Mobile Gambling: Implications of Accessibility

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Abstract

Mobile gambling is the fastest growing form of internet gambling. However whilst internet gambling research as a whole has raised concerns over its impact on problem gambling, mobile gambling has not yet received study as a separate entity despite characteristics of its accessibility posing a greater risk. The present study used semi-structured qualitative interviews and a focus group to understand accessibility of mobile gambling and to identify consequential gambling behaviour changes that could result in problem gambling. Results indicated that mobile gambling was more accessible than both land based venues and internet computer gambling in more than one way. Implications of mobile gambling included an increase in gambling frequency, continuous participation of gambling integrated with daily life which demonstrated early stages of obsession together with impulse gambling which could facilitate impulsive gambling traits found in some problem gamblers. Generally mobile gamblers do appear more social than internet computer gamblers, although problem mobile gamblers may find it easier to hide gambling. The results therefore highlight the importance of considering mobile gambling as a significant, if not separate, form of internet gambling as it continues to be used by more gamblers.

Keywords
Mobile Gambling, Accessibility, Gambling Behaviour, Problem Gambling, Internet Gambling

Introduction

Problem gambling is on the increase. The most recent problem gambling prevalence survey issued by the Gambling Commission in 2010 and conducted on their behalf by the National Centre for Social Research reported approximately 450,000 problem gamblers in the UK. This figure had risen by 200,000 since 2007 (BBC News, 2011). Problem gambling behaviour occurs when a person gambles in a manner that exceeds their means causing significant distress and disruption to their lives such as neglect of other important commitments including relationships and employment (Monaghan, 2009). At the same time, the global online gambling industry is currently worth €41.4 billion (Statista, 2015) and growing at 7-10% per year (yStats, 2014). Within online gambling, the mobile gambling platform (smartphones and tablets) is growing even more rapidly and could be worth US$100 by 2017 according to Juniper Research (PR Newswire, 2012) with the number of users increasing from 64 million in 2013 to 164 million by 2018 (Epstein, 2013). Moreover, online gambling company, Betfair, claim that the number of bets they received from mobiles grew by 122% between 2010 and 2011 financial year (Dredge, 2011).

Internet gambling as a whole (including mobile) has increased so quickly that knowledge about its association with problem gambling is still catching up along with legislation (Wood & Williams, 2009; Gainsbury et al., 2012). Griffiths (2011) suggests that mobile is an area of increasing research interest due to its implications regarding its physiological impact and the way gambling is perceived. However, mobile gambling prior to this research was an area that had not received any significant study as a separate entity to internet gambling as a whole.
It is important not to consider mobile gambling as a separate form of gambling but rather as a convenient method of participating in existing forms of gambling. It makes the opportunity to gamble accessible anywhere a gambler is, even if in transit (Griffiths, 2011). Existing research suggests that high accessibility to gambling opportunities can increase consumption; leading to excessive gambling problems (Orford, 2005; Storer et al., 2009; Grun & McKeigue, 2000; Welte et al., 2006; Rush et al., 2007; Productivity Commission, 1999; Engel et al., 2013; Clarke et al., 2006; Lund, 2009). This therefore demonstrates the importance of the present study, which intends to provide information about the consequences of mobile gambling, its accessibility and any behavioural implications which could contribute towards problem gambling behaviour.

This was undertaken by investigating how accessibility factors for traditional gambling, constructed using previous gambling studies (Productivity Commission, 1999; Thomas et al, 2009) compared to those of mobile gambling. Then behavioural implications of mobile gambling as a result of its increased accessibility and characteristics were identified to determine if any could lead to problem gambling. Overall views are given by a recovering problem gambler as to how mobile may encourage problem gambling.

This paper begins by analysing existing information upon the accessibility of gambling in relation to problem gambling together with the implications of internet gambling accessibility and mobile consumer behaviour. A methodology for this qualitative study is provided followed by results from data analysis. Results are discussed in terms of accessibility factors of mobile gambling and their relation to changes in mobile gambling behaviour which could facilitate problem gambling. Finally, a conclusion summarising the study is provided.

**Literature Review**

**Accessibility of gambling**

A number of studies have explored accessibility of gambling and the implications of increased accessibility for problem gambling. Research predominantly suggests that high accessibility to gambling increases participation which can lead to excessive gambling problems (Orford, 2005; Storer et al., 2009; Grun & McKeigue, 2000; Welte et al., 2006; Rush et al., 2007; Productivity Commission, 1999; Engel et al., 2013; Clarke et al., 2006; Lund, 2009). Mobile devices such as smartphones are regarded as the most accessible gambling platform with 3G/4G internet connectivity making gambling through mobile sites and apps accessible virtually anywhere in the world (Gainsbury et al., 2012; Griffiths, 2003; Griffiths, 2011). However, there is currently no research into the accessibility of mobile gambling and/or its consequences.

The importance of accessibility in problem gambling research is illustrated in a theoretical model proposed by Blaszczynski and Nower (2002) which visualises the role of accessibility in the causation of problem gambling. They propose that ecological factors, namely availability and accessibility of gambling, are the initial stimulators that facilitate other non-ecological factors and consequently habituation and loss chasing which ultimately results in pathological and problem gambling. Many other studies have identified psychological factors that influence pathological gambling. These include depression (Clarke, 2006), self-regulation deficits (Viets & Vanessa C, 2001), contributing psychiatric diagnosis’s and substance use (Cunningham-Williams et al., 1998), higher levels of certain biochemicals in the body (Roy et al., 1988) and impulsivity traits (Steel, Z. & Blaszczynski, 1998; Clarke, 2006). All of these non-ecological factors are integrated into Blaszczynski and Nower’s (2002) model under emotional vulnerability factors, biological vulnerability factors and impulsivity trait factors. Nonetheless, the model’s structure suggests that accessibility and availability of gambling are the initial ecological stimulators that facilitate problem gambling prior to these psychological and biological contributors, highlighting the importance of accessibility in relation to other factors.

A few studies have found that adaption to increased accessibility occurs in that problem gambling increases after initial exposure to increased accessibility to terrestrial venues but then decreases somewhat after initial exposure. For example, Jacques & Ladouceur (2006) found that increased accessibility to gambling via the opening of a new casino in Hull, Quebec temporarily increased problem gambling which then plateaued after a certain time; concurrent with other studies (Abbot, 2006; Shaffer et al., 2004; Volberg, 2002). Volberg (2002)
found that of those living in Nevada, USA (one of the few US states to allow gambling) the longer people lived there the less likely they were to have problem gambling issues. Of problem gamblers in Nevada 62% had lived there less than 10 years, 22.2% had lived there 11-30 years with the remaining 15.6% having lived there more than 30 years; indicating that adaption may occur after initial exposure (Shaffer et al., 2004). However, whilst these studies demonstrate adaption may occur, they also suggest that problem gambling increases with accessibility and the timescales referring to adaption reflect that problem gambling can occur for a long time potentially having detrimental effects. Additionally, these studies refer to land based venues only. Results may differ with mobile gambling.

Accessibility research principally focuses on proximity of gambling. Sèvigny et al. (2008) identified an increase in gambling participation and overall expenditure from people living closer to a gambling venue. Other studies find positive correlations between close proximity and prevalence of problem gambling (Adams et al., 2007; Rush et al., 2007; Ladouceur et al., 1999; Blaszczynski, 1998 in Productivity Commission, 1999; Tong & Chim, 2013; Pearce et al., 2007). For example, Welte et al. (2004) found that individuals living within ten miles of the casino were twice as likely to have problem gambling issues as those living outside that radius. They considered the possibility that problem gamblers may relocate near a casino, rather than develop issues because of it. However, this still suggests that accessibility can facilitate problem gambling concurring with Blaszczynski and Nower’s (2002) model. Similarly Adams et al. (2007) observed that students living near a casino experienced more serious problem gambling than students living further away. These findings suggest there may be concern about mobile gambling where its accessibility albeit in a different form represents greater physical closeness than land based venues.

Some accessibility research that focuses on terrestrial gambling venues such as bookmakers and casinos recommends that accessibility should be considered on a multidimensional scale rather than singular proximity (Thomas et al., 2009; Moore et al., 2010; Hing and Haw, 2009; Productivity Commission, 1999). For example, Thomas et al. (2009) used semi-structured interviews and focus groups with problem, non-problem and ex-problem gamblers to determine all accessibility factors associated with gambling and which were deemed most important to each group. Three categories emerged: geo-temporal accessibility, social and personal accessibility and financial accessibility (Thomas et al. 2009). Geo-temporal accessibility referred to ‘distance to the venue (proximity)’ and ‘opening hours’; social and personal accessibility included ‘a safe option’ (reputation of venue for being safe), ‘a social place’ (a good social venue in terms of the people there), ‘part of a wider social experience’ (the venue provides entertainment other than gambling), ‘accessible retreat from life issues’ (escape into a virtual world from reality); financial accessibility included ‘access to money’ and ‘low outlay games’ (minimum stake required). The geo-temporal accessibility aspects were considered the most significant factor to problem gamblers (Thomas et al., 2009); concurrent with proximity research and thus demonstrating the further importance of the present study. The Productivity Commission (1999) had previously found similar factors for accessibility but also included ‘number of venues’ which was concerned with the spatial distribution of gambling opportunities to being important in determining average proximity at any point in a given area. Additionally the ‘number of opportunities to gamble in any given venue’ was mentioned referring to the capacity of gambling opportunities within a land based venue. ‘Ease of use’ regarding the skill requirements to gamble and ‘conditions of entry’ to the venue were also found as accessibility factors (Productivity Commission, 1999; Thomas et al., 2009). Moore et al. (2010) combined the geo-temporal concept with ‘an oasis from problems without interruptions or distractions’ to form an accessible retreat concept of their own. This was based on Thomas et al’s (2009) ‘accessible retreat from life issues’ aspect of their social and personal accessibility only being mentioned by problem gamblers. Blaszczynski and McConaghy (1989) concomitantly state that gambling may be used to dissociate or escape chronic depression which is a state of mind often found in problem gamblers (Clarke, 2006). Accessible retreat was found to be consistently significant to problem gamblers (Moore et al., 2010).

Conversely, Hing and Haw’s (2009) research testing the Productivity Commissions (1999) nine factors of accessibility found that their social accessibility concept demonstrated the greatest significance. However, their social accessibility concept differed from Thomas et al. (2009). It was broader and related predominantly to
social approval of gambling by family and friends and included an ‘affordability’ aspect. They found physical accessibility (ability to get to a venue) and cognitive accessibility (ease of use) as factors but analysis of subscales indicated questionable convergent validity due to inconsistent correlations with gambling expenditure, frequency and problem gambling (Hing and Haw, 2009). Also, the population sample was gambling employees with access to gambling at their workplace. Therefore proximity factors to a gambling opportunity may differ from the general population and gambling problems may be higher due to exposure levels, potentially affecting the results.

Whilst financial accessibility was identified as a factor, Thomas et al (2009) and Productivity Commission (1999) agree that its significance is less than other accessibility dimensions. Conversely, Hing and Haw’s (2009) results disagree because ‘affordability’ is included in their social accessibility concept and was found to be significant. However, its inclusion under a much broader concept of social accessibility that included varying aspects means this small aspect of the entire concept may not be the same as other aspects within it.

Overall, research into the accessibility of gambling and in particular ‘proximity’ suggests that problem gambling increases with increased accessibility (Adams et al., 2007; Blaszczynski, 1998; Orford, 2005; Storer et al., 2009; Gru & McKeigue, 2000; Ladouceur et al., 1999; Welte et al., 2006; Rush et al., 2007; Productivity Commission, 1999; Tong & Chim, 2013; Engel et al., 2013; Clarke et al., 2006; Lund, 2009; Pearce et al., 2007). However, there are more accessibility factors that should be considered than just proximity (Thomas et al., 2009; Moore et al., 2010; Hing and Haw, 2009; Productivity Commission, 1999). Therefore with mobile gambling appearing to be the most accessible form (Gainsbury et al., 2012; Griffiths, 2003; Griffiths, 2011) this demonstrates the importance of this study.

Internet gambling: accessibility

The gambling industry has seen significant changes in the last 15 years due to the increased availability of internet gambling (Gainsbury et al., 2015). Concerns regarding the accessibility of internet gambling have been raised in numerous papers (Griffiths, 2002; Griffiths, 2003; Griffiths, 2000; Wood & Williams, 2009; Wood & Williams, 2007a; Williams & Wood, 2007b; Griffiths et al., 2009a; Ladd & Petry, 2002; Griffith & Barnes, 2008; Gainsbury et al., 2012, Gainsbury et al., 2013; Woolley, 2003; McBride & Derevensky, 2009; Wood & Williams, 2011). Previous studies have usually included mobile as a small aspect of internet gambling (e.g. Gainsbury et al., 2012). However, research into mobile gambling as a single entity currently appears non-existent.

Some studies have investigated reasons for preferring internet gambling to terrestrial forms. Wood et al’s (2007) research which was conducted using an online survey of 1,920 internet gamblers found that 73.8% preferred internet gambling to land based gambling although the sample of respondents chosen (internet gamblers) may have caused bias in results. Reasons identified related mainly to the accessibility of internet gambling over land based venues. For example the main reasons given for preferring internet gambling were ‘convenience of access’ and ‘distance from a gambling venue’ (Wood et al., 2007). Gainsbury et al’s (2012) research is generally concurrent, finding that 56% and 46.2% of internet gamblers perceived ‘not leaving the house’ and ‘24 hour availability’ respectively as the biggest factors that make internet gambling more accessible. This theme is also consistent with other research (American Gaming Association, 2006 in Wood et al, 2007; Williams & Wood, 2007b; Griffiths & Barnes, 2008).

Griffiths and Barnes (2008) found ‘ease of access’ to be a significant factor for 84% of the student internet gambling population studied, which is interesting considering Gainsbury et al (2012) also found being a student to be prevalent in internet gambling. A link between these online gambling motives (i.e. convenience, distance and 24hr availability) and the geo-temporal accessibility factors identified in traditional gambling accessibility (Thomas et al., 2009; Productivity Commission, 1999; Moore et al., 2010) can be clearly recognised. Convenience of access and close proximity to gambling opportunities in a home is therefore more extreme for internet gambling than terrestrial gambling making it more accessible. However, arguably mobile gambling in that sense would appear to be even more accessible.
Whilst it is noted that social accessibility of internet gambling is less than land based venues due to a ‘poorer atmosphere’ (Gainsbury et al., 2012), studies have found factors such as privacy, anonymity and the ability to gamble away from crowds make internet gambling as a whole more accessible (Gainsbury et al., 2012; Griffiths & Barnes, 2008). This is generally contradictory to Thomas et al’s (2009) research that listed social and personal accessibility of a venue as the second most important factor of accessibility. However, it may suggest that ‘accessible retreat’ (Thomas et al., 2009) is more significant for internet gamblers. This may suggest that new markets of online gamblers are opening up that wouldn’t have previously been involved in gambling at terrestrial venues (Gainsbury et al., 2012; Wood & Williams, 2009).

Gainsbury et al (2012) found factors relating to financial accessibility in terms of ‘access to money’ and ‘low initial stake requirements’ to be a less important advantage of internet gambling which is consistent with previous research for traditional gambling forms (Thomas et al., 2009). However, Gainsbury et al (2012) and Wood et al (2007) did identify that people consider the higher potential pay out rates offered by online gambling companies to be a benefit. This is caused by low overheads and competition among online gambling companies being more intense as people can switch venues in seconds as opposed to the time it would take to move between terrestrial venues (Woods & Williams, 2007b). Wood & Williams (2009) suggested that some gamblers may be averse to online gambling due to mistrusting online gambling websites and their e-payment systems. However, Kim et al (2009) proposes that e-payment systems are generally now favourable in terms of security and gambling companies make depositing money online easier. Gainsbury et al. (2012) found that only a minority of internet gamblers were concerned about deposit security. Other concerns have been raised about the relative simplicity in spending virtual e-cash at internet gambling websites compared to land based venues (Griffiths & Parke, 2002; Griffiths, 1999). They suggest that suspension of judgement occurs which can affect the gamblers perception of the real cash value of virtual e-cash inciting greater spend; similar to casino chips being used in terrestrial venues.

Griffiths and Barnes (2008) also found that having a greater choice of betting opportunities on the internet was a perceived advantage of online gambling with 57% of respondents determining it as significant. This relates to factors of accessibility by Productivity Commission entitled ‘number of venues’ and ‘number of opportunities to gamble in any given venue’. The number of different online gambling companies (venues) and the great variance and number of potential gambling opportunities within each online venue may therefore be deemed as making internet, including mobile, more accessible.

**Internet gambling: implications**

Research indicates that internet gambling makes it more accessible for individuals to gamble. As suggested by previously mentioned literature, the accessibility and proximity of a gambling opportunity generally correlates with an increase in problem gambling behaviour. Additionally, research has found internet gamblers (usually including mobile) to have greater tendencies to be either moderate or severe problem gamblers (Wood et al, 2007; Wood & Williams, 2009; Griffiths et al., 2009a; Ladd & Petry, 2002; Griffith & Barnes, 2008; Brunelle et al., 2012; McBride & Derevensky, 2009; Gainsbury et al., 2013; Wood & Williams, 2011). For example, Wood and Williams (2011) found that internet gamblers tend to be 3 to 4 times more likely to be problem gamblers. Similarly, McBride and Derevensky (2009) identified 29% of internet gamblers as problem gamblers. Conversely, Gainsbury et al (2013) found that internet gamblers were not more likely to be problem gamblers than non-internet gamblers but suggested that the relationship between the two forms was complicated because many participants were involved in both; they did concede that new internet technologies may facilitate already existing gambling problems. A study by Petry and Weinstock (2007) into internet gambling among students found that 6% of students gambled on the internet weekly. Of those gambling weekly 61.6% were identified as problem gamblers. Interestingly, McBride and Derevensky’s (2009) also found internet problem gamblers were more likely to bet on their mobile phone. Since internet gambling as a whole appears to facilitate higher problem gambling rates and problem gamblers may be more likely to gamble on their mobile phone, the general increase in mobile phone gambling poses concern.
Internet gambling has also been found to attract a changed market of gamblers. Some research suggests that internet gamblers are more likely to be relatively younger than land based gamblers (Gainsbury et al., 2015; McBride & Derevensky, 2009; Wood & Williams, 2011; Griffiths et al., 2009a). Wood and Williams (2009) found that being a student increased the likelihood of internet gambling. This poses concern as higher risk internet gamblers have been found to be more likely to be younger (Ladd & Petry, 2002). Other studies have found that males are more likely to gamble on the internet than females (Griffiths & Barnes, 2008; Gainsbury et al., 2012; Gainsbury et al., 2015; Wood & Williams, 2011; Griffiths et al., 2009; McBride & Derevensky, 2009). That said, Wood et al’s (2007) findings suggest that internet gambling appeals to a less gender split market, although they recommend that more research is required into this. For example, Abarbanel and Bernhard (2012) found that women sometimes feel social pressure and discomfort through unpleasant flirtations experienced in land based venues and therefore avoid them. GamCare have reported increases in the number of female callers using the internet for eight years. Calls were up from 38% in 2009 to 50% in 2013 (GamCare, 2010 & 2013). A more worrying issue is that the internet has opened up gambling to adolescents (Parker et al., 2008; Griffiths & Wood 2000; Brunelle et al., 2012; Griffiths et al., 2009a; Griffiths & Barnes, 2008; Ladd & Petry, 2002). A meta-analysis conducted by Shaffer & Hall (2002) concluded that the mean pathological gambling percentage was 3.38% for adolescents which is higher than that of 1.92% for adults. This is consistent with research that indicates adolescents are more at risk of developing addictive behaviours (Griffiths & Wood, 2000; Pallanti et al., 2006). Potential causes include the constant availability to parents of internet gambling at home, which may expose children to the activity and therefore normalise gambling at an early age (Monaghan and Derevensky, 2008). Also, young people are often happier to enter card details online (Griffiths, 2002) with Griffiths (2000) suggesting that technological platforms are more appealing to them.

A number of gambling behavioural changes have been identified for internet gambling compared to terrestrial gambling. Shifting gambling participation from terrestrial to internet computer gambling in the home means that gambling has become integrated into normal home living (Cotte, & LaTour, 2009). Gambling frequency has also been found to be higher for internet gamblers than non-internet gamblers (Gainsbury et al., 2012; Gainsbury et al., 2015; Gainsbury et al., 2013). Other behavioural changes identified include that internet gamblers now gamble on more than one online venue. McBride and Derevensky (2009) found that 65.2% of internet gamblers use between two and five online betting sites whilst a further 2% use more than six; consistent with finding from Wood and Williams (2011). On mobile phones, individuals now have the opportunity to download multiple gambling apps to their phone making it easy to switch between venues on the same portable hub. Gainsbury et al (2015) also comments that internet gamblers bet on a greater number of activities, which Wood and Williams (2011) recognised led to higher gambling expenditure, concurrent with McBride and Derevensky’s (2009).

It has been noted that the most addictive terrestrial gambling form is Fixed Odds Betting Terminals (FOBT) seen in casinos and betting shops (Dowling et al., 2005; Snowden, 2013). They incorporate a wide variety of games on a virtual screen and the technology mechanisms allow for faster gameplay speed and pay-outs which attracts a higher frequency of play leading to gambling problems (Griffiths, 1999). However, Gainsbury et al (2012) found that sports betting and wagering on horse and dog racing were the most predominant form of gambling online over casino gambles such as roulette and blackjack, as well as poker and other forms. Gainsbury et al (2013) found internet gamblers were most likely to consider wagering on horse and dog racing as a significant contribution to their gambling problems. The authors of this study failed to include sports betting within the options for the same questions. This was considered a significant limitation of the study considering they also found internet sports betting gamblers to be more associated with gambling problems than race gamblers. Whilst other forms of gambling may be more addictive at land based venues, internet gamblers who predominantly gamble on sports are similarly likely to develop issues. Gainsbury et al (2012) also found that of all sports wagered on a mobile device; betting on horse races was 21.5% and dog races was 23.1%. This was despite only 5.5% stating that they preferred mobile gambling to computer gambling. However, since the date of this study mobile gambling has grown significantly and the implications are currently unknown.
McBride and Derevensky (2009) also found that internet problem gamblers were significantly more likely to spend longer than non-problem gamblers online which is consistent with Griffiths and Barnes (2008) This is perhaps through dissociation of real life leading to problems (Griffiths, 2003). Traditional gambling research has identified that problem gamblers prefer gambling in isolated places (Ladouceur et al., 2005). McBride & Derevensky (2009) suggest that another internet gambling benefit is that it is easier to hide their gambling from others, reporting that 86% of online gamblers do it alone. They also expressed concerns about the relevant ease of ‘chasing losses’ on internet gambling, which is a factor of problem gambling (Lesieur, 1979). Another behavioural concern prompted by internet gambling is the openness of gambling opportunities to vulnerable individuals. McBride and Derevensky (2009) report that 45.4% of internet gamblers use alcohol when gambling online and problem gamblers were significantly more likely to do so. Similar concerns have been made by Griffiths and Barnes (2008) who comment on the inevitable lack preventative measures possible for gambling when intoxicated. This is particularly concerning as gambling problems have been linked with drug and alcohol addictions (Petry et al., 2005). Other concerns are that internet gamblers tend to perceive positive impacts of gambling over negatives (Gainsbury et al., 2015). This aligns with findings that internet gamblers have a lower recognition of gambling problems and therefore do not seek treatment (Gainsbury et al., 2012, Gainsbury et al., 2013; The Guardian, 2011).

Issues and concerns about the impact of internet gambling has prompted research into regulation and encouraging social responsibility to tackle them. Monaghan (2009) suggests the lack of regulation should result in internet gambling companies being more socially responsible than just implementing the minimum legal requirements. It has been suggested that this can be achieved by using pop-up messages with audio alerts to capture the attention of users. Griffiths et al (2009b) highlight the effective social responsibility of a Swedish online gambling company; Svenska Sen. Their main marketing focus is upon responsible gambling rather than betting products and they promote the use of PlayScan. This provides services such as setting time and money limits together with self-exclusion services which 52% of users said was useful. Interestingly, 62% of users of Svenska Sen only bet with them. The remainder, who also bet with others are six times as likely to admit Svenska Sen treated them better than those other companies. This suggests the trust message that they promote is commercially superior (Griffiths et al., 2009b). Griffiths and Whitty (2010) suggest that the internet provides the opportunity for online betting sites to track problem gambling behaviour such as chasing losses and increasing the amount of time and money spent. Arguably this may not have a substantial impact on internet gamblers that bet in more than one venue as behaviour in a single venue may suggest no risk compared to overall betting activity. Another online gambling company that has attempted to integrate social responsibility concepts is Bwin (Broda et al., 2008). They set deposit limits for consumers and reject and notify any attempt to exceed them. They found that those who tried to exceed the limits display levels of problem gambling risk in terms of total bets and expenditure per bet. It could therefore be used as a harm reduction technique. The Senet group are an organisation set up by four large UK internet betting companies (Coral, Ladbrokes, Paddy Power and William Hill) that focus on social responsibility in advertising and recently released a responsible gambling advert in 2015 (The Senet Group, 2015). However, whilst it promotes responsible gambling it does little to enforce it.

Mobile consumer behaviour
Mobile consumer behaviour research is becoming increasingly appropriate with the rise in mobile purchasing spend (Retail Research, 2015). Mobile commerce (m-commerce) represents an extension of the internet from static devices such as a PC, where use and purchasing can occur anywhere at any time and where every form of betting is available (Hsieh, 2007). Purchasing habits on a mobile are therefore useful in identifying potential mobile gambling habits which could lead to problem gambling behaviour.

M-commerce provides many benefits to consumers, including the elimination of time consuming tasks (Hsieh, 2007). For example, mobile gambling takes away the time taken in travelling to a terrestrial gambling venue (Wood et al, 2007). Delivering added value through offering additional services to customers on mobile is becoming increasingly essential in maintaining a competitive edge. It can improve customer relations (Lin & Wang, 2006). Online gambling companies are intensively advertising their mobile services to attain a
competitive advantage. However, with the increase in mobile gambling predicted (Epstein, 2013; The Guardian, 2011; PR Newswire, 2012), it may soon be an order qualifier for a majority of online gamblers.

Research has shown that impulse purchasing is likely to increase when using m-commerce. A 2012 study by Rackspace found that 48% of 2,009 UK adults who owned a smartphone and/or a tablet make more impulse purchases due to this new technology. This generates a substantial amount of extra income for businesses providing this purchasing platform. The age range of 18-34 years old was found to be the most likely to impulse purchase via m-commerce (Rackspace, 2012). However, this study was focused on mobile retail purchasing. Behaviour may be different for mobile gambling because impulse buying has been found to be subjective for different product categories (Jones et al., 2003; Rackspace, 2012). That said, a number of studies report a correlation between impulsivity traits of individuals and problem gambling (Brever et al., 2012; Potenza & Hollander, 2002; Specker et al., 1995; Steel, Z. & Blaszczynski, 1998; Clarke, 2006). For example Brever et al. (2012) describe impulsive gambling as the inability to withhold a gambling response or demonstrate a delayed withholding response.

Impulse buying occurs when a purchase is unintended and unplanned with little evaluation and immediate (Rook, 1987; Rook & Fisher, 1995; Jones et al., 2003). Jones et al. (2003) also found that a consumer’s involvement with the product affects their likelihood to impulse purchase. Internet gamblers tend to be more involved in gambling than land based gamblers (Gainsbury et al, 2012; Wood & Williams, 2011; Griffiths et al, 2009a; Gainsbury et al 2015) and accessibility of mobile gambling could potentially increase involvement due to an individual’s constant attachment to these devices. San-Martin and López-Catalán (2013) found that whilst involvement with the product had positive impacts on buyer satisfaction the impulsiveness had negative impacts on satisfaction. This suggests that while product involvement can initiate an impulse purchase, it is only the involvement that is satisfactory, not the impulse purchase generated. Therefore, it is possible that highly involved gamblers who use their mobile phones, have a higher tendency to impulsively gamble on it.

Close proximity to a purchase location can also impact the likelihood of an impulsive purchase when gratification of the purchase is immediately obtained (Drossos et al., 2014). Environmental cues can also influence impulsive buying behaviour (Parboteah et al., 2009). With relevance to online, Parboteeah et al (2009) found that high quality websites that include good navigability and are aesthetically appealing can increase impulsive behaviour. This suggests that high quality mobile websites and apps can increase impulsive bets and therefore the number of overall bets placed by a consumer. In terms of external environmental factors affecting impulsive habits, Youn and Faber (2000) identified environmental stimuli such as advertising as a factor of impulsive buying. As well as mobile adverts, mobile gambling allows gambling to occur in any environment, including one in which a consumer is watching TV where adverts are common. The number of TV gambling related adverts aired in the UK has increased from 152,000 in 2006 to 1.39 million in 2012 (OfCom, 2013). The influence of this could therefore result in an increase in the number of impulse bets.

Lack of control and stress reaction was found to increase impulse buying (Youn & Faber, 2000). This was also identified as a trait of problem gamblers (Coventry & Brown, 1993; Blaszczynski and Nower, 2002) suggesting that the increase in impulse behaviour generated by m-commerce may affect problem gamblers utilising mobile gambling to a larger extent.

Mobile phones also open up the ability for online gambling companies to display and send adverts directly to a device that the gambler can bet with. Scharl et al (2005) state that expert’s claim most recipients read SMS text messages received. However, they did recognise that consumers consider the impact of a message quickly disappears and it is therefore imperative it urges recipients to act on the spot (Scharl et al., 2005). Arguably, these mobile advert prompts may exploit the impulsivity traits found in problem gamblers and general mobile purchasing behaviour. Perceived pleasurable products being advertised via display mobile adverts have been found to be more likely to be clicked on than perceived un-pleasurable product adverts (Bart et al., 2014). This possibly depends on the consumer in question. Bart et al (2014) also found that mobile display adverts requiring higher involvement were more likely to be engaged with. Internet gamblers (who as stated previously are also
more likely to be problem gamblers) are more involved in gambling (Gainsbury et al, 2012; Wood & Williams, 2011; Griffiths et al, 2009a; Gainsbury et al 2015). Therefore, mobile adverts linking to online mobile gambling sites could encourage highly involved gamblers which potentially have higher levels of problem gambling risk.

The present study
The literature review suggests that there is a shortfall in information as to the effect of all currently available gambling forms. This is due to the relatively recent introduction of mobile gambling which appears to have not yet received significant study. The research contained in the literature review provided findings from studies into both traditional and internet gambling forms and their respective effects upon problem gambling behaviour. This appears to indicate that there are multiple means of accessibility associated with gambling and that increased accessibility can increase problem gambling. It appears that internet gambling provides gamblers greater access and opportunity with a corresponding increase in problem gambling behaviour. Since mobile gambling is intended to be even more accessible and increasing according to separate consumer research an empirical investigation into mobile gambling accessibility and changes in gambling behaviour is valid.

Therefore, the aim of the present study is to understand the concept of accessibility relating to mobile gambling and to identify consequential consumer behaviour which might result in problem gambling.

The objectives deployed were as follows:

- (1) Identify how mobile gambling accessibility relates to traditional factors
- (2) Identify new accessibility factors of mobile gambling
- (3) Identify how gambling behaviour has changed for mobile gambling
- (4) Identify potential effects of mobile gambling on problem gambling

Methodology

Philosophical stance
The aims and objectives were accomplished using an interpretivist approach through qualitative research (Saunders et al., 2009: 116). The biopsychology of gambling behaviour and problem gambling is considered complex (Sharpe, 2002; Blaszczynski & Nower, 2002) and therefore information received was likely to stem from a variety of reasons based on their own social experiences of gambling. Thus, a positivist approach would not have taken these complex social factors into account (Saunders et al., 2009: 113). Moreover, qualitative research has been considered useful in understanding interpretations for concerns regarding public health issues such as problem gambling (Baum, 1995 in Liamputtong & Ezzy, 2005: 5). Likewise, it has been argued to be more valid because perspectives given cannot be wrong (McNeil & Chapman, 2005: 22). The approach of the present study was similar to Thomas et al (2009) who deployed a phenomenological framework to reveal the “psychological meaning of accessibility regulation from the point of view of the gambler”. The interpretivist phenomenological analysis approach was therefore relevant to this study because it studies an individual’s perception of accessibility and their gambling habits on mobile based on first-hand experiences (Smith & Osborn, 2007). These can then be used to understand potential implications of mobile gambling.

Participants
The sample consisted of 7 participants chosen from a large population of gamblers. 6 participants were selected through the researchers contact networks and were deemed suitable for the study, each gambling at least once per week on their mobile phone with a sound level of experience. This purposive sampling method was necessary to meet the objectives (Saunders et al., 2009: 237). 1 participant was recruited from Gamblers Anonymous UK (GAUK) as a problem gambler in the process of recovery. However, whilst they had some experience of internet and mobile gambling they began the GAUK recovery program prior to mobile gambling being as developed as it is today and therefore mostly had experience of terrestrial gambling. However, due to their current stage and experience within the recovery program they were considered suitable in offering their own gambling experience and that of other recovering problem gamblers at GAUK that have been involved in
mobile gambling. They could also offer their perspective on mobile gambling and its impacts in problem gambling. This non-probability sampling method was used in order to select participants that were deemed an appropriate fit of demographics with sound experience and knowledge (Robson, 2007: 99). The most important aspect was their experience and knowledge of mobile gambling in order to collect rich insightful data (Holloway, 1997: 142).

An attempt was made for the sample to partially represent the key demographics of internet gambling. For example, participants consisted of 6 males (M) and 1 female (F) (M=85%) (e.g. Griffiths & Barnes, 2008). The average age of participants were relatively young ranging 21-35 years (mean age = 25.6 years) (e.g. Gainsbury et al., 2015). 3 participants were students (e.g. Wood & Williams, 2009). The sample also attempted to represent mobile gamblers with varying levels of problem gambling severity to collect data across the whole problem gambling severity spectrum (this was not used as a way to strictly categorise them due to the interpretivist approach undertaken). It was achieved by gauging their problem gambling severity index (PGSI) using the Canadian Gambling Severity Index which asks nine questions prompting the participant to think about their gambling habits and emotions when gambling in the last twelve months (Ferris & Wynne, 2001). A score was calculated based on their answers which determined their gambling severity. The sample consisted of 1 non-problem gambler (NPG), 2 low risk gamblers (LRG), 3 moderate risk gamblers (MRG) and 1 problem gambler (PG). Please note that the problem gambler was not required to complete the PGSI test because they were recruited for that reason. For the purpose of this study the participants will be referred to as (gender, age, PGSI score). The participants in the sample will consequently be identified as (F, 29, NPG), (M, 22, LRG), (M, 25, LRG), (M, 21, MRG), (M, 22, MRG), (M, 25, MRG), (M, 35, PG).

**Method**

Research was conducted using four face to face in-depth semi structured interviews with (M, 22, LRG), (M, 21, MRG), (M, 22, MRG) and (M, 35, PG) together with one focus groups with (F, 29, NPG), (M, 25, LRG) & (M, 25, MRG) all lasting between 31 and 64 minutes. These methods were chosen to gather exploratory information that aided in the understanding of perspectives and personal experiences associated with mobile gambling (Saunders et al., 2009: 324; Cooper & Schindler, 2001: 299; Gray, 2009: 370) that have not yet been recognised in research regarding internet gambling overall. A focus group was used to encourage discussion between participants (Carson et al., 2001) in order to formulate common themes of mobile accessibility and resulting behaviours. However, focus groups have sometimes been found to lead to participants not offering or offering a dishonest opinion fearing their views would be spread and falsely agree with other responses (Liamputtong & Ezzy, 2005: 97). To combat this in-depth semi structured interviews were also used to create an environment in which respondents could be open and fully discuss their views and experiences (Cooper et al., 2001: 334). Questions only related to the use of mobile phones and not tablets. This was because tablets are often used in a less mobile way than phones. The research questions were asked in a logical order corresponding to the objectives set. Questions differed for the 6 mobile gambling participants compared to (M, 35, PG). (see appendix A for full list of base questions to mobile gambling participants and appendix B for base questions asked to (M, 35, PG)). Questions concerning the objective to (2) identify new accessibility factors of mobile gambling were asked prior to identifying (1) *Identify how mobile gambling accessibility relates to traditional factors*. This was to ensure the input of accessibility aspects in the questions aiming to satisfy (1) did not hinder exploration into new accessibility aspects of mobile gambling. Objective (3) was satisfied by asking questions associated with mobile gambling behaviour and objective (4) was met by identifying how behavioural changes for the 6 mobile gambling participants matched data given mainly by (M, 35, PG) together with his own experience of mobile gambling within GAUK. The semi-structured format allowed key questions to direct the interviews and focus group in order to satisfy the objectives but new ideas were explored using further questioning when relevant (Saunders et al., 2009: 321). Probing at views and opinions is imperative when using this phenomenological approach (Gray, 2009: 373). Additionally, the ability of (M, 35, PG) to offer a problem gambler psychological perspective from their self and others at GAUK meant that some questions were altered for this interview (Gray, 2009: 373). All interviews and the focus group were audio recorded and transcribed for analysis.
Analysis
 Initially, ‘complete coding’ was used to identify anything that could have been relevant to the research question (Braun & Clarke, 2013; 206). Coding was then used to categorise data in terms of objectives set followed by axial coding in order to build relationships between these categories such as how mobile gambling accessibility factors affect gambling habits (Liamputtong & Ezzy, 2005: 269; Saunders et al., 2009: 511). Triangulation allowed comparison between the data collected from all participants from the interviews and focus group method (Saunders et al., 2009: 146). This allowed some concepts that were provided by multiple sources to emerge as key themes within the research, increasing the validity of the said concepts (Crabtree & Miller, 1999; 82; Gray, 2009: 191). These themes can be found in the results. Themes were also triangulated with secondary data provided by an anonymous UK internet gambling company (Company A). Further triangulation can be found in the discussion where themes are linked with theory (Crabtree & Miller, 1999; 82). Conversely to Thomas et al. (2009) who used a purely inductive approach, analysis of the data collected from the current study used both an inductive and deductive based approach where appropriate (Saunders et al., 2009: 489). Deductive methods were used for the remaining objectives.

Ethical considerations
 The research project adhered to the guidelines set within the UoP University Research Committee’s ‘Ethical principles for research involving human participants’ document. Recruitment, data collection, data storage, data analysis and the reporting of the results were all performed in an ethical manner (Saunders et al., 2009: 184). All participants were made aware of their interview or focus group being audio recorded. They were each required to read and consent to the briefing document provided prior to the data collection. It contained a summarised version of the aims and objectives of the study and the format they would be referred to in this report. Anonymity was guaranteed and they were given the right to withdraw up until five days after data collection when the result began to be analysed. Additionally, they were each made aware of their problem gambling severity score. They were also made aware that this research may be published online and offered to problem gambling help groups.

Limitations
 Due to time constraints held on the study data was only collected from 7 participants which does not represent the whole population of mobile gamblers. The small sample of participants was recruited based on the recommended key demographics (gender and age) mentioned in literature regarding internet gambling together with a varied problem gambling severity risk. However, it does not consider a variety of other potentially influential demographics such as ethnicity, socioeconomic background and the mean age is younger than that found in the majority of studies. Additionally, (M, 35, PG) was not as experienced in mobile gambling and therefore could not provide much information based on personal experience. However, they were able to offer a perspective on mobile gambling form the viewpoint of a problem gambler which was essential for objective (4).

Participants were recruited from Devon, Bath and London and therefore do not represent the whole UK. Nor is it representative of the global population although this would be difficult across varying jurisdictions concerning gambling legislation. Furthermore, due to the small sample not every gambling type (e.g. electronic gambling machines, bingo) was participated in by the sample despite all forms being available on a mobile phone. The 6 participants with sound mobile gambling experience mainly gambled on sport (including horse and dog wagering), which corresponds with previous literature (Gainsbury et al, 2013; Gainsbury et al., 2012). Casino was sometimes used on mobile phones by (M, 22, LRG) and (M, 22, MRG). Slots were very occasionally used on mobile by (F, 29, LRG).
Results
When referring to ‘mobile gambling participants’ this includes the 6 participants that use mobile gambling regularly: (F, 29, NPG), (M, 22, LRG), (M, 25, LRG), (M, 21, MRG), (M, 22, MRG), (M, 25, MRG). Also note ‘terrestrial venues’ refers to all land based forms of gambling such as casinos and bookmakers, ‘internet/online gambling’ refers to both computer and mobile phone gambling via the internet because the internet gambling companies referred to offer both platforms. ‘Computer gambling’ refers to singularly computer gambling via the internet. Mobile gambling refers to gambling singularly on a mobile phone via the internet.

Identify how mobile gambling accessibility relates to traditional factors
To satisfy this objective participants were asked whether mobile gambling made is more accessible than both (1) terrestrial venues and (2) computer gambling in terms of traditional factors of accessibility from previous literature. These factors were formed from a combination of factors mentioned by Thomas et al (2009) and Productivity Commission (1999). ‘Proximity’, ‘opening hours’, ‘number of venues’, ‘number of opportunities to gamble in any given venue’ were categorised under physical accessibility factors. ‘A safe option’, ‘a social place’, ‘part of a wider social experience’, ‘accessible retreat from life issues’, ‘ease of use’ and ‘conditions of entry’ were categorised under social accessibility factors. ‘Access to money’ and ‘low outlay games’ were categorised under financial accessibility factors. Please note that not every mobile gambling participant was asked these questions directly. Some arose unprompted in the data collection and some emerged through data analysis.

Physical accessibility factors
‘Proximity’ (Thomas et al., 2009) was found to be significantly applicable to mobile gambling. All participants agreed that mobile gambling was more accessible than terrestrial venues due to it always being close: “the past you had to go down to the bookies [terrestrial venue], or go to a casino; [but now] it’s all there. You don’t have to go far at all, you just hit a button” (M, 35, PG). Additionally they said it made gambling more accessible than internet computer gambling because you can be anywhere: “if my computer is not nearby I’ll just pull out my phone which is always on me” (M, 21, MRG).

Results indicate that ‘number of venues’ (Productivity Commission, 1999) as an accessibility factor was found to be relevant to mobile gambling but deviates from the original concept. The ‘spatial distribution’ aspect of this factor (Productivity Commission, 1999) is now only applicable in that there are a huge number of online gambling venues that can be accessed by their mobile distribution channels within a single mobile hub. Mobile gambling participants deemed that this made mobile gambling more accessible than land based venues due to other accessibility factors that mobile gambling companies compete upon, such as odds for sports betting (see financial accessibility factors): “I’ve even used the mobile phone to bet whilst being in a betting shop rather than using the betting shop…. mainly because you’ve got access to the comparison sites [sports betting odds comparison]” (M, 25, MRG). However this accessibility factor was considered to not contribute towards mobile gambling being more accessible than computer gambling because the same companies are also accessible via computer gambling websites on one hub.

‘Total number of gambling opportunities per venue’ (Productivity Commission, 1999) was also found to differ from the traditional concept relating to limited capacity of gambling opportunities in a venue. Participants quoted the number and variety of gambling opportunities that internet gambling companies offer on mobile: "use someone like ‘(large UK online gambling company name unplugged)’ which are renowned for having like loads & loads of [sports betting] markets” (M, 22, MRG). They suggested that unlimited capacity therefore makes mobile gambling more accessible than terrestrial venues. The majority of mobile gambling participants suggested that it was equally as accessible to computer gambling although one participant deemed it less accessible: “the number of mobile casino games that they have got is way less on mobile than on a desktop” (M, 22, LRG).

‘Opening hours’ (Thomas et al., 2009) of mobile gambling (24 hour) was found to be relevant by all participants in making it more accessible than land based venues: “I might be lying in bed and reading something on Twitter...
about a celebrity and I might just want to put a novelty bet on or something like that … it could be the dead of night” (F, 29, NPG). Its opening hour accessibility was not noted to be significantly different to computer gambling but the fact that gamblers don’t always have their laptop with them was mentioned: “I’m not 24 hours with my laptop” (M, 21, MRG).

Social accessibility factors

‘A safe option’ (Thomas et al., 2009) was relatable in terms of the reputation of the internet gambling company: “any advert that mentions a bookie [referring to internet sports gambling company on Twitter advert] that isn’t like one of the big names, so like a new upcoming bookie I’ll just ignore them” (M, 21, MRG). Another theme was that social media has impacted the accessibility of certain companies: “with stuff like Twitter as well, I think people are more familiar with different companies [internet gambling] now” (M, 25, MRG).

‘A social place’ (Thomas et al., 2009) was relatable in that gamblers can bet with friends: “you can be with your mates while you do it” (M, 22, MRG). This underpinned the conjunction that all mobile gambling participants prefer mobile gambling to computer gambling because it is more social. All mobile gambling participants said that land based casinos were not used to gamble primarily, they were an ad-on to a social event. 1 participant said they did not find land based betting shops as ‘a social place’: “I don’t really go to betting shops I find them a little bit old and there is just guys with newspapers” (M, 22, LRG). Therefore it differed depending on the terrestrial venue in question.

Similarly, ‘part of a wider social experience’ (Thomas et al., 2009) related to mobile gambling being accessible in any social environment: “if I was going to the pub to watch a game in the evening I’d always put a fiver on it, just to kind of make the game a bit more exciting” (M, 21, MRG). On the flip side ‘accessible retreat’ (Thomas et al., 2009) was also discovered by two participants in that mobile gambling could be done privately: “easier to hide it from society on a mobile phone” (M, 35, PG).

‘Conditions of entry’ (Productivity Commission, 1999) were deemed to be applicable to mobile gambling with regards to sign up requirements. 5 mobile gambling participants said that mobile was more accessible than land based in this respect because it was easier to sign up quickly: “you can sign up pretty quickly; you don’t have to go through the whole taking a photo, giving your ID in [referring to land based]. You’ve just got to sign up and play straight away” (M, 21, MRG). It was also mentioned by 2 mobile gambling participants that internet gambling companies can be quite lax with sign-ups making it more accessible: “when you just turn 18 it’s a bit tougher in terms of having to send off ID’s to certain places, but once you’re about 20 they don’t really properly check” (M, 22, MRG). 1 participant suggested that it was easier in a land based venue “you can go into a shop & just hand over cash [without sign-up] so it’s easier” (M, 22, MRG). Similar to other factors mobile and computer gambling were deemed to be equally accessible in this respect.

All participants identified ‘ease of use’ (Productivity Commission, 1999) as a factor of accessibility in terms of functionality of mobile gambling platforms that make it more accessible than most land based venues, particularly for sports: “if you don’t regularly use them [betting shops], which I don’t, they’re a bit hard to understand, mobile makes it definitely easier” (M, 22, MRG). Similarly, all but one participant identified mobile gambling to be easier to use than computer gambling because it is quicker: “apps are more simplified than desktop sites” (F, 29, NPG).

Financial accessibility factors

‘Access to cash’ (Thomas et al., 2009) was found make mobile gambling more accessible than terrestrial venues: “a land based you’d probably have to go out & get cash if you’re going to go or use your card maybe. It’s just a tap to deposit or bet on mobile” (F, 29, NPG). Similarly for internet gambling there are less deposit limits than some land based venues: “You just keep going until the cash machine stops [terrestrial venues]. But the online [internet gambling] version, any amount can be taken out. There’s no restriction as to what deposit you can do” (M, 35, PG). However, internet gambling was found to be harder to access money for withdrawal after winning because there is usually a minimum withdrawals amount and it is not as quick: “benefit of the
shops is being able to get your money straight away, whereas it’s 2 – 5 working days [on internet gambling]” (M, 25, MRG). There was no difference in accessibility identified between mobile and computer gambling. Access to better odds and promotional offers, such as ‘free bets’ (free money given to customers by internet gambling companies that can be put down as a stake to receipt the winnings but cannot be withdrawn as real cash) was also mentioned to make internet gambling more accessible than terrestrial venues. Some offers were found to make mobile gambling more accessible than computer gambling: “there’s more mobile offers as well as just on line” (F, 29, NPG).

‘Initial outlay required (minimum gambling stake)’ (Thomas et al., 2009) was found to be relatively insignificant for 5 mobile gambling participants in making mobile more accessible than land based. It was suggested by 1 that table games in casinos had higher minimum stakes: “In a casino there is a minimum requirement on most tables ... it makes mobile more accessible with the fact that you don’t have a minimum bet [on mobile]: you can just chuck 10p and 20p on it” (M, 22, LRG). However, the others mentioned that terrestrial venues now have ‘minimum 10p machines’ which was a lesser amount than applicable to be significant. No difference in accessibility was identified between mobile and computer gambling in this respect.

Another significant theme that emerged from the data in terms of accessibility wasn’t involved with ecological factors. It included the concept that some mobile gambling companies are more accessible than others as a result of some of the traditional ecological factors making it quicker to gamble, becoming appropriate within the virtual mobile gambling environment. For example, better accessibility of internet gambling companies was determined by factors such as ‘ease of use (better app functionality to place a more quickly), ‘financial accessibility (quick depositing) and ‘total number of gambling opportunities per venue (providing the gambling opportunity required)’ which would result in choosing one company over another: ”some companies you can deposit and place the bet at the same time ... say I’d forgotten to bet on a horse and I had 2 minutes until the race was about to go off, I know if I use their site I’d be able to get the bet on in 2 minutes. Whereas some sites don’t allow you to do that” (M, 25, MRG).

Identify new accessibility factors of mobile gambling
Data analysis revealed no new ecological accessibility factors for mobile gambling. However, one new accessibility concept emerged that can be applied to mobile gambling which has been titled Instant Accessibility. It incorporates themes such as the ‘speed’ at which participants could gamble: “you’ve got your mobile there you can quickly get a bet on” (F, 29, NPG), together with ‘no waiting’ to act on an urge to gamble: “if he [problem gambler] ever wanted to press the f**k it button he knows that he can gamble online through his mobile phone, within seconds” (M, 35, PG). The fact that it is “at your fingertips” (M, 22, MRG) was considered to make mobile gambling more accessible than terrestrial and computer gambling. This was noted to be significant in sports betting, including in-play sports betting (sports betting markets during live events) where betting markets and prices (odds) can change very quickly: “...or a goal has just gone in and you are at the pub and you want to get it on [bet on the match], it’s not always accessible to go to your computer and place a bet” (M, 22, LRG). Instant accessibility is predominantly associated with being able to gamble anywhere with speed ‘instantly’ and therefore only applicable to mobile gambling.

Identify how gambling behaviour has changed for mobile gambling.
Accessibility factors described were found to have significant effects upon consumer gambling behaviour. The constant close ‘proximity’ meant that all mobile gambling participants were involved in gambling activities at numerous different times throughout a normal working day: “quite often it’s [referring to mobile gambling] when I’m sat on the bus or walking around” (M, 21, MRG). Furthermore, a theme of continuously monitoring and assessing potential gambling opportunities and re-gambling winnings by mobile gamblers emerged: “you’re continuously looking at offers; it’s always in your pocket” and “you get the winnings straight away near enough, which means you continuously then put it on the next event, which builds it up pretty quickly” (M, 22, MRG).
The frequency of gambling was reported to increase for all mobile gambling participants when using a mobile phone, particularly for sports: “now it’s probably like every day on something or it’s every other day at least, whereas before it was just on weekends” (M, 22, MRG). 3 mobile gambling participants mentioned that that they now gamble on a greater variety of gambling activities due to using their mobile that they previously had no interest in away from gambling: “I’d probably never bet on horse racing, if I didn’t have the app” (M, 22, MRG). The main reason for increased frequency for sports gambling was identified to be instant accessibility in that sports gamblers never miss a betting opportunity because it is always in close proximity: “on your mobile you wouldn’t have had those bets because you don’t have a laptop at the pub” (M, 25, MRG). Additional data provided by a large UK internet gambling company (referred to anonymously as Company A) demonstrates a significant increase in sports betting activity when using a mobile device. The data is based on a sample of 2,362 accounts in 2013 that have converted to placing at least 10% of overall bets on a mobile from a computer. Results showed that the average number of bets per account increases by 121% after conversion.

All mobile gambling participants appeared and admitted to exhibit impulsive betting behaviours. The speed at which participants can bet on sports in response to an attractive odds change seems to reduce the thought process involved: “you’re not conscious of how much [referring to frequency] you’re betting really, because it’s just a tap [to bet]” (F, 29, NPG). Additionally, mobile gambling participants seemed to gamble on their mobile predominantly without planning on doing so: “you’ve always got your mobile there so you don’t have to plan it” (M, 25, LRG). Moreover, mobile gamblers acted “on a whim” (M, 21, MRG) instantly without thought.

No increase in expenditure per gamble was found for 5 mobile gambling participants normally. However, mobile sport and wagering race betting was themed to be actioned consistently in pubs and it was recognised that drinking increasing betting frequency and stake: “obviously drinking increases your stakes” (M, 25, LRG). 1 participant that used both a mobile and a computer to gamble even mentioned that larger stakes on sports were made on a computer because it was easier to research information surrounding the bet to make more informed decisions: “its big bets like that [pre-event World Cup tournament winner] that I place on my laptop, just because I am researching it and know what I am talking about. But on my phone, they’re the ones when I just bet more frequently and smaller” (M, 22, LRG). Data from Company A also demonstrated that spend per bet increases by 17% when gamblers convert to using mobile.

Another behavioural trait recognised by some participants was their lower recognition of the real cash value of virtual e-cash leading to more spending: “money doesn’t seem as significant as a figure on your screen ... the other day actually I got a return back from a bet and it was £346 and if I’d have got that in cash I think I would have just chucked it in my pocket, but because it was online I withdrew £300 and put £46 on the next bet” (M, 25, MRG). This was found to be even more significant on mobile than computer for two participants: “on a phone I just don’t think you really think about it going out [referring to money] as much as you do when you sit on your laptop” (M, 22, MRG).

The increased social accessibility of mobile gambling also appears to contribute to higher bet sports betting frequency and expenditure due to influences: “say I was with two mates and I was only going to have £50 on a horse and they both said they were going to have £100 each, chances are because I was with them I’d be go on then I’ll have a £100 too. Whereas if I was on my own at a computer I’d just have whatever I want” (M, 25, MRG). Approval from others also influenced lesser expenditure for two participants: “in front of your girlfriend you’re not going to put as much on” (M, 25, MRG). A competitive element also emerged in that mobile gamblers can’t allow friends to get ahead: “friends would be like “I’m just going to put this cheeky bet on” and I’m like oh right well I may as well. Can’t leave it to you because I would hate to see you win and me not” (M, 21, MRG).

Although not a gambling behaviour, mobile adverts were mentioned a great deal in affecting some participant’s mobile gambling habits and therefore potentially significant. Mobile gambling participants that use social media on mobile commented on reacting impulsively to current information emerging on Twitter: “if I saw it on Twitter that Ronaldo [football player] got injured in the warm up I’d be backing Barcelona [opposing team]...
the more access to information you’ve got on your mobile it makes you bet more” (M, 25, MRG). Advertising was also identified as a potential contributing cause of problem gambling: “you go home on a night and you’ll see all these 10 ads for casino online...they’re constantly re-enforcing that image in your head” (M, 35, PG). Constant SMS text message adverts and push notification adverts (text adverts sent through apps) to mobile phones were mentioned to also affect impulse gambling behaviour although it does depend on the content of the message.

**Identify potential effects of mobile gambling on problem gambling**

The results for this section were formulated by comparing mobile gambling participants with problem gambling issues mentioned by (M, 35, PG). Additionally, further thoughts from (M, 35, PG) not already identified in other objective sections are provided here.

The results indicated that all mobile gambling participants were aware of potential gambling problems: “I can see me becoming more and more addicted; especially if I keep putting [on] more and more money. I can rein that in. I don’t feel that I’ve become addicted yet” (M, 21, MRG). For 1 participant mobile gambling made it easier to hide their habit: “if I’m with my friends, I will bet slightly less because they all think I have a problem. I don’t want to be seen betting constantly” (M, 21, MRG). This was mentioned as a potential problem gambling behaviour with consequences by (M, 35, PG): “If you’re a secret gambler your mobile phone is probably your principle device ... you’re looking at a mobile phone, people don’t question why you’re looking at it ... society is oblivious” (M, 350, PG).

Additionally, a behavioural change identified was continuous involvement in gambling on a mobile “you’re continuously looking” (M, 22, MRG). Problem gamblers exhibit associated behaviours of obsession needing gambling as a stress relief was similarly acknowledged: “we obsess over it [gambling]. And that obsession has to be relieved” (M, 35, PG).

Another important factor mentioned was that payday loans can be used to facilitate problem gambling habitsby providing access to funds quickly: “you max out your credit card, pay day loans come into it” (M, 35, PG). A further issue raised was the fast speed at which problem gambling habits develop: “We’re getting guys with serious habits in there early 20’s ... but because of the online mobile scenario their habit is deeper. A problem gambler historically would have spent years building up to his habit ... it’s [mobile gambling] speeded up the habit” (M, 35, PG).

**Discussion**

The aim of the present study was to understand the multidimensional accessibility of mobile gambling and to determine changes in gambling behaviour as a result, which could potentially lead to gambling problems. In understanding mobile gambling accessibility in relation to traditional accessibility factors, the results found that mobile gambling is relatable to all factors therefore concurring that gambling can be looked at on a multidimensional scale (Thomas et al., 2009; Moore et al., 2010; Hing and Haw, 2009; Productivity Commission, 1999). In comparison with land based gambling, mobile appears to be more accessible in all but one aspect mentioned by Thomas et al (2009) and Productivity Commision (1999). The only aspect that could not be completely confirmed was ‘a social place’ from social accessibility. From the results it was not clear whether mobile gambling is more socially accessible than terrestrial venues because casinos were associated with a social activity; although it was mentioned that terrestrial bookmakers were not seen as ‘a social place’ because of the age of people in there. This may suggest that young people, based on the sample age, do not see all terrestrial venues as socially accessible, which would be a reason for internet gamblers being younger (Gainsbury et al., 2015; McBride & Derevensky, 2009; Wood & Williams, 2011; Griffiths et al., 2009a). The results also indicate that mobile gambling is equally as accessible to computer gambling for the majority of accessibility factors but more accessible in terms of ‘proximity’, ‘ease of use’, ‘a social place’ and ‘part of a wider social experience’. Overall this suggests that mobile gambling is more accessible than any other form, concurrent with previous theories (Gainsbury et al., 2012; Griffiths, 2003).
Physical accessibility factors and implications
The most significant factor of accessibility that mobile gambling has changed is ‘proximity’, making it more accessible in this context than both terrestrial and computer gambling because it can be done anywhere. It also appears to be the most important contributor impacting mobile gambling behaviours. Previous research examining internet gambling as a whole found that internet gamblers gambled at a higher frequency than terrestrial focused gamblers (Gainsbury et al., 2012; Gainsbury et al., 2015). However, a triangulation of data sources demonstrates that gambling frequency has increased dramatically on mobile phones. It would therefore concur that increased accessibility through close ‘proximity’ increases gambling (Sévigny et al., 2008). Whilst the data cannot provide evidence of increased problem gambling as a result of this, significant behavioural implications do exist. A main point of concern is that constant close ‘proximity’ appears to have facilitated impulsive gambling, concurrent with mobile commerce research (Drossos et al., 2014). This is significant because it could mean that mobile gambling may therefore manipulate impulsivity traits found in some problem gamblers (Steel, Z. & Blaszczynski, 1998; Clarke, 2006) which are a result of the disability to withhold from gambling (Bevers et al., 2012). Mobile gamblers don’t need to plan or wait to act on an urge to gamble (Rook, 1987; Rook & Fisher, 1995; Jones et al., 2003), it can be performed instantly without consequence assessment. Moreover, for non-problem gamblers that possess these traits but were not previously able to access gambling as quickly, it is possible that mobile gambling will provoke it leading to gambling problems. This study has therefore demonstrated the importance of studying mobile gambling as a separate entity to internet gambling as whole.

The ‘total number of venues’ within a small portable hub means companies compete on factors such as greater returning odds and offers, which internet gamblers have mentioned as a benefit of internet gambling (Wood et al., 2007). However, the constant accessibility of mobile gambling appears to have created a behaviour in which mobile gamblers continuously look for attractive gambling opportunities provided by internet gambling companies. Thus, it suggests a much higher involvement in gambling activities which could potentially lead to problem gambling. This high involvement has been mentioned for internet gamblers in previous studies (Gainsbury et al., 2012; Wood & Williams, 2011; Griffiths et al, 2009a; Gainsbury et al 2015). This concept of constant accessibility also appears to have allowed for a more extreme integration of gambling with everyday activities than was identified by Cotte and LaTour (2009) for computer gambling. It was mentioned in the data that problem gamblers are obsessed with gambling and therefore the continuous looking for gambling opportunities could be seen as an early indication of potential problem gambling behaviour.

The ‘total number of gambling opportunities per venue’ previously related to capacity within a venue but now relates to the variety of gambling opportunities offered. This could be the potential cause of mobile gamblers betting on a greater number of activities, consistent with internet gambling research (Gainsbury et al., 2015). ‘Opening hours’ as an accessibility factor of mobile gambling was found to contribute to accessibility in that gambling can be done at any time of day. Therefore behaviours exhibited as a result of mobile gambling can continue perpetually.

The fact that this study has found physical accessibility factors of gambling, in particularly ‘proximity’ to make mobile gambling more accessible than both terrestrial and computer gambling and that certain behavioural implications exist as a result that could lead to problem gambling issues provides evidence that mobile gambling should be looked at separately to internet gambling as a whole. It also potentially concurs with research that ‘proximity’ of gambling can increase problem gambling issues (Adams et al., 2007; Rush et al., 2007; Ladouceur et al., 1999; Blaszczynski, 1998 in Productivity Commission, 1999; Tong & Chim, 2013; Pearce et al., 2007). Thus, this demonstrates the significance of this study within the gambling field.

Social accessibility factors and implications
As found by Thomas et al (2009) social accessibility continues to incorporate a complex number of themes. The most significant finding, associated with ‘a social place’ and ‘part of a wider social experience’, was that mobile gamblers appear more social than internet gamblers. Previous research has identified privacy and anonymity as a key benefit of internet gambling (Gainsbury et al., 2012; Griffiths & Barnes, 2008). However this study
presents findings that mobile gamblers see the ability to gamble with friends as a factor that makes mobile gambling more accessible, in this context, than computer gambling. This could imply that mobile gamblers would experience fewer problems as a result compared with computer gambling on their own (Griffiths, 2003). However, also significant was that the ability to hide gambling, referring to ‘accessible retreat’ (Moore et al., 2010; Thomas et al., 2009), was observed and mentioned to be easier on mobile due to the fact it is accessible anywhere. Mobile gambling would allow for privacy and secrecy in any environment so it is easier to hide it from families out of the home if necessary. This could also be a contributing finding that represents concurrence that problem gamblers are more likely to use their mobile phone (McBride & Derevensky., 2009). Although not statistically valid, it is of note that hiding gambling was only mentioned by a moderate risk level and problem gambler. Previous studies have found a lower recognition of gambling problems among internet gamblers (Gainsbury et al., 2012, Gainsbury et al., 2013; The Guardian, 2011). Therefore if mobile problem gamblers are able to maintain secrecy, it is unlikely that associates will notice problem gambling behaviour of individuals and thus no treatment would be received, resulting in further gambling issues.

Interestingly, social accessibility of mobile gambling would also appear to be a contributor to an increase in gambling frequency and stake due to the influence of other people. However, whilst this could potentially make mobile gamblers slightly financially worse off, it does not demonstrate problem gambling. That said, other influences such as social media and notification driven mobile advertising does appear to affect gambling behaviour. The constant attachment to a device that receives adverts and allows instant gambling could contribute significantly to impulsive gambling in that impulsive problem gamblers cannot without their responses (Brevers et al., 2012). It could also be significant for highly involved gamblers who are more likely to engage with these adverts (Bart et al., 2014).

Another issue recognised was that mobile gambling on sports is often performed in pubs and drinking was mentioned to increase stakes. Therefore, similar to internet gambling (McBride & Derevensky, 2009; Griffiths and Barnes, 2008), mobile gambling opens up gambling to vulnerable and intoxicated individuals in more places where they can do harm. ‘Conditions of entry’ mentioned in respect to accessibility are associated with signing up. One significantly worrying concern is the laxness that some internet gambling companies appear to show with regards to age. Previous research has raised concerns of internet gambling opening up gambling to adolescent markets (Parker et al., 2008; Griffiths & Wood 2000; Brunelle et al., 2012; Griffiths et al., 2009a; Griffiths & Barnes, 2008; Ladd & Petry, 2002) and it appears that online companies may be failing to conform effectively to preventative measures. This provides concern particularly as previous studies have found adolescents to be more at risk of developing problem gambling behaviours (Shaffer & Hall, 2002). However it may be that internet gambling companies have other systems to conform to regulations.

The ‘ease of use’ of mobile gambling relating to good mobile platform navigability for quick access is similarly an addition that would simply facilitate instant gambling. As a result of good navigation, impulse gambling is easier to perform, concurrent with research (Parboteeah et al., 2009).

Financial accessibility factors and implications
With regards to accessing money the most significant finding that has not been mentioned in previous research was that internet gambling as a whole makes depositing money extremely fast in order to aid in the speed at which mobile gamblers can gamble. Also significantly important in this is the slow accessibility of withdrawing money from internet gambling companies. The speed at which money can be deposited would appear to assist in the facilitation of impulsive gambling and gambling frequency on mobile phones. However, the slowness of withdrawals could be a contributor to continuous re-betting of winnings. Additionally, whilst mobile gamblers appear to appreciate the speed at which gambling can be done over and over, including on sports betting where pay-outs are quick and winnings can easily be put on the next gamble, this behaviour is similar to behaviour on Fixed odds betting terminals (FOBT) that problem gamblers exhibit (Griffiths, 1999). Therefore is it possible with continuous gambling that mobile accessibility offers, even sports betting could potentially be as addictive as FOBT’s, which have been found to be the most addictive form of terrestrial gambling (Dowling et al., 2005; Snowden, 2013).
Payday loans were mentioned as a form of cash access to facilitate problem gambling. With payday loans companies now being accessible on mobile phones, this access to instant cash could facilitate problem gambling on mobile. Moreover, the perception of a lower real cash value of virtual money was demonstrated, consistent with previous concerns (Griffiths & Parke, 2002; Griffiths, 1999). This was partially found to be more significant on mobile phones than computers which could be a reason for mobile gamblers interviewed not concurring with data from Company A that suggests ‘spend per bet’ increases.

**Instant accessibility and implications**

The concept of *instant accessibility* revolves around the speed at which mobile gamblers can access gambling. The concept is particularly significant in sports betting where mobile gambling needs to be instantly accessible for gamblers to take benefit of odds they deem attractive and that can change quickly. The reduced thought process involved in reaction behaviours associated could potentially derive the same impulsive gambling behaviours as a result of instant access similar to effects of close ‘proximity’.

**Further mobile gambling implications**

(M, 35, PG) was able to provide information on mobile gambling implications for problem gambling based on experience as part of GAUK. Based on trends within the group it was found that more young individuals were seeking treatment due to problems with online and mobile gambling. Previous research conducted has found internet gamblers were more likely to be young (Gainsbury et al., 2015; McBride & Derevensky, 2009; Wood & Williams, 2011; Griffiths et al., 2009a) and be more likely to be problem gamblers (Wood et al., 2007; Wood & Williams, 2009; Griffiths et al., 2009a; Ladd & Petry, 2002; Griffith & Barnes, 2008; Brunelle et al., 2012; McBride & Derevensky, 2009; Gainsbury et al., 2013; Wood & Williams, 2011). The findings of previous research appear to therefore be concurrent with the results of the present study. However, no studies have thus far breached for an explanation into this findings with regards to problem gambling. Data collected from the present study suggests that the process involved in becoming a problem gambler has decreased in length as a result of accessible technological forms of gambling. It is also possible that normalising of gambling from an early age through internet gambling at home (Monaghan and Derevensky, 2008) has affected more recent generation of gamblers due to them starting at an early ages, thus reducing the age at which they become a problem gambler.

**Conclusion**

The aim of the present study was to understand the concept of multidimensional accessibility with regards to mobile gambling and to identify new consumer behaviours associated to mobile gambling which could facilitate problem gambling. Key findings include that accessibility for mobile gambling maintains a multidimensional form backing up previous accessibility theories (Thomas et al., 2009; Moore et al., 2010; Hing and Haw, 2009; Productivity Commission, 1999). A number of the concepts that previous literatures refer to tends to differ for mobile gambling but are nonetheless apparent. Considering mobile gambling accessibility overall, it appears that mobile gambling is a more accessible form of gambling than both terrestrial venues and internet computer gambling. The constant close proximity of mobile gambling is the most significant factor that makes it more accessible than other forms. Mobile gambling was found to be more ‘sociably accessible’ and ‘unsociably accessible’ than internet computer gambling. From the sample it appears that mobile gamblers may be more sociable than internet computer gamblers based on previous literature suggesting a vast majority do internet gambling alone (McBride & Derevensky, 2009). Mobile gamblers enjoyed gambling with friends and as part of a wider social experience. However, for problem gamblers it was found to potentially be even easier to hide gambling. A new concept called *instant accessibility* can be applied to mobile gambling which revolves around the speed at which gambling can be done. Whilst it is not an ecological factor it is particularly significant in sports betting where odds can change quickly and allows mobile gamblers to react the bets, increasing frequency. Behavioural implications of mobile gambling include impulsive gambling. An increase in gambling frequency was confirmed; but no increase in expenditure per gamble as a result of mobile gambling was reported by mobile gambling participants but this did not correlate with internal data from an online (and
mobile) gambling company. This therefore suggests that mobile gamblers may not be aware of increased expenditure aligning that mobile gamblers also appear to suffer from an even greater lower perception of real cash value. The constant close proximity of mobile gambling has developed a behaviour in which mobile gamblers are continuously looking for attractive gambling opportunities and therefore likely to be more involved. As a result of online and mobile gambling, the speed at which problem gambling issues progress is likely to be quicker resulting in a younger generation of problem gamblers.

The significance of the findings presented is that mobile gambling makes gambling far more accessible, in terms of proximity, than both terrestrial and computer gambling. Based on previous research this could be detrimental in that increase closeness to gambling opportunities increases participation and problem gambling (Adams et al., 2007; Rush et al., 2007; Ladouceur et al., 1999; Blaszczynski, 1998 in Productivity Commission, 1999; Tong & Chim, 2013; Pearce et al., 2007). Whilst the nature of the research could not determine whether this was the case for mobile, impulsivity behaviours found to be associated with mobile gambling due quick access could be detrimental to a subgroup of problem gamblers that possess impulsive traits. Additionally, non-problem gamblers that possess but were not previously affected by this trait due to no instant gambling platform could become problem gamblers. Also the continuousness of constant accessibility could relate or facilitate an obsessive addiction with gambling. Within the field of gambling research this was the first to look into mobile gambling as a separate entity to internet gambling as a whole and issues concerns over the growing number of mobile gamblers (PR Newswire, 2012; Epstein, 2013). The findings suggest that some accessibility factors are changed (e.g. social accessibility) or enhanced (e.g. proximity) which has affected mobile gambling behaviour with possible effects on problem gambling. Therefore this study adds value to the field of gambling research in demonstrating that mobile gambling should be considered a separate entity to overall internet gambling because consequential behavioural implications exists as a result.

**Recommended for future research**

This qualitative research has captured the essential aspects of how mobile gambling relates to accessibility factors identified in previous research and provided evidence that mobile gambling should be considered as a separate entity due to behavioural implications potentially leading to problem gambling. Future study should consist of a greater sample size of mobile gamblers with more accurate demographics represented together with more gamblers within each PGSI risk level. This could be used to determine which accessibility factors are more significant depending on the level of problem gambling risk, similar to Thomas et al (2009). Additionally, based on data collected within this study, particular attention should focus on problem gamblers with impulsivity traits to determine whether mobile gambling characteristics could potentially manipulate these traits and increase problem gambling. Moreover, due to the small sample size an increase in problem gambling could only be predicted and not confirmed. Therefore future quantitative studies could look into gauging whether mobile gamblers are more likely to be problem gamblers to establish increased validity that mobile gambling could increase problem gambling.

**References**


Appendix A: question structure for mobile gambling participants

Why would you choose to gamble on your mobile phone, rather than a land based venue such as a bookies or casino?

Why would you choose to gamble on your mobile phone, rather than online at a computer?

Which would you say are the most important reasons to you as to why you would gamble on a mobile phone, rather than online at a computer?

Would you say that mobile gambling makes gambling more accessible to you? Why?

How would you say that the closeness of your mobile phone makes it easier, more accessible and impacts your decision to bet on your mobile rather than (1) land based venue? (2) online using a computer?

How would you say that the large number of different companies to bet with on your mobile phone makes it easier, more accessible to bet and impacts decision to bet on your mobile rather than (1) land based venue? (2) online using a computer?

How would you say that the large number of betting opportunities per venue, i.e. per online betting company, makes it easier, more accessible and impacts your decision to bet on your mobile rather than (1) land based venue? (2) online using a computer?

How would you say that the 24hr accessibility of mobile betting makes it easier, more accessible and impacts your decision to bet on your mobile rather than (1) land based venue? (2) online using a computer?

How would you say that the conditions of entry for mobile gambling make it easier, more accessible and impact your decision to bet on your mobile rather than (1) land based venue? (2) online using a computer?

Would you say that it is gambling on your mobile phone is easier to use and therefore more accessible and impacts your decision to bet on your mobile rather than (1) land based venue? (2) online using a computer?

Would you say that mobile gambling is financially easier, more accessible and impacts your decision to bet on you mobile rather than (1) land based venue? (2) online using a computer?

Would you say that mobile gambling in terms of the low initial stake requirements makes it easier, more accessible and impacts your decision to bet on your mobile rather than (1) land based venue? (2) online using a computer?

How would you determine the social accessibility of gambling on your mobile in comparison with (1) land based venue? (2) online using a computer?

Are there any other factors that your mobile phone offers you over land based and online computer gambling that make it easier, more accessible or impact your decision that you have not already mentioned, or would like to clarify from previous answers?

What would you say are the key advantages to you of gambling on your mobile phone over gambling online at a computer?
What would you suggest are the key disadvantages to you of gambling on your mobile phone over gambling online at a computer?

How have your gambling habits changed since you started betting on your mobile phone?
Would you say you bet more frequently? Why?

Would you say you bet with more money? Why?

How does the environment you are in effect your mobile betting habits?

Are there any other factors that affect your gambling habits?

Do you think you bet more impulsively on your mobile phone than online at a computer? Why?

Do you think that any of these changes of habit could lead to further gambling problems for you?

Would you say betting on your mobile has had any negative effects on your life?

Would you say gambling on your mobile is as enjoyable as betting (1) land based venue? (2) online using a computer?

**Appendix B: question structure for problem gambling participant**

Could you please tell me about your experience within the problem gambling area, including your role within Gamblers Anonymous?

What factors do you think make gambling on a mobile phone more accessible to a person than gambling at a land based venue?

What factors do you think make gambling on a mobile phone more accessible to a person than gambling online at a computer?

In terms of accessibility how dangerous is it for problem gamblers that it can be done anywhere?

What would you say are the most significant trends that have changed, from your experience within Gamblers Anonymous and thinking about mobile gambling, since you started at Gamblers Anonymous?

Is integration of mobile gambling into daily life an issue for problem gambling?

Do you think that mobile gambling accessibility makes it easier to chase losses?

What gambling behavioural changes exist as a result of mobile gambling?

What affects do you think mobile gambling has on problem gambling?

What affects do you think advertising has on mobile gambling and facilitating problem gambling habits?

From your point of view do you think more regulations should be put in place for mobile gambling to protect problem gamblers?

Do you think that gambling companies should be more socially responsible?