds betting with a bookmaker
- ☐ Spread betting with a bookmaker
- ☐ Financial spread betting
- ☐ Betting exchange
- ☐ Football pools
- ☐ Bingo
- ☐ Roulette
- ☐ Slots/Fruit machines
- ☐ 'Instant Win' games
- ☐ Black Jack
- ☐ Poker
- ☐ National/other Lottery
- ☐ Other (please state). [   ]

8. Approximately how often have you played the following gambling activities on the Internet for money in the last 12 months or 12 months prior to stopping? *

	Not in the last 12 months	Less than once a month	1-3 times a month	1 day a week	2-3 days a week	4 days a week or more
a) Odds betting with a bookmaker	○	○	○	○	○	○
b) Spread betting with a bookmaker	○	○	○	○	○	○
c) Financial spread betting	○	○	○	○	○	○
d) Betting exchange	○	○	○	○	○	○
e) Football pools	○	○	○	○	○	○
f) Bingo	○	○	○	○	○	○
g) Roulette	○	○	○	○	○	○

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	Not in the last 12 months	Less than once a month	1-3 times a month	1 day a week	2-3 days a week	4 days a week or more
h) Slots/Fruit machines	○	○	○	○	○	○
i) 'Instant Win' games	○	○	○	○	○	○
j) Black Jack	○	○	○	○	○	○
k) Poker	○	○	○	○	○	○
l) National/other Lottery	○	○	○	○	○	○

9. Did you engage in any other Internet gambling activity not included in this list? *

- ○ No
- ○ Yes - please state. [＿＿＿＿]

How often have you undertaken this activity on the Internet in the last 12 months? *

Not in the last 12 months	Less than once a month	1-3 times a month	1 day a week	2-3 days a week	4 days a week or more
○	○	○	○	○	○

10. Over the last 12 months (or 12 months prior to stopping), approximately how much time did you spend on average <u>each week</u> on Internet gambling? *

[-- Please Select -- ▼]

11. Thinking about your Internet gambling experience, please indicate the extent to which you agree or disagree with each of the following statements. *

	Strongly disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Strongly agree
• When I am gambling on the Internet, winning money is very important to me	○	○	○	○	○
• I feel skillful or clever when I gamble on the Internet	○	○	○	○	○
• When I am gambling on the Internet, I forget about day-to-day hassles and problems	○	○	○	○	○
• I feel mesmerised or numb when I gamble on the Internet	○	○	○	○	○
• Gambling on the Internet makes me feel good about myself	○	○	○	○	○
• Winning is just a matter of luck	○	○	○	○	○

	Strongly disagree	**Slightly disagree**	**Neither agree nor disagree**	**Slightly agree**	**Strongly agree**
• **I find Internet gambling an exciting activity**	○	○	○	○	○
• **When I am gambling on the Internet, beating other players or 'beating the system' is very important to me**	○	○	○	○	○
• **I find Internet gambling a good way to 'switch off'**	○	○	○	○	○

Please click the 'NEXT' button to move to the next section of the survey.

Next | Back

33%

Internet Gambling Survey
Section Three - Internet gambling experience

12. The list below includes events and circumstances which relate to Internet gambling experiences and general life experiences.
Please select all the events and circumstances that you experienced in the last 12 months of Internet gambling. *

- ☐ I was making friends online via Internet gambling sites
- ☐ I was ill
- ☐ I split up with my partner/spouse
- ☐ I had a big win from Internet gambling and wanted to win more
- ☐ I was bored
- ☐ My usual Internet gambling strategies weren't working particularly well
- ☐ Internet gambling was taking up lots of my time
- ☐ I found I had lots of choice when I gambled on the Internet
- ☐ I was stressed
- ☐ I wasn't winning much on Internet gambling
- ☐ When gambling on the Internet, I was beating other players and/or 'beating the system'
- ☐ When gambling on the Internet, I was regularly winning money
- ☐ I suffered a bereavement of a family member or close friend
- ☐ I found it convenient to gamble on the Internet
- ☐ I lost money gambling on the Internet and wanted to win it back
- ☐ I had more spare time on my hands than usual
- ☐ I was in debt/having money problems

- ☐ I enjoyed developing skill at Internet gambling
- ☐ I had less available cash than usual
- ☐ I was at home a lot of the time
- ☐ I became less interested in offline gambling activities
- ☐ I lost money gambling on the Internet and didn't want to lose more
- ☐ I found that Internet gambling allowed me to forget about my problems
- ☐ My friends and/or family were also interested in Internet gambling
- ☐ I had more available cash than usual
- ☐ I have seen lots of advertising and promotions for Internet gambling activities
- ☐ I was successfully using a particular gambling strategy on the Internet
- ☐ I became more interested in offline gambling activities
- ☐ I was feeling lonely and/or isolated

13. Thinking about all your Internet gambling activities in the last 12 months (or in the 12 months before you stopped) ... *

	Never	Sometimes	Most of the time	Almost Always
...how often have you gambled more than you could really afford to lose?	⊙	○	○	○
...how often have you needed to gamble with larger amounts of money to get the same feeling of excitement?	○	○	○	○
...how often have you gone back another day to try to win back the money you lost?	○	○	○	○
...how often have you borrowed money or sold anything to get money to gamble?	○	○	○	○
...how often have you felt that you might have a problem with gambling?	○	○	○	○
...how often have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?	○	○	○	○
...how often have you felt guilty about the way you gamble, or what happens when you gamble?	○	○	○	○
...how often has your gambling caused you any health problems, including stress or anxiety?	○	○	○	○
...how often has your gambling caused any financial problems for you or your household?	○	○	○	○

Please click the 'NEXT' button to move to the next section of the survey.

| Next | Back |

50%

Internet Gambling Survey
Section Four - Changes in Internet gambling activities

This is the last section about Internet gambling. The next (and final) survey section just asks for basic information about your age, marital status etc. and enters your details for the IPod draw. You are nearly done!

How did the following events and circumstances, occuring in the last 12 months of your Internet gambling, influence your Internet gambling level? *
Note: This question is based on your responses to question 12.

My Internet gambling decreased a lot	**My Internet gambling decreased a little**	**My Internet gambling did not increase or decrease**	**My Internet gambling increased a little**	**My Internet gambling increased a lot**

Please click the 'NEXT' button to move to the last section of the survey.

Next	Back

67%

Internet Gambling Survey
Section Five - Your details

A few details about you and then we are done.
How old are you? Please select from the drop down list *
-- Please Select --

What is your current marital status? *

- ○ Single
- ○ Living as domestic partners
- ○ Married
- ○ Separated/Divorced
- ○ Widowed

What is the highest level of education you have completed? *
-- Please Select --

How would you describe your ethnic category? (Optional)

- ○ White or White British
- ○ Asian or Asian British
- ○ Black or Black British

- ○   Mixed race
- ○   Other ethnic group (please state). [   ]

Please indicate how you heard about this survey? *

- ○   Gamcare forum
- ○   Gambling Therapy forum
- ○   Other online forum
- ○   Facebook
- ○   University poker society
- ○   Gambling Magazine
- ○   Personal email from researcher
- ○   via University student email
- ○   via University staff email
- ○   Other (please state) [   ]   [SURVEY_TIME]

If you have any comments you would like to make about this survey or about Internet gambling, please do so below. Thankyou.
[_____]

If you wish to be entered into the draw for an Apple Ipod Touch please enter your email address or full telephone number here.
[_____]

If you are willing to take part in future research about gambling, please provide a contact email address or full telephone number here. You will only be contacted by this researcher and your details will not be passed on to anyone else without your permission.
[_____]

Thankyou, the survey is now complete.
Please click the 'SUBMIT' button to submit your data and go to the closing page of the survey.

| Submit | Back |

83%

Internet Gambling Survey
Thank You!

Thank you very much for completing the survey. Your response is very important.

To end the survey, please close the browser or navigate away from the page.

About the research

This study is part of a three year PhD project about internet gambling, undertaken in the School of Health at the University of Greenwich. It is sponsored by the Responsible

Gambling Fund, an independent charity funding research into gambling in the UK. The project has received ethical approval from the University of Greenwich Research Ethics Committee.

Your data, combined with other data from surveys and interviews, will be used to look at how and why people are gambling on the Internet, identifying the risks of Internet gambling, whilst considering the impact of gender and different types of Internet game.

You may withdraw your data at any stage prior to the data being analysed, anticipated as being August 2011, by contacting the researcher with the last 4 digits of your telephone number, provided by you at the start of the survey.

If you have any questions about this study, please contact the researcher or project supervisor.

Researcher   Janette Davis   J.M.Davis@gre.ac.uk
Supervisor   Professor Roslyn Corney   R.H.Corney@gre.ac.uk

If you have any other queries or concerns about the issues raised by this study, you may speak in confidence with the researcher or supervisor, and additionally, the following agencies may be useful.

Responsible Gambling Fund - An independent charity funding gambling related treatment, research and education programmes in the UK.
020 7397 8710, www.rgfund.org.uk

GamCare - Provides information, advice and counselling to individuals and families concerned about problem gambling.
0845 6000 133, www.gamcare.org.uk

The Gordon House Association - Provides accommodation, therapy and rehabilitation for compulsive gamblers.
01384 241292, www.gordonhouse.org.uk

Gamblers Anonymous UK - A self-help fellowship of gamblers wanting to address their gambling problems.
020 7384 3040, www.gamblersanonymous.org.uk

National Debtline - Provides free confidential advice on how to deal with debt problems.
0808 808 4000 www.nationaldebtline.co.uk

100%

Appendix H: Results: Comparing two recruitment strands

Differences in the demographics of the two recruitment strands, namely University staff and students, recruited from a University population, and targeted Internet gamblers recruited through gambling-related websites, are shown in Figure H1. Chi^2 tests, with a Bonferroni adjustment, were undertaken to test the significance of differences. Some grouping of the variable dimensions was undertaken to ensure the tests were valid.

Figure H   Differences in demographics between the two recruitment strands

	University staff & students		Targeted Internet gamblers		Chi^2	Sig.
	N	**%**	**N**	**%**		
Gender	**118**	**50.6%**	**115**	**49.4%**	**21.52**	**p<.001**
Male	**106**	**89.8%**	**74**	**64.3%**		*
Female	**12**	**10.2%**	**41**	**35.7%**		*
Age Group	**118**	**50.6%**	**115**	**49.4%**	**64.65**	**p<.001**
18-24	**11**	**9.3%**	**59**	**51.3%**		*
25-34	28	23.7%	28	24.3%		
35-44	25	21.2%	15	13.0%		
45-54	**33**	**28.0%**	**5**	**4.3%**		*
55-64	14	11.9%	8	7.0%		
65-74	**7**	**5.9%**	**0**	**0.0%**		*
Marital Status	**118**	**50.6%**	**115**	**49.4%**	**30.55**	**p<.001**
Single	**35**	**29.7%**	**75**	**65.2%**		*
Married/Living as domestic partners	**71**	**60.2%**	**34**	**29.6%**		*
Separated/Divorced/Widowed	12	10.2%	6	5.2%		
Level of Education	**106**	**48.4%**	**113**	**51.6%**	**16.37**	**p<.01**
GCSE or equivalent	20	16.9%	12	10.4%		
A level	**17**	**14.4%**	**31**	**27.0%**		
Vocational	17	14.4%	9	7.8%		
Degree	36	30.5%	42	36.5%		
Post Graduate	16	13.6%	19	16.5%		
None apply	**12**	**10.2%**	**2**	**1.7%**		
Ethnicity	**116**	**50.4%**	**114**	**49.6%**	**25.13**	**p<.001**
White or white British	**112**	**96.6%**	**83**	**72.8%**		*
All other ethnicities	**4**	**3.4%**	**31**	**27.2%**		*
Asian or Asian British	1	0.9%	18	15.8%		
Black or Black British	2	1.7%	7	6.1%		
Mixed Race	1	0.9%	5	4.4%		
Other group	0	0.0%	1	0.9%		
Main current Internet mode	**118**	**50.6%**	**115**	**49.4%**	**16.74**	**p<.01**
Betting	44	37.3%	38	33.0%		
Casino	21	17.8%	27	23.5%		
Poker	**44**	**37.3%**	**23**	**20.0%**		
Lottery	**9**	**7.6%**	**27**	**23.5%**		
Gambling Level	**118**	**50.6%**	**115**	**49.4%**	**13.38**	**p<.001**
Non-Problem Gambling	**102**	**86.8%**	**76**	**66.1%**		*
Problem Gambling	**16**	**13.6%**	**39**	**33.9%**		*

Note - * **bold** significant differences

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The university staff and students recruitment strand included significantly more male and less female participants than the targeted Internet gamblers strand. The university strand also represented more older participants, with a significantly lower proportion of recruits aged 18-24, and a significantly higher proportion of recruits aged 45-54. University recruits were more likely to be married, whereas targeted Internet gamblers were more likely to be single. University recruits had a significantly lower proportion of participants who had A level education than the targeted Internet gambler recruits. Targetted Internet gambling recruits included significantly more participants from diverse ethnic backgrounds than University recruits. Targetted Internet gambling recruits included more problem gamblers than university recruits, and included significantly more lottery players and less poker player than University recruits.

Whilst there are significant variations across the two recruitment strands, the overall picture across the whole sample appears to broadly reflect demographics as found in other key Internet gambling samples (see Discussion).

Appendix I: Results: Events influencing initiating Internet gambling

Table I   *Moderate and strong influences to initiate Internet gambling for all participants and by gender, gambling level and first activity domain*

	All	Gender		Gambling level		First activity			
		Men	Women	NPG	PG	Betting	Casino	Poker	Lottery
N	260	199	61	181	58	102	53	62	43
More convenient	60.8%	61.8%	57.4%	60.2%	67.2%	*75.5%*	*52.8%*	*41.9%*	*62.8%*
Opportunity to make money	60.0%	*64.3%*	*45.9%*	*56.4%*	*74.2%*	66.7%	56.6%	56.5%	53.5%
Fun and entertainment	56.9%	57.5%	54.8%	*51.9%*	*63.8%*	*52.4%*	*70.4%*	*69.4%*	*32.6%*
I just fancied doing it	54.8%	51.8%	64.5%	54.2%	58.6%	54.4%	54.7%	58.1%	51.2%
Promotions	37.8%	39.9%	31.1%	37.0%	41.4%	45.1%	47.2%	24.6%	27.9%
Wider choice anticipated	31.4%	*35.0%*	*19.7%*	*28.8%*	*41.3%*	*51.0%*	*18.5%*	*24.2%*	*11.6%*
Wanting to 'beat the system'	31.2%	*34.7%*	*19.7%*	*27.1%*	*43.1%*	34.3%	28.3%	32.3%	25.6%
Wanting to beat other players	27.3%	*29.1%*	*21.3%*	*21.5%*	*43.1%*	*21.6%*	*18.9%*	*54.8%*	*11.6%*
Boredom	26.0%	*23.4%*	*34.4%*	*17.7%*	*46.5%*	*20.4%*	*48.1%*	*21.0%*	*18.6%*
Advertising	23.0%	21.0%	29.5%	*16.6%*	*38.0%*	*18.6%*	*38.9%*	*9.7%*	*32.6%*
Recommendation	21.9%	*20.1%*	*27.9%*	20.4%	25.8%	24.5%	15.1%	21.0%	25.6%
Greater success anticipated	20.8%	22.6%	14.8%	*17.1%*	*29.3%*	24.5%	20.8%	19.4%	14.0%
Success with virtual stakes	20.8%	19.6%	24.6%	17.1%	31.0%	*5.9%*	*26.4%*	*41.9%*	*18.6%*
Something new/ new skills	20.3%	21.0%	18.0%	19.3%	24.1%	*21.6%*	*16.7%*	*32.3%*	*4.7%*
Practice for offline play	15.8%	18.1%	8.3%	*14.9%*	*22.4%*	*17.8%*	*11.3%*	*24.2%*	*4.7%*
Shown how to play	14.9%	14.0%	18.0%	11.6%	20.7%	14.7%	18.5%	11.3%	16.3%
Joining friends/family	13.1%	12.6%	14.8%	11.1%	17.2%	11.8%	17.0%	11.3%	14.0%
Feeling lonely/isolated	13.0%	13.9%	9.8%	*3.9%*	*34.4%*	*7.8%*	*25.9%*	*12.7%*	*9.3%*
Smoking ban	4.6%	5.0%	3.3%	*2.3%*	*8.6%*	3.9%	3.7%	6.5%	4.7%
Making contact with new people	4.2%	3.5%	6.6%	2.8%	3.4%	2.9%	7.5%	4.8%	2.3%

Items in bold italics show significant differences

I1 Events influencing initiation by gender

Significant Mann-Whitney results

Item 3, 'Someone recommended that I try it', was a significantly stronger influence for women (N=61, Mean Rank=142.33) than for men (N=199, Mean rank=126.87), U=6791.00, p=0.05 (one-tailed), r = -.10.

Item 6, 'I was already gambling offline and thought I would have more choice on the Internet', was a significantly stronger influence for men (N=200, Mean Rank= 136.80) than for women (N=61, Mean rank=111.98), U=4939.50, p<0.01 (one-tailed), r = -.15

Item 9, 'I was feeling bored', was a significantly stronger influence for women (N=61, Mean Rank=146.80) than for men (N=201, Mean rank=126.86), U=7063.50, p<0.05 (one-tailed), r = -.12

Item 17, 'I saw Internet gambling as an opportunity to make money', was a significantly stronger influence for men (N=199, Mean Rank= 136.77) than for women (N=61, Mean rank=110.04), U=4821.50, p<0.01 (one-tailed), r = -.16

Item 18, 'I thought it would be interesting to see if I could 'beat the system', was a significantly stronger influence for men (N=199, Mean Rank= 135.46) than for women (N=61, Mean rank=114.32), U=5082.50, p<0.05 (one-tailed), r = -.13

Item 19, 'I wanted to find out if I could be better than other players', was a significantly stronger influence for men (N=199, Mean Rank=134.88) than for women (N=61, Mean Rank=116.21), U=5198.00, p<0.05 (one-tailed), r = -.12

Figure I1   Influences on initiating Internet gambling: Relative relevance and influence of different items for men

Figure I2   Influences on initiating Internet gambling: Relative relevance and influence of different items for women
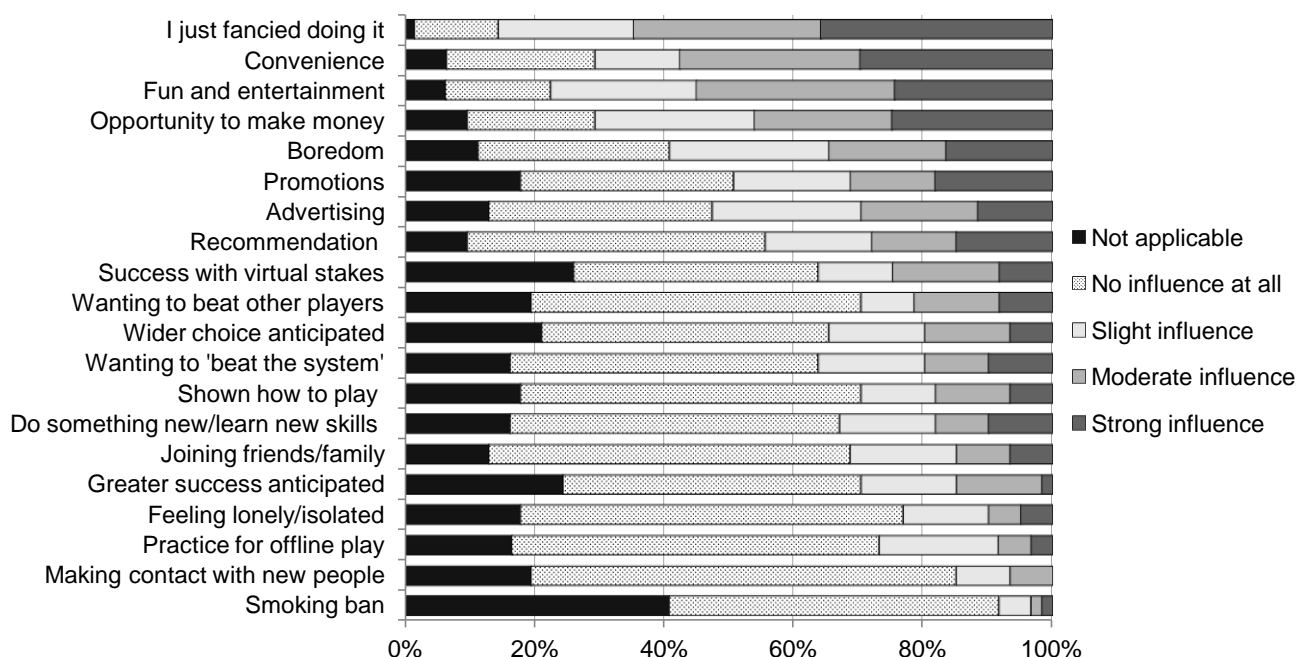
I2   Events influencing initiation by current main gambling domain

Results of significant Kruskal-Wallis and Mann-Whitney U post hoc tests

Item 1, 'I saw an advert for Internet gambling and decided to give it a go' was significantly different between players of different activities, H(3) = 12.80, p<.01. Casino players were significantly more likely to be influenced to initiate gambling because of advertising than bettors (U = 2091.5, r = -.21) and poker players (U = 1143, r = -.30)

Item 9, 'I was feeling bored' was significantly different between players of different activities, H(3) = 19.86, p<.001 Casino players were significantly more likely to be influenced to initiate gambling because of boredom than bettors (U = 1724, r = -.34) and lottery players (U = 768.5, r = -.30)

Item 10, 'I thought it would be fun and entertaining' was significantly different between players of different activities, H(3) = 23.24, p<.001 Casino players were significantly more likely to be influenced to initiate gambling because of entertainment than lottery players (U = 1650, r = -.42). Poker players were significantly more likely to be influenced to initiate gambling because of entertainment than bettors (U = 2363, r = -.23). and lottery players (U = 688.5, r = -.42)

Item 11, 'I was feeling a bit lonely or isolated' was significantly different between players of different activities, H(3) = 18.53, p<.001. Casino players were significantly more likely to be influenced to initiate gambling because they were feeling lonely or isolated than bettors (U = 2529.5, r = -.34).

I3   Events influencing initiation by gambling level

Results of significant Mann-Whitney tests

Item 6, 'I was already gambling offline and thought I would have more choice on the Internet', was a significantly stronger influence for PGs (N=58, Mean Rank=134.40) than for NPGs (N=181, Mean Rank=115.39), U=6084.50, p<0.05 (two-tailed), r = -.13

Item 7, 'I was already gambling offline and thought I would be more successful on the Internet', was a significantly stronger influence for PGs (N=58, Mean Rank=143.41) than for NPGs (N=181, Mean Rank=112.50), U=6606.50, p<0.001 (two-tailed), r = -.23

Item 9, 'I was feeling bored', was a significantly stronger influence for PGs (N=58, Mean Rank=158.73) than for NPGs (N=181, Mean Rank=107.59), U=7495.00, p<0.001 (one-tailed), r = -.35

Item 10, 'I thought it would be fun and entertaining', was a significantly stronger influence for PGs (N=58, Mean Rank=137.85) than for NPGs (N=181, Mean Rank=114.28), U=6284.50, p<0.05 (two-tailed), r = -.15

Item 11, 'I was feeling a bit lonely or isolated', was a significantly stronger influence for PGs (N=58, Mean Rank=159.21) than for NPGs (N=181, Mean Rank=107.44), U=7523.00, p<0.001 (one-tailed), r = -.46

Item 14, 'I was interested in offline gambling and I wanted to practice on the Internet', was a significantly stronger influence for PGs (N=58, Mean Rank=133.62) than for NPGs (N=181, Mean Rank=115.64), U=6039.00, p<0.05 (one-tailed), r = -.13

Item 15, 'I could no longer smoke at my usual gambling venue so I moved my gambling activities to the Internet', was a significantly stronger influence for PGs (N=58, Mean Rank=131.82) than for NPGs (N=181, Mean Rank=116.21), U=5934.50, p<0.01 (two-tailed), r = -.19

Item 16, 'I was successfully playing for points, so decided to play for money', was a significantly stronger influence for PGs (N=58, Mean Rank=133.03) than for NPGs (N=181, Mean Rank=115.82), U=6005.00, p<0.05 (one-tailed), r = -.13

Item 17, 'I saw Internet gambling as an opportunity to make money', was a significantly stronger influence for PGs (N=58, Mean Rank=133.59) than for NPGs (N=181, Mean Rank=115.65), U=6037.00, p<0.05 (one-tailed), r = -.12

Item 18, 'I thought it would be interesting to see if I could 'beat the system', was a significantly stronger influence for PGs (N=58, Mean Rank=139.18) than for NPGs (N=181, Mean Rank=113.85), U=6361.50, p<0.01 (one-tailed), r = -.17

Item 19, 'I wanted to find out if I could be better than other players', was a significantly stronger influence for PGs (N=58, Mean Rank=143.31) than for NPGs (N=181, Mean Rank=112.53), U=6601.00, p<0.001 (one-tailed), r = -.21

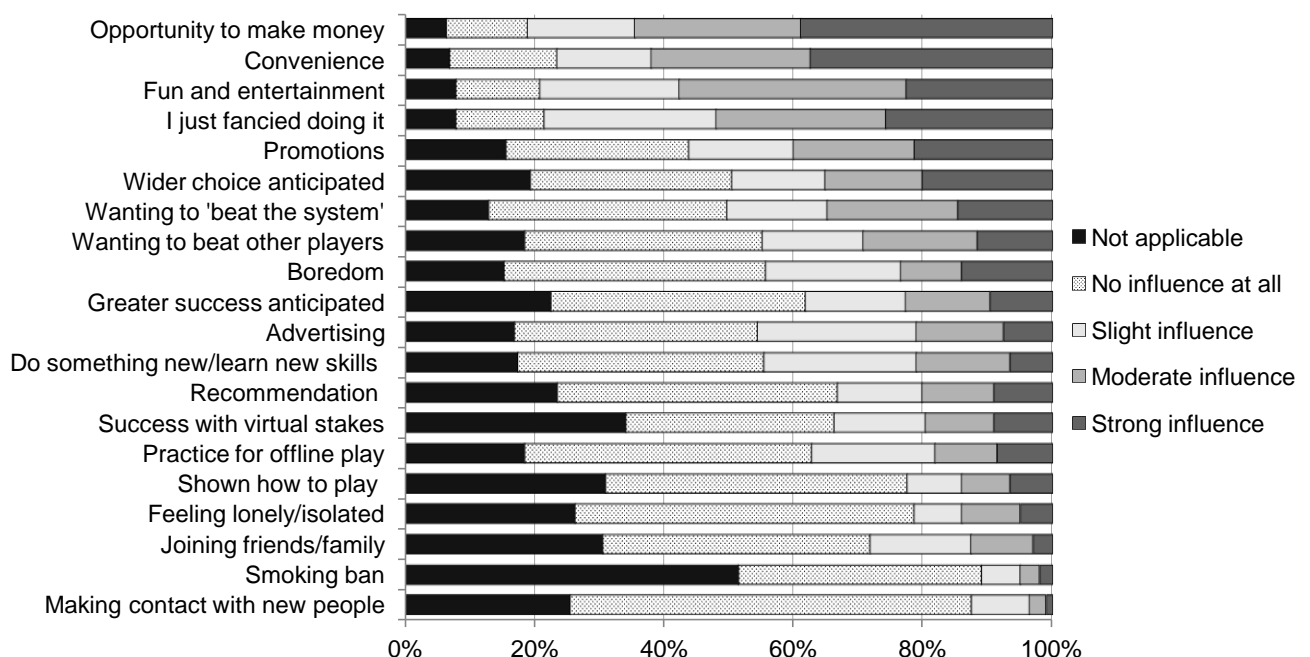*Figure I3   Influences on initiating Internet gambling: Relative relevance and influence of different initiation reasons for non-problem gamblers*
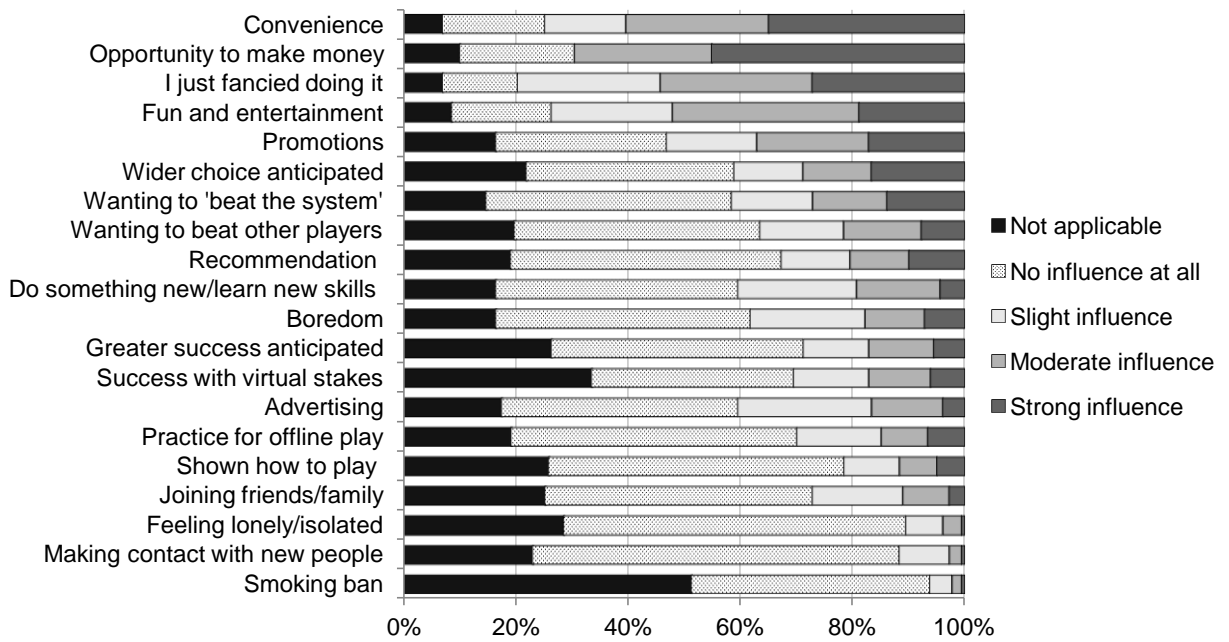
Figure I4   Influences on initiating Internet gambling: Relative relevance and influence of different initiation reasons for problem gamblers
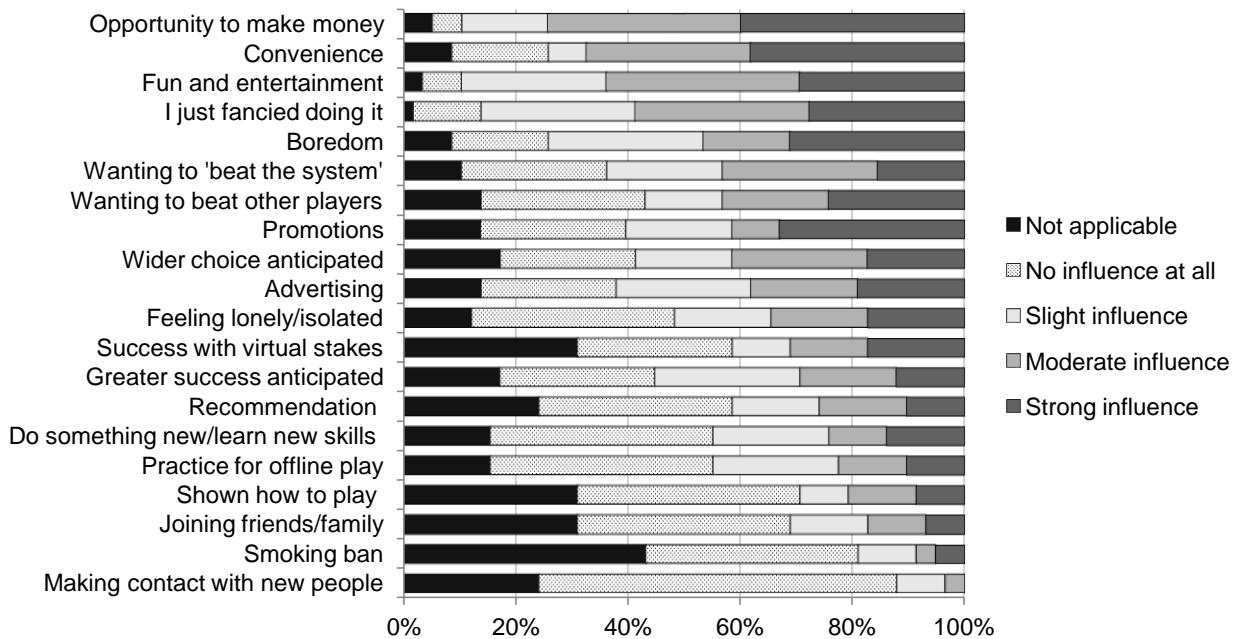
Appendix J: Results: Initiation reasons Factor Analysis - top 20%

Table J   Profile of Top 20% of each initiation motivation factor

Variable		Competitive-ness		Social introduction		Increased utility		Alternative social environment		Value for money		Needing something to do	
Gender (n=258)	Male	22.20%	NS	18.70%	NS	**23.70%**	**	18.70%	NS	**23.20%**	*	18.70%	NS
	Female	13.30%		25.00%		**8.30%**		25.00%		**10.00%**		25.00%	
First activity Domain (n=258)	Betting	**12.90%**	***	18.80%	NS	**31.70%**	**	**9.90%**	***	26.70%	NS	**14.90%**	*
	Casino	**13.20%**		22.60%		**13.20%**		**43.40%**		15.10%		**20.80%**	
	Poker	**45.90%**		19.70%		**13.10%**		**16.40%**		13.10%		**32.80%**	
	Lottery	**9.30%**		20.90%		**11.60%**		**20.90%**		20.90%		**14.00%**	
Current Activity Domain (n=245)	Betting	**9.50%**	***	22.60%	NS	**28.60%**	*	**10.70%**	*	26.20%	NS	13.10%	NS
	Casino	**11.50%**		17.30%		**13.50%**		**32.70%**		17.30%		21.20%	
	Poker	**47.20%**		18.10%		**20.80%**		**19.40%**		15.30%		27.80%	
	Lottery	**5.40%**		18.90%		**8.10%**		**13.50%**		21.60%		13.50%	
PGSI Level (n=239)	NPG	**15.50%**	**	17.70%	NS	18.80%	NS	**9.90%**	***	19.30%	NS	**15.50%**	**
	PG	**34.50%**		24.10%		15.90%		**44.80%**		25.90%		**31.00%**	
When Start (n= 258)	< 2 years ago	14.90%	NS	23.00%	*	**14.90%**	**	20.30%	*	20.30%	NS	18.90%	NS
	2-8 years ago	21.10%		23.30%		**16.50%**		24.80%		18.80%		24.80%	
	> 8 years ago	17.60%		7.80%		**37.30%**		7.80%		23.50%		9.80%	
Already gamble offline (n=258)	No	22.70%	NS	21.60%	NS	**4.10%**	***	21.60%	NS	25.80%	NS	**27.80%**	*
	Yes	18.60%		19.30%		**29.80%**		19.30%		16.80%		**15.50%**	
Play for points first (n=258)	No	**11.70%**	***	17.90%	NS	**24.70%**	*	**13.60%**	***	23.50%	NS	20.40%	NS
	Yes	**34.40%**		24.00%		**12.50%**		**31.20%**		14.60%		19.80%	
Hours of play per week (n=245)	<1	**2.70%**	***	24.30%	NS	10.80%	NS	16.20%	NS	14.90%	NS	14.90%	NS
	1-10	**24.40%**		21.10%		21.10%		16.70%		20.00%		22.20%	
	11-20	**24.10%**		13.80%		31.00%		10.30%		27.60%		24.10%	
	21-30	**41.70%**		8.30%		20.80%		20.80%		25.00%		25.00%	
	30+	**32.10%**		17.90%		28.60%		35.70%		25.00%		10.70%	
Current age (n=232)	18-34	20.80%	NS	**27.20%**	**	16.80%	NS	21.60%	NS	23.20%	NS	**24.80%**	*
	35-54	24.40%		**12.80%**		25.60%		11.50%		19.20%		**17.90%**	
	55+	13.80%		**6.90%**		24.10%		10.30%		20.70%		**0.00%**	
Marital status (n=230)	Single	24.80%	NS	**28.40%**	**	21.20%	NS	19.30%	NS	23.90%	NS	18.30%	NS
	Married/live together	17.10%		**12.40%**		20.00%		13.30%		21.00%		21.00%	
	Separated/divorced	25.00%		**12.50%**		20.40%		18.80%		6.20%		18.80%	
Ethnicity (n=228)	White/White British	19.60%	NS	**17.50%**	*	22.70%	NS	**13.90%**	**	20.10%	NS	17.00%	NS
	All other ethnicities	29.40%		**35.30%**		8.80%		**32.40%**		29.40%		23.50%	
Education Level (n=218)	GCSE	22.60%	NS	9.70%	NS	32.30%	NS	16.10%	NS	25.10%	NS	22.60%	NS
	A level	16.70%		20.80%		18.80%		20.80%		18.80%		16.70%	
	Vocational	30.80%		19.20%		23.10%		7.70%		26.90%		26.90%	
	Degree or above	21.20%		22.10%		16.80%		16.80%		18.60%		20.40%	

Note - % shown is % of each demographic in the top 20% of each factor. If variable % is over 20%, variable is over-represented in factor, under 20% is underrepresented.
Chi-squared tests give indication of whether differences in % of levels of variable are significant, ***p<.001, **p<.01, *p<.05, NS Not Significant.

Appendix K: Results: Current Internet gambling

K1   Frequency of activities by gender

*Table K1   Association between frequency of participation in IG activities by gender:
Significant Chi-squared Results*

	N	Not Undertaken		Low/Moderate Frequency		High Frequency		Chi² Value	p Value
		Male	Female	Male	Female	Male	Female		
Odds betting	246	38.1%	77.2%	38.1%	21.1%	23.8%	1.8%	29.31	<.001
Betting Exchange	245	69.7%	94.7%	19.7%	5.3%	10.6%	0.0%	15.27	<.001
Bingo	246	88.9%	64.9%	9.5%	26.3%	1.6%	8.8%	19.18	<.001
Instant win games	246	77.8%	57.9%	18.0%	33.3%	4.2%	Ns 8.8%	8.86	<.05
Blackjack	244	73.4%	87.5%	20.7%	5.4%	5.9%	Ns 7.1%	7.17	<.05
Poker	246	45.0%	68.4%	19.0%	Ns17.6%	36.0%	14.0%	11.66	<.01

NS - No significant difference between these gender pairs

K2   Frequency of activities by main gambling activity

*Table K2   Association between frequency of participation in IG activities by main
gambling activity: Significant Chi-squared Results*

	N	Not Undertaken				Low/Moderate Frequency			
		Betting	Casino	Poker	Lottery	Betting	Casino	Poker	Lottery
Odds betting	246	16.7%	62.3%	48.5%	91.9%	38.1%	34.0%	43.1%	8.1%
Betting Exchange	245	53.0%	94.3%	77.8%	94.6%	26.5%	5.7%	18.1%	5.4%
Roulette	246	78.6%	41.5%	73.6%	89.2%	16.7%	35.8%	22.2%	10.8%
Poker	246	69.0%	58.5%	2.8%	89.2%	22.6%	17.0%	20.8%	8.1%
Lottery	246	48.8%	39.6%	50.0%	0.0%	36.9%	41.5%	44.4%	73.0%

	N	High Frequency				Chi 2 Value	p Value
		Betting	Casino	Poker	Lottery		
Odds betting	246	45.2%	3.8%	8.3%	0.0%	93.27	<.001
Betting Exchange	245	20.5%	0.0%	4.2%	0.0%	45.87	<.001
Roulette	246	4.8%	22.6%	4.2%	0.0%	37.21	<.001
Poker	246	8.3%	24.5%	76.4%	2.7%	125.38	<.001
Lottery	246	14.3%	18.9%	5.6%	27.0%	34.60	<.001

K3 Frequency of activities by gambling level

Table K3   Association between frequency of participation in IG activities by gambling level: Significant Chi-squared Results

	N	Not Undertaken		Low/Moderate Frequency		High Frequency		Chi 2 Value	p Value
		NPG	PG	NPG	PG	NPG	PG		
Football pools	240	87.4%	74.1%	10.4%	NS15.6%	2.2%	10.3%	8.89	<.05
Bingo	240	87.4%	69.0%	11.0%	22.4%	1.6%	8.6%	12.39	<.01
Roulette	240	76.4%	50.0%	19.8%	29.3%	3.8%	20.7%	21.94	<.001
Slots/fruit machines	239	77.9%	55.2%	18.2%	29.3%	3.9%	15.5%	14.62	<.001
Instant win games	240	78.0%	55.2%	19.8%	29.3%	2.2%	15.5%	19.38	<.001
Blackjack	238	83.0%	55.4%	13.7%	28.6%	3.3%	16.1%	20.83	<.001
Poker	240	54.9%	37.9%	18.7%	NS17.3%	26.4%	44.8%	7.41	<.05

NS - No significant difference between these gambling level pairs

K4 Weekly hours spent gambling by gender, main activity and gambling level

Table K4   Number of hours per week spent Internet gambling by gender, gambling activity and gambling level

	N	Less than 1 hour	1-10 hours	11-20 hours	21-30 hours	Over 30 hours
All participants (n=246)		30.1%	37.0%	11.8%	9.7%	11.4%
Gender (n=246)	246					
Male	189	24.9%	37.6%	13.8%	11.6%	12.2%
Female	57	47.4%	35.1%	5.3%	3.5%	8.8%
Current gambling activity (n=246)						
Betting	84	38.1%	35.7%	10.7%	7.1%	8.3%
Casino	53	11.3%	54.7%	9.4%	11.3%	13.2%
Poker	72	5.6%	38.9%	20.8%	16.7%	18.1%
Lottery	37	86.5%	10.8%	0.0%	0.0%	2.7%
Gambling level (n=240)						
Non-problem gambler	182	34.6%	39.0%	12.6%	7.7%	6.0%
No risk	61	55.7%	29.5%	6.6%	1.6%	6.6%
Low risk	61	26.2%	41.0%	18.0%	9.8%	4.9%
Moderate risk	60	21.7%	46.7%	13.3%	11.7%	6.7%
Problem gambler	58	13.8%	32.8%	8.6%	15.5%	29.3%

K5 Experiences and feelings about current Internet gambling

Figure K1 Main gambling domain and Finding Internet gambling exciting
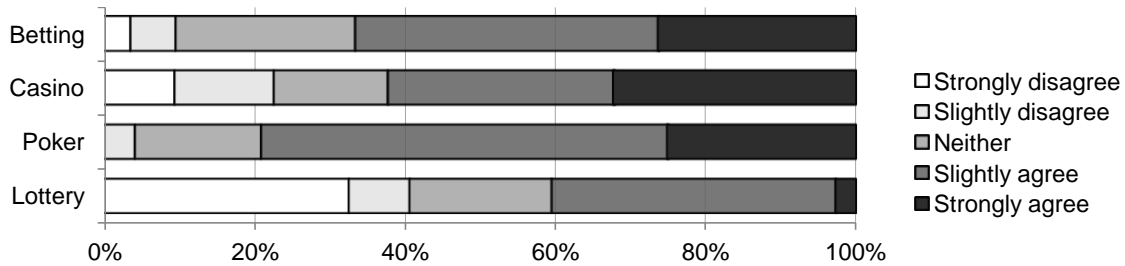
Finding Internet gambling exciting was significantly different between players of different activities H(3) = 23.80, p<.001.

There were no significant differences between bettors and casino players (U = 2150, r = -.03) or bettors and poker players (U = 2746.5, r = -.08). There was also no significant difference between poker and casino players (U = 1705.5, r = -.10). However, poker players (U 613.5, r = -.47), bettors (U = 863.5, r = -.37) and casino players (U = 604, r = -.34) agreed that they found Internet gambling exciting significantly more than lottery players.

Figure K2 Main gambling domain and Forgetting about day to day hassles
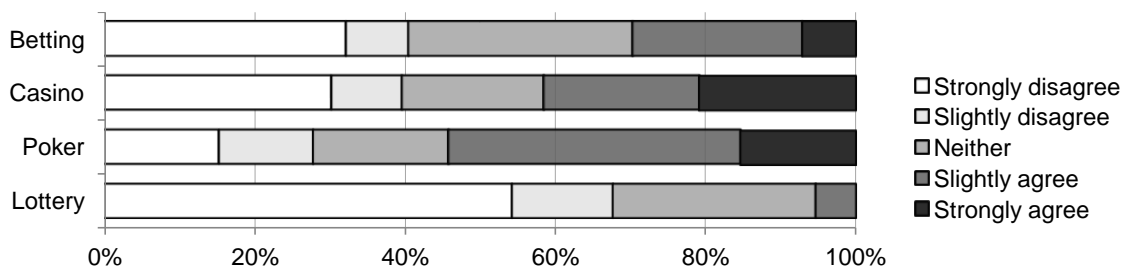
Forgetting about daily hassles while gambling on the Internet was significantly different between players of different activities H(3) = 27.68, p<.001.

There were no significant differences between bettors and casino players (U = 1974, r = -.10) or poker and casino players (U = 1679, r = -.11). However, poker players (U 546.5, r = -.50), casino players (U = 585.5, r = -.36) and bettors (U = 1024.5, r = -.28) agreed that they forgot about daily hassles when they were Internet gambling significantly more than lottery players. In addition, poker players agreed with the statement significantly more than bettors (U = 2211.5, r = -.24)

Figure K3   Main gambling domain and Feeling mesmerised or numb
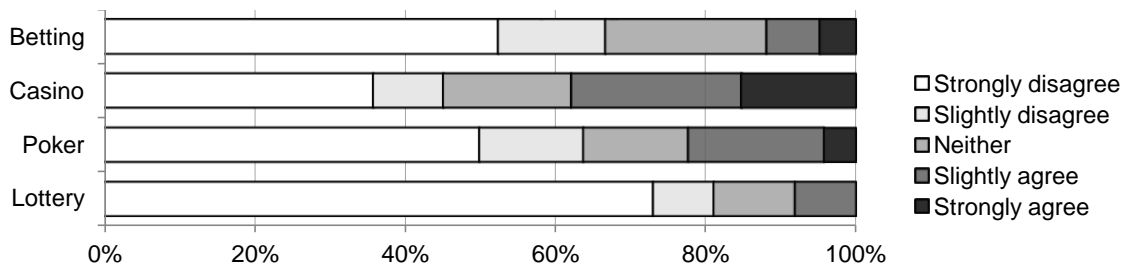
Feeling mesmerised or numb while gambling on the Internet was significantly different between players of different activities H(3) = 16.96, p<.001.

There were no significant differences between bettors and poker players (U = 2859, r = -.05) or bettors and lottery players (U = 1235, r = -.18). There were also no significant differences between poker and casino players (U = 1496, r = -.19) or poker and lottery players (U = 1000.5, r = -.23). However, casino players agreed that they felt mesmerised or numb significantly more than bettors (U = 1619, r = -.24) and lottery players (U 552, r = -.40).

Figure K4   Main gambling domain and Finding it a good way to switch off
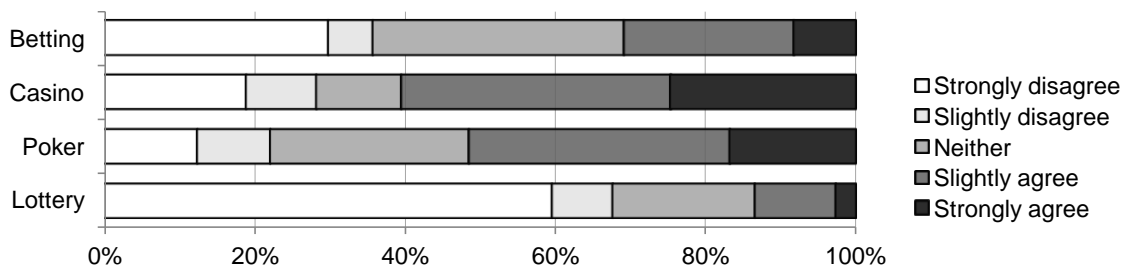
Finding Internet gambling a good way to switch off was significantly different between players of different activities H(3) = 33.30, p<.001.

There was no significant difference between casino and poker players (U = 1795, r = -.05). However, casino players (U = 1596, r = -.24) and poker players (U = 2253, r = -.23) agreed that they found it a good way to switch off significantly more than bettors.   Additionally, casino players (U = 442, r = -.48), poker players (U = 1596, r = -.24) and bettors (U = 1016, r = -.29) found it a good way to switch off significantly more than lottery players.

Figure K5   Main gambling domain and Believing winning is just a matter of luck.
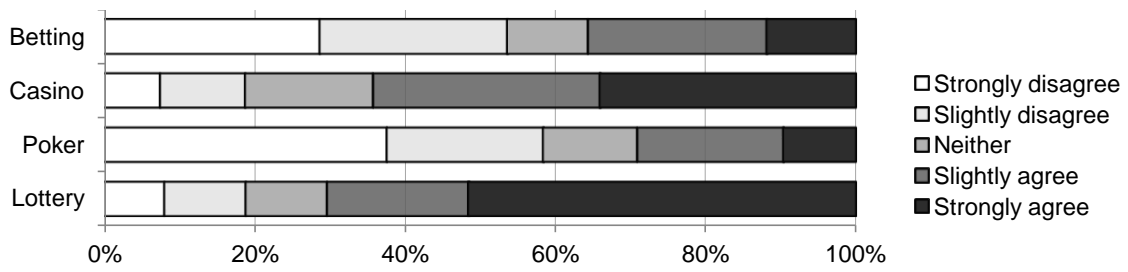
Believing winning is just a matter of luck was significantly different between players of different activities H(3) = 42.44, p<.001.

Both lottery players and casino players agreed that they believed winning was a matter of luck significantly more than bettors (lottery: U = 787, r = -.24, casino:U = 1305.5, r = -.36) and poker players (lottery: U 552, r = -.46 casino: U = 975.5, r = -.43).

Appendix L: Results: Frequency of IG activities: Factor Analysis of top 20%

Table L   Profile of Top 20% of each Internet gambling activity factor

		Betting Activities		Chance Games		Poker & Casino Activities	
Gender (n=242)	Male	25.3%	***	13.4%	***	22.6%	NS
	Female	1.8%		41.1%		10.7%	
First activity Domain (n=241)	Betting	36.7%	***	13.3%	***	16.3%	NS
	Casino	4.3%		41.3%		23.9%	
	Poker	10.7%		5.4%		23.2%	
	Lottery	9.8%		31.7%		17.1%	
Current Activity Domain (n=242)	Betting	47.0%	***	8.4%	***	14.5%	**
	Casino	7.8%		52.9%		33.3%	
	Poker	7.0%		7.0%		23.9%	
	Lottery	0.0%		24.3%		5.4%	
PGSI Level (n=239)	NPG	17.1%	*	14.9%	***	13.8%	***
	PG	30.4%		37.5%		39.3%	
When Start (n= 258)	< 2 years ago	11.9%	***	25.4%	NS	17.9%	NS
	2-8 years ago	13.6%		19.2%		19.2%	
	> 8 years ago	46.9%		14.3%		22.4%	
Already gamble offline (n=241)	No	14.1%	NS	22.8%	NS	19.6%	NS
	Yes	23.5%		18.1%		19.5%	
Play for points first (n=241)	No	25.6%	**	19.2%	NS	16.7%	NS
	Yes	9.4%		21.2%		24.9%	
Hours of play per week (n=245)	<1	6.8%	**	13.7%	NS	5.5%	***
	1-10	20.0%		24.4%		22.2%	
	11-20	39.3%		13.4%		17.9%	
	21-30	20.8%		25.0%		33.3%	
	30+	33.3%		22.2%		40.7%	
Current age (n=232)	18-34	14.5%	*	25.8%	NS	26.6%	**
	35-54	24.7%		14.3%		15.6%	
	55+	37.9%		6.9%		3.4%	
Marital status (n=230)	Single	16.7%	NS	26.9%	*	23.1%	NS
	Married/living together	24.0%		12.5%		17.3%	
	Separated/divorced	3120.0%		18.8%		18.8%	
Ethnicity (n=228)	White/White British	20.8%	NS	15.6%	***	19.3%	NS
	All other ethnicities	20.6%		44.1%		23.5%	
Education Level (n=218)	GCSE	33.3%	NS	20.0%	NS	20.0%	NS
	A level	23.4%		23.4%		25.5%	
	Vocational	19.2%		19.2%		15.4%	
	Degree or above	16.8%		20.4%		20.4%	

Note - % shown is the % of each demographic in the top 20% of each factor. If variable % is over 20%, variable is over-represented in factor, under 20% is underrepresented in factor. Chi-squared tests undertaken give indication of whether differences in % of levels of variable are significant
***p<.001, **p<.01, *p<.05, NS Not Significant

Appendix M: Results: Events influencing increasing/decreasing gambling involvement for PG & NPG

Figure M1   Events influencing stability & change in problem gamblers
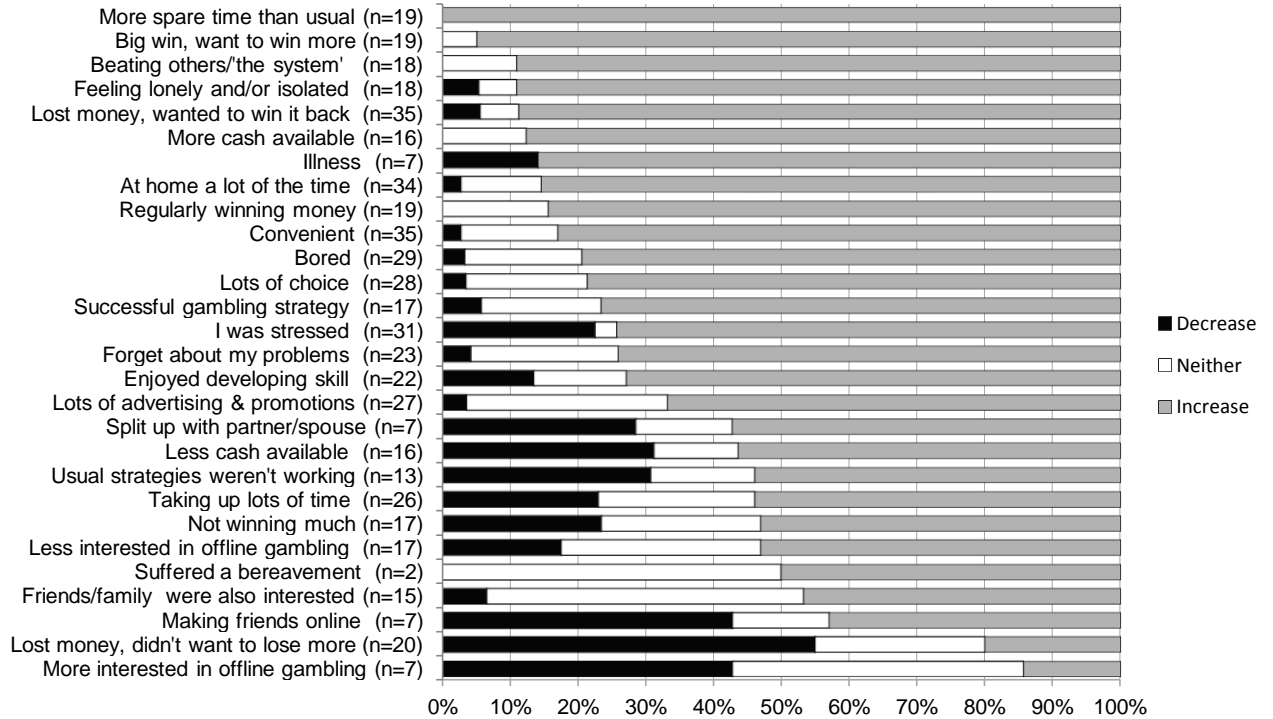
Figure M2   Events influencing stability & change in non-problem gamblers
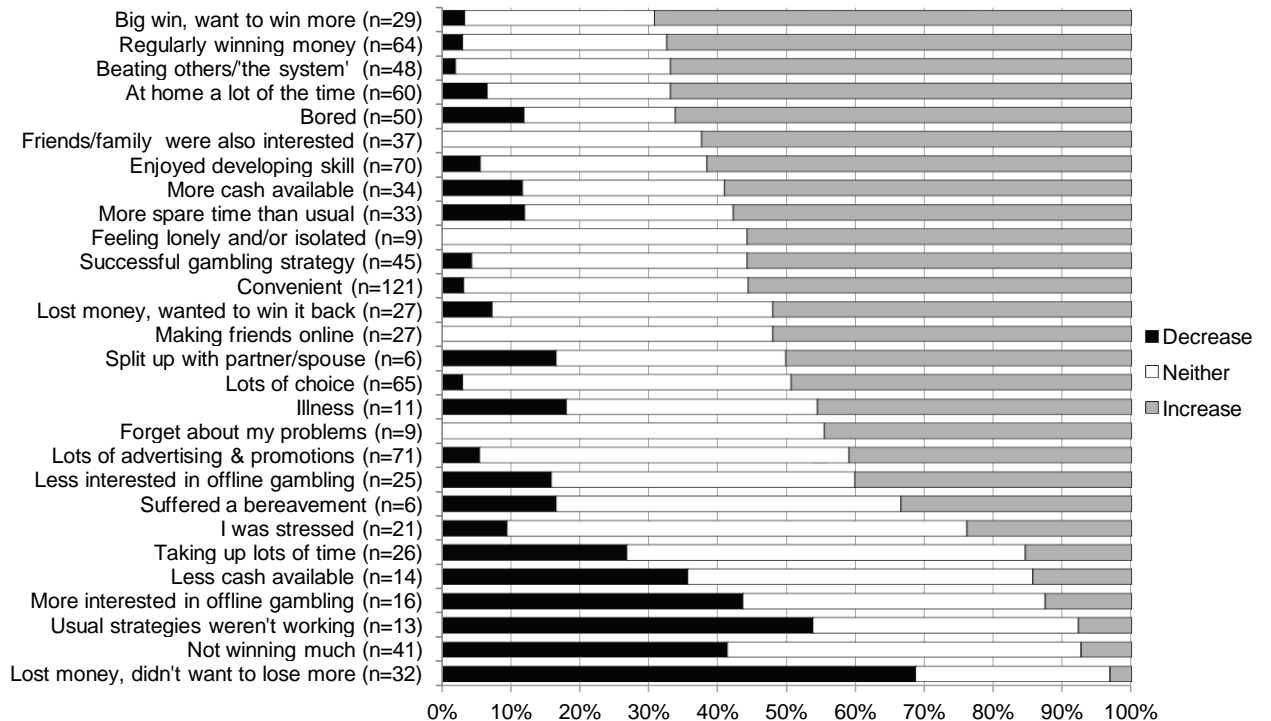
Table N1   Experience of events influencing change by gender

	N	Male n=185	Female n=55	Chi^2	
Enjoyed developing skill	93	47.0%	10.9%	23.3	***
Successful gambling strategy	63	30.8%	10.9%	8.67	**
Lots of choice	97	45.4%	23.6%	8.34	**
Bored	84	30.3%	50.9%	7.94	**
Less interested in offline gambling	43	21.1%	7.3%	5.5	*
Usual strategies weren't working	30	15.1%	3.6%	5.13	*
Beating others/'the system'	68	31.9%	16.4%	5.03	*
Regularly winning money	84	38.4%	23.6%	4.05	*
Lots of advertising & promotions	101	43.8%	36.4%		NS
Friends/family were also interested	53	23.8%	16.4%		NS
Convenient	163	70.8%	58.2%		NS
More interested in offline gambling	23	10.8%	5.5%		NS
At home a lot of the time	100	44.3%	32.7%		NS
Feeling lonely and/or isolated	30	13.0%	10.9%		NS
I was stressed	56	24.3%	20.0%		NS
Making friends online	36	16.2%	10.9%		NS
Forget about my problems	35	13.5%	18.2%		NS
Big win, want to win more	49	21.6%	16.4%		NS
Lost money, wanted to win it back	67	27.6%	23.6%		NS
Not winning much	64	29.2%	23.6%		NS
Lost money, didn't want to lose more	57	23.8%	23.6%		NS
More spare time than usual	58	8.6%	21.8%		NS
Taking up lots of time	56	25.4%	16.4%		NS
Less cash available	33	23.2%	18.2%		NS
More cash available	53	13.5%	14.5%		NS
Split up with partner/spouse	15	5.9%	7.3%		NV
Suffered a bereavement	11	3.2%	9.1%		NV
Illness	21	8.6%	9.1%		NV

***p<.001, **p<.01, *p<.05, NS Not Significant, NV Not valid due to small sample

Table N2   Experience of events influencing change by main gambling domain

	Betting n=82	Casino n=52	Poker n=69	Lottery n=37	Chi^2		Sig. diff
Beating others/'the system'	11.0%	25.0%	63.8%	5.4%	64.70	***	P>BCL
Enjoyed developing skill	34.1%	26.9%	69.6%	8.1%	46.04	***	P>BCL, B>L
Making friends online	8.5%	15.4%	30.4%	0.0%	22.12	***	P>B
Taking up lots of time	28.0%	38.5%	53.6%	10.8%	22.05	***	CP>BL
Regularly winning money	13.4%	36.5%	34.8%	5.4%	21.28	***	P>BL, C>L
Lost money, not want to lose more	24.4%	44.2%	10.1%	18.9%	19.59	***	C>P
Bored	25.6%	57.7%	36.2%	21.6%	17.09	***	C>LB
Lots of choice	50.0%	42.3%	43.5%	10.8%	16.94	***	BCP>L
At home a lot of the time	36.6%	51.9%	52.2%	18.9%	14.13	**	CP>L
Forget about my problems	14.6%	32.7%	26.1%	5.4%	13.01	**	C>L
Big win, want to win more	8.5%	25.0%	20.3%	2.7%	12.93	**	C>L
Not winning much	29.3%	26.9%	18.8%	35.1%	10.79	*	L>P
Lots of advertising & promotions	42.7%	57.7%	39.1%	24.3%	10.25	*	C>L
Successful gambling strategy	22.0%	28.8%	37.7%	10.8%	10.18	*	P>L
Friends/family also interested	23.2%	17.3%	31.9%	8.1%	8.80	*	P>L
Feeling lonely and/or isolated	6.1%	23.1%	13.0%	10.8%	8.51	*	C>B
Convenient	75.6%	67.3%	63.8%	59.5%		NS	
More interested in offline gambling	7.3%	7.7%	15.9%	5.4%		NS	
Less interested in offline gambling	28.0%	15.4%	11.6%	10.8%		NS	
I was stressed	24.4%	30.8%	20.3%	16.2%		NS	
Usual strategies weren't working	15.9%	13.5%	10.1%	8.1%		NS	
Lost money, wanted to win it back	26.8%	42.3%	27.5%	10.8%		NS	
More spare time than usual	18.3%	28.8%	33.3%	13.5%		NS	
Less cash available	15.9%	25.0%	31.9%	13.5%		NS	
More cash available	12.2%	21.2%	13.0%	8.1%		NS	
Split up with partner/spouse	3.7%	9.6%	7.2%	5.4%		NV	
Suffered a bereavement	3.7%	5.8%	5.8%	2.7%		NV	
Illness	4.9%	11.5%	13.0%	5.4%		NV	

***p<.001, **p<.01, *p<.05, NS Not Significant, NV Not valid due to small sample

Table N3   Experience of events influencing change by gambling level

	N	NPG n=182	PG n=58	Chi^2	
Forget about my problems	35	4.9%	44.8%	56.16	***
Lost money, wanted to win it back	67	15.9%	65.5%	53.74	***
I was stressed	56	12.1%	58.6%	53.24	***
Feeling lonely and/or isolated	30	4.9%	36.2%	39.3	***
Taking up lots of time	56	14.8%	50.0%	30.4	***
Less cash available	33	8.8%	29.3%	15.62	***
At home a lot of the time	100	34.6%	63.8%	15.41	***
Bored	84	28.6%	55.2%	13.68	***
Usual strategies weren't working	30	8.2%	25.9%	12.49	***
Less interested in offline gambling	43	13.7%	31.0%	8.95	**
Lost money, didn't want to lose more	57	19.2%	37.9%	8.49	**
More spare time than usual	58	19.8%	37.9%	7.91	**
Big win, want to win more	49	16.5%	32.8%	7.17	**
Lots of choice	97	36.3%	53.4%	5.39	*
Illness	21	6.6%	15.5%	4.38	*
More interested in offline gambling	23	8.8%	12.1%		NS
Making friends online	36	15.4%	13.8%		NS
Friends/family were also interested	53	20.3%	27.6%		NS
Successful gambling strategy	63	25.3%	29.3%		NS
More cash available	53	19.2%	31.0%		NS
Beating others/'the system'	68	26.9%	32.8%		NS
Regularly winning money	84	35.2%	34.5%		NS
Not winning much	64	24.2%	34.5%		NS
Enjoyed developing skill	93	38.5%	39.7%		NS
Lots of advertising & promotions	101	40.7%	46.6%		NS
Convenient	163	68.7%	65.5%		NS
Split up with partner/spouse	15	3.3%	15.5%		NV
Suffered a bereavement	11	3.8%	6.9%		NV

***p<.001, **p<.01, *p<.05, NS Not Significant, NV Not valid due to small sample

Table N4   Impact of events on increasing/decreasing gambling involvement by gender & by gambling level

	Change Category	Men		Women		NPG		PG	
		Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase
Regularly winning money	FIC	1.1%	25.9%	0.0%	20.0%	1.1%	23.6%	0.0%	27.6%
Big win, want to win more	FIC	0.5%	16.8%	0.0%	12.7%	0.5%	11.0%	0.0%	31.0%
Lost money, wanted to win it back	FIC	1.6%	20.5%	1.8%	12.7%	1.1%	7.7%	3.4%	53.4%
Lost money, didn't want to lose more	FIC	13.0%	2.7%	16.4%	0.0%	12.1%	0.5%	19.0%	6.9%
Not winning much	FIC	8.6%	5.9%	9.1%	1.8%	9.3%	1.6%	6.9%	15.5%
More cash available	FIC	2.2%	13.5%	0.0%	16.4%	2.2%	11.0%	0.0%	24.1%
Less cash available	FIC	4.3%	3.2%	3.6%	3.6%	2.7%	1.1%	8.6%	15.5%
Bored	LEEE	1.1%	21.6%	9.1%	29.1%	3.3%	18.1%	1.7%	39.7%
I was stressed	LEEE	3.2%	12.4%	5.5%	9.1%	1.1%	2.7%	12.1%	39.7%
Feeling lonely and/or isolated	LEEE	0.0%	9.7%	1.8%	5.5%	0.0%	2.7%	1.7%	27.6%
Split up with partner/spouse	LEEE	1.6%	2.7%	0.0%	3.6%	0.5%	1.6%	3.4%	6.9%
Suffered a bereavement	LEEE	0.5%	1.1%	0.0%	1.8%	0.5%	1.1%	0.0%	1.7%
Illness	LEEE	1.6%	3.8%	0.0%	7.3%	1.1%	2.7%	1.7%	10.3%
Forget about my problems	LEEE	0.0%	7.6%	1.8%	12.7%	0.0%	2.2%	1.7%	29.3%
Enjoyed developing skill	SD (ELA)	3.2%	30.3%	1.8%	5.5%	2.2%	23.6%	5.2%	27.6%
Successful gambling strategy	SD	1.1%	19.5%	1.8%	3.6%	1.1%	13.7%	1.7%	22.4%
Usual strategies weren't working	SD	5.9%	3.8%	0.0%	1.8%	3.8%	0.5%	6.9%	12.1%
Beating others/'the system'	SD	0.5%	21.6%	0.0%	14.5%	0.5%	17.6%	0.0%	27.6%
Friends/family were also interested	SI	0.5%	13.0%	0.0%	10.9%	0.0%	12.6%	1.7%	12.1%
Making friends online	SI	1.6%	7.6%	0.0%	5.5%	0.0%	7.7%	5.2%	5.2%
At home a lot of the time	T (LEEE)	1.6%	30.8%	3.6%	21.8%	2.2%	22.0%	1.7%	50.0%
More spare time than usual	T	1.1%	16.8%	3.6%	12.7%	2.2%	10.4%	0.0%	32.8%
Taking up lots of time	T	5.4%	8.6%	5.5%	3.6%	3.8%	2.2%	10.3%	24.1%
Convenient	UIGF	1.6%	42.2%	3.6%	32.7%	2.2%	36.8%	1.7%	50.0%
Lots of choice	UIGF	1.1%	25.9%	1.8%	10.9%	1.1%	17.6%	1.7%	37.9%
Lots of advertising & promotions	UIGF	1.6%	20.5%	3.6%	16.4%	2.2%	15.9%	1.7%	31.0%
More interested in offline gambling		4.3%	1.6%	3.6%	0.0%	3.8%	1.1%	5.2%	1.7%
Less interested in offline gambling		2.7%	10.3%	3.6%	0.0%	2.2%	5.5%	5.2%	15.5%

Items highlighted in top three highest impact factor for each gambler variable
Change reasons: ELA Enjoyable leisure activity; FIC Financial interests & concerns; LEEE Life events, emotions & escape; SD Skill development; SI Social influence; T Time; UIGF Utility of Internet gambling features.

Table N5   Impact of events on increasing/decreasing gambling involvement by main gambling domain

	Change Category	Betting Decrease	Increase	Casino Decrease	Increase	Poker Decrease	Increase	Lottery Decrease	Increase
Regularly winning money	FIC	2.4%	13.4%	5.8%	30.8%	4.3%	42.0%	8.1%	8.1%
Big win, want to win more	FIC	0.0%	12.2%	0.0%	19.2%	1.4%	24.6%	0.0%	2.7%
Lost money, wanted to win it back	FIC	1.2%	19.5%	1.9%	28.8%	2.9%	15.9%	0.0%	8.1%
Lost money, didn't want to lose more	FIC	17.1%	1.2%	25.0%	3.8%	4.3%	1.4%	8.1%	2.7%
Not winning much	FIC	8.5%	4.9%	9.6%	7.7%	7.2%	2.9%	10.8%	5.4%
More cash available	FIC	2.4%	9.8%	0.0%	15.4%	2.9%	21.7%	0.0%	8.1%
Less cash available	FIC	3.7%	4.9%	7.7%	5.8%	2.9%	5.8%	2.7%	0.0%
Bored	LEEE	2.4%	18.3%	5.8%	36.5%	1.4%	26.1%	2.7%	10.8%
I was stressed	LEEE	3.7%	8.5%	5.8%	21.2%	4.3%	8.7%	0.0%	10.8%
Feeling lonely and/or isolated	LEEE	0.0%	4.9%	1.9%	15.4%	0.0%	8.7%	0.0%	8.1%
Split up with partner/spouse	LEEE	1.2%	1.2%	1.9%	3.8%	1.4%	2.9%	0.0%	5.4%
Suffered a bereavement	LEEE	0.0%	1.2%	0.0%	0.0%	1.4%	2.9%	0.0%	0.0%
Illness	LEEE	0.0%	1.2%	1.9%	7.7%	2.9%	7.2%	0.0%	2.7%
Forget about my problems	LEEE	0.0%	2.4%	1.9%	19.2%	0.0%	11.6%	0.0%	2.7%
Enjoyed developing skill	SD (ELA)	3.7%	19.5%	3.8%	13.5%	1.4%	52.2%	2.7%	0.0%
Successful gambling strategy	SD	1.2%	11.0%	1.9%	15.4%	0.0%	29.0%	2.7%	2.7%
Usual strategies weren't working	SD	11.0%	2.4%	0.0%	3.8%	2.9%	4.3%	0.0%	2.7%
Beating others/'the system'	SD	1.2%	6.1%	0.0%	17.3%	0.0%	47.8%	0.0%	2.7%
Friends/family were also interested	SI	1.2%	9.8%	0.0%	15.4%	0.0%	17.4%	0.0%	5.4%
Making friends online	SI	2.4%	1.2%	1.9%	7.7%	0.0%	17.4%	0.0%	0.0%
At home a lot of the time	T (LEEE)	3.7%	22.0%	1.9%	34.6%	1.4%	42.0%	0.0%	10.8%
More spare time than usual	T	1.2%	14.6%	0.0%	17.3%	2.9%	21.7%	2.7%	5.4%
Taking up lots of time	T	2.4%	3.7%	7.7%	15.4%	10.1%	8.7%	0.0%	2.7%
Convenient	UIGF	2.4%	45.1%	1.9%	44.2%	1.4%	40.6%	2.7%	21.6%
Lots of choice	UIGF	2.4%	29.3%	1.9%	23.1%	0.0%	24.6%	0.0%	2.7%
Lots of advertising & promotions	UIGF	2.4%	24.4%	3.8%	25.0%	0.0%	17.4%	2.7%	5.4%
More interested in offline gambling		3.7%	1.2%	7.7%	0.0%	4.3%	1.4%	0.0%	0.0%
Less interested in offline gambling		3.7%	12.2%	5.8%	5.8%	0.0%	8.7%	2.7%	0.0%

Items highlighted in top three highest impact factor for each gambler variable
Change reasons: ELA Enjoyable leisure activity; FIC Financial interests & concerns; LEEE Life events, emotions & escape; SD Skill development;
 SI Social influence; T Time; UIGF Utility of Internet gambling features.

Appendix O: Ethical approval from University Research Ethics Committee

Original full submission approved at outset of project

the
UNIVERSITY
of
GREENWICH

Mrs Janette Davis
School of Health and Social Care
Department of Psychology and Counselling
Avery Hill Campus
University of Greenwich

Direct Line 020 8331 8842
Direct Fax 020 8331 8824
Email research_ethics@gre.ac.uk
Our Ref   UREC/08/09/6.5.11
Date   18th November 2009

Dear Janette

University Research Ethics Committee – Minute 08/09.6.5.11 – Application for ethical approval

TITLE OF RESEARCH: **Routes in and out of problem gambling: The role of gender and the type of game played.**

I am pleased to confirm that the above application has been **approved** by the Committee and that you have permission to proceed.

I am advised by the Committee to remind you of the following points:

- You must notify the Committee immediately of any information received by you, or of which you become aware, which would cast doubt upon, or alter, any information contained in the original application, or a later amendment, submitted to the Committee and/or which would raise questions about the safety and/or continued conduct of the research;

- You must comply with the Data Protection Act 1998;

- You must refer proposed amendments to the protocol to the Committee for further review and obtain the Committee's approval thereto prior to implementation (except only in cases of emergency when the welfare of the subject is paramount).

- You are authorised to present this University of Greenwich Research Ethics Committee letter of approval to outside bodies in support of any application for further research clearance.

On behalf of the Committee may I wish you success in your project.

Yours sincerely

John Wallace
Secretary, University Research Ethics Committee

cc: Prof. Roslyn Corney

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Second full submission approved including a University staff and student sample

the
UNIVERSITY
of
GREENWICH

Janette Davis
(School of Health & Social Care)

Direct Line 020 8331 8842
Direct Fax 020 8331 8824
Email research_ethics@gre.ac.uk
Our Ref   UREC/09/10.4.5.1
Date: 23 March 2010

Dear Janette

University Research Ethics Committee – Minute 09/10.4.5.1
Title of Research: Routes in and out of problem gambling: the role of gender and type of game played

I am writing to confirm that the above application has been **approved** by the Committee and that you have permission to proceed.

I am advised by the Committee to remind you of the following points:

- You must notify the Committee immediately of any information received by you, or of which you become aware, which would cast doubt upon, or alter, any information contained in the original application, or a later amendment, submitted to the Committee and/or which would raise questions about the safety and/or continued conduct of the research;

- You must comply with the Data Protection Act 1998;

- You must refer proposed amendments to the protocol to the Committee for further review and obtain the Committee's approval thereto prior to implementation (except only in cases of emergency when the welfare of the subject is paramount).

- You are authorised to present this University of Greenwich Research Ethics Committee letter of approval to outside bodies in support of any application for further research clearance.

On behalf of the Committee may I wish you success in your project.

Yours sincerely

John Wallace
Secretary, University Research Ethics Committee

c.c. Prof. Ros Corney, Psychology & Counselling Department

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the
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of
GREENWICH

Mrs Janette Davis
School of Health and Social Care
Department of Psychology and Counselling
Avery Hill Campus
University of Greenwich

Direct Line 020 8331 8842
Direct Fax   020 8331 8824
Email research_ethics@gre.ac.uk
Our Ref   UREC/09/10.4.5.1
Date: 03 February 2011

Dear Janette

University Research Ethics Committee – Minute 09/10.4.5.1
Title of Research: Routes in and out of problem gambling: the role of gender and type of game played

I am writing to confirm that the variations requested to your research project:

> Amendments to design of online survey and inclusion of a participation incentive to complete the survey

have been **approved** by Chair's Action on behalf of the Committee and that you have permission to proceed.

You are authorised to present this University of Greenwich Research Ethics Committee letter of variation to outside bodies in support of any application for further research clearance.

On behalf of the Committee may I wish you success in your project.

Yours sincerely

John Wallace
Secretary, University Research Ethics Committee

c.c. Prof. Ros Corney, Psychology & Counselling Department

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