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Conflict of Interest
The first, third and fourth authors have worked on projects funded by gambling industry organisations and governments, and acted as a consultant for gambling industry organisations by providing advice on responsible gambling practices and policies. The second author has no conflicts of interest to report.

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Abstract

Research suggests that Internet-based gambling includes risk factors that may increase gambling problems. The current study aimed to investigate subgroups of gamblers to identify the potential harms associated with various forms and modes of gambling. An online survey was completed by 4,594 respondents identified as Internet-only (IG), land-based only (LBGs), or mixed-mode (MMG) gamblers based on self-reported gambling behaviour in the last 12 months. Results showed significant socio-demographic differences between groups, with the LBGs being the oldest and MMGs the youngest. MMGs engaged in the greatest variety of gambling forms, had the highest average problem gambling severity scores, and were more likely to attribute problems to sports betting than the other groups. IGs were involved in the lowest number of divergent gambling activities, most likely to gamble frequently on sports and races, and attribute problems to these forms. Compared to the other groups, LBs had a higher proportion of problem gamblers than IGs and were most likely to play electronic gaming machines weekly, with this form of gambling contributing to problems at a substantially greater rate. This study confirms the importance of considering gambling involvement across subgroups of Internet or land-based gamblers. There is a need to consider the interaction between forms and modes of gambling to advance our understanding of the potential risk of mode of gambling to contribute to problems.

Key words: Internet gambling, disordered gambling, problem gambling, predictors, risk factors, sub-groups

Introduction & literature review

Approximately 65-90% of adults worldwide report gambling at some level on some form each year (Abbott, Volberg, & Rönnberg, 2004; Gainsbury et al., in press a; Petry, Stinson, & Grant, 2005; Wardle, Moody, Griffiths, Orford, & Volberg, 2011a; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2002). Epidemiological research estimates that between 0.2% and 2.3% of adults in the general population meet criteria for problem or pathological gambling (Fong, Fong, & Li, 2011; Gainsbury et al., in press a; Petry, 2005; Shaffer, LaBrie, LaPlante, Nelson, & Stanton, 2004; Wardle et al., 20011b), a condition now described as 'gambling disorder' (APA, 2013). Problem gambling is a more general term that incorporates sub-clinical conditions and as such is appropriate for use in relation to harm minimisation policies (Neal, Delfabbro, & O'Neil, 2005). The Australian Productivity Commission (2010)

estimated that the annual cost of problem gambling to the community was AU$4.7 billion leading to their conclusion that policy measures with even modest effectiveness in reducing harm will often be worthwhile.

Problem gambling develops through the interaction of a multiplicity of social, psychological and biological factors (Blaszczynski & Nower, 2002; Hodgins, Stea, & Grant, 2011; Reith, 2006). Socio-demographic factors that enhance risk include lower socio-economic status, substance use, psychological distress, and being under 35 years of age (particularly for males) (Gainsbury et al., in press a; Reith, 2006; Shaffer & Korn, 2002; Volberg, 1994). Some forms of gambling are known to have a greater propensity to be associated with harms. Population surveys and research on treatment seeking gamblers indicate that electronic gaming machines (EGMs) have a high association with gambling problems (Abbott, 2006; Dowling, Smith, & Thomas, 2005; Gainsbury et al., in press a; Wardle et al., 20011b). Characteristics of EGMs that are argued to lead to harms include capacity for rapid play, high event frequency, and intermittent rewards of various size (Dowling et al., 2005).

Other factors relate to aspects of the gambling environment, for example, easy access to additional funds, ability for uninterrupted play, an immersive interface or game experience, access to multiple gambling activities, and alcohol (Reith, 2006; Finlay, Marmurek, Kanetkar, & Londerville, 2006). Gambling environments have evolved over recent years and Internet gambling's popularity is linked to its accessibility and capacity to place bets via multiple devices (computers, mobiles, tablets, other wireless devices) from almost any location, at any time (Gainsbury, Wood, Russell, Hing, & Blaszczynski, 2012). Use of online modes makes gambling more accessible, and enables faster and more continuous gambling than generally available in land-based venues (Hing et al., in press). Research has pointed to a putative relationship between Internet gambling and problems on the basis of higher rates of gambling problems found in samples of Internet as compared to non-Internet gamblers (Gainsbury et al., in press a, b, c; Griffiths, Wardle, Orford, Sproston, & Erens, 2009; Wood & Williams, 2011). However, when rates of overall gambling involvement are controlled for, participating in Internet gambling is not a significant risk factor for gambling problems (Gainsbury et al., in press a; Holtgraves, 2009; LaPlante, Nelson, LaBrie, & Shaffer, 2009; Philander & MacKay, in press; Wardle et al., 2011a; Wood & Williams, 2011). A study of 15,006 gamblers found that problem gambling rates were three times higher among Internet than non-Internet gamblers (Gainsbury et al., in press a). However, more than half of Internet problem and at-risk gamblers indicated that their problems were related to land-based gambling forms, specifically EGMs, and just over half had problems before ever gambled online.

Although Internet gambling in itself is not necessarily a causal factor, research suggests that problem Internet gamblers differ significantly in some respects from land-based problem gamblers. A study of 6,682 gamblers found problem Internet gamblers were more likely to bet on sports and on a greater number of forms than problem land-based gamblers (Gainsbury, Russell, Hing, Wood, & Blaszczynski, 2013). Land-based problem gamblers were more likely to gamble on EGMs, nominating this form as contributing to problems. However, this study defined an Internet gambler as anyone who had gambled on the Internet at least once in the past year, and not exclusive of land-based gambling, an approach consistent with previous studies of Internet gamblers (Griffiths et al., 2009; Olason et al., 2011; Wood & Williams, 2011). As overall involvement in gambling on multiple forms appears to be predictive of gambling problems, it is important to consider the impact of modes of gambling more specifically on harms.

The majority of UK Internet gamblers use the Internet for single gambling activities and have few gambling problems (Lloyd et al., 2010). In contrast, multi-activity gamblers were more likely to be male, single, unemployed with below-average income, and most likely to experience gambling problems. Wardle et al. (2011a) found similar socio-demographic differences between sub-groups of gamblers. The highest problem gambling prevalence was in mixed mode gamblers who had the highest levels of gambling involvement; online only gamblers had the lowest levels of problems, most likely due to their tendency to only purchase lottery tickets.

From a methodological perspective, a number of studies purporting to investigate characteristics of Internet gamblers and/or to compare Internet and land-based gamblers classify those who use both modes as Internet gamblers thus preventing clear conclusions (Griffiths & Barnes, 2008; Ladd & Petry, 2002; Kairouz, Paradis, & Nadeau, 2012: McCormack & Griffiths, 2011). This research aimed to advance our understanding of gambling subgroups by gathering insights into the relationship between different forms and modes of gambling and gambling problems. Gamblers who engaged in both Internet and land-based modes were hypothesized to be more involved gamblers and more likely to experience gambling problems than those exclusively using Internet or land-based modes.

Method

Sampling

A total of 4,594 respondents completed an online survey. Respondents were recruited through advertisements placed on various websites. The majority, 53.9% of respondents were recruited through online wagering/lottery sites, 17.6% via Facebook advertisements and 6.3% via Google advertisements. Survey completion rate was

68.7% and mean time to complete the entire survey was 23.1 minutes. The survey was completed by Australian gamblers in 2012. This study had approval from two University Human Research Ethics Committees and all participants gave informed consent.

Survey

The survey contained nine sections, although only the relevant sections are described below:

1) Gambling behaviour. This section contained questions about gambling participation, frequency and expenditure on ten commercial forms of gambling (see Table 2 for a list of the forms involved), and whether the participant had gambled online. Participants who had engaged in at least one form of interactive gambling were asked to indicate the extent to which they used interactive gambling as compared to land-based gambling.
2) Demographics. See Table 1 for a list of analysed demographic variables.
3) Problem Gambling Severity Index (PGSI, Ferris & Wynne, 2001). Questions assessed the frequency of negative consequences from gambling and symptoms of problem gambling over the past 12 months. Responses ranged from "Never" = (0) to "Almost always" = (3). Total score was the sum of the numeric values of responses given. Possible score ranges from 0-27, with higher scores indicating greater problem severity. Cut-off scores adhered to those used in original validation of the PGSI: 0 = non-problem gambler, 1-2 = low risk gambler, 3-7 = moderate risk gambler and 8-27 = problem gambler. Cronbach's alpha was 0.93, indicating good reliability.

Definition of Internet and non-Internet gamblers

Respondents were asked "In terms of your gambling over the last 12 months, which of the following statements is most accurate for you?" with the following response options: "I have only gambled online in the last 12 months", "I have mostly gambled online, but I have sometimes gambled offline", "About half of my gambling has been online and half has been offline", "I have mostly gambled offline, but I have sometimes gambled online" and "I have never gambled on the Internet in the last 12 months". The 608 respondents who responded they only gambled online were classified as "Internet gamblers" (IGs), 1,416 respondents who only gambled offline were classified as "Land-based gamblers" (LBGs) and 2,570 respondents who reported doing both over the last 12 months were classified as "Mixed-mode gamblers" (MMGs).

Statistical analyses

All analyses compared the three groups described above. Where dependent variables were continuous, one-way ANOVAs with Tukey pairwise comparisons were used to further understand differences. Chi-square analyses with Bonferroni adjusted z-tests were used in the case of categorical dependent variables and group differences are indicated in tables using subscripts.

Results

Demographics

IGs and MMGs did not differ significantly in terms of gender and were largely dominated by males (86.2% and 85.8% respectively). In contrast, LBGs had a significantly higher proportion of females than the other groups, although the majority (59.6%) were male.

The age bracket comparisons in Table 1 indicate that LBGs tended to be older than MMGs or IGs. However, the mean age for IGs (M=44.34; *SD*=14.78) was similar for LBGs (M=44.78, *SD*=15.41) and MMGs were significantly younger (M=40.16, *SD*=13.93), ($F(2,4591)=54.22$, $p<0.001$). IGs were significantly more likely to have a postgraduate qualification compared to MMGs and LBGs. MMGs were more likely to be employed full-time and less likely to be retired compared to both groups. IGs were significantly more likely to be employed as professionals compared to both groups. A post-hoc test indicated that IGs were significantly more likely to live in major metropolitan cities compared to both groups. MMGs were more likely to live in group households compared to the other groups. MMGs were significantly more likely to only have a mobile phone compared to IGs and were significantly less likely to only have a landline compared to both groups.

IGs were significantly more likely to classify themselves as professional gamblers compared to both groups, and a significantly larger proportion of MMGs classified themselves as professional gamblers compared to LBGs. IGs and MMGs had a significantly higher proportion of semi-professional gamblers compared to LBGs. A significantly higher proportion of MMGs was born in Australia and only spoke English at home compared to IGs and LBGs. A significantly higher proportion of IGs reported primarily speaking English at home compared to LBGs.

Insert table 1 about here

Gambling behaviour

A significantly higher proportion of MMGs engaged in every form of gambling surveyed apart from bingo and lottery/lotto/pools compared to the other groups (Table 2). For these two forms, both MMGs and LBGs were significantly higher than IGs. MMGs engaged in a greater average number of gambling activities

(M=4.73; *SD*=1.90) compared to LBGs M=3.35; *SD*=1.87), which was significantly higher than the IGs (M=2.87; *SD*=1.62), $F(2,4591)=398.62$, $p<0.001$.

LBGs gambled less frequently on sports betting, horse and dog racing and poker compared to the other groups (Table 3). IGs were more likely to gamble at least weekly on sports compared to MMGs. MMGs gambled significantly less frequently on Keno compared to the other groups. LBGs gambled significantly more frequently on EGMs compared to both other groups. No significant differences were observed between groups in terms of frequency of lottery/lotto/pools betting, bingo, or casino table games.

Insert tables 2 & 3 about here

Problem gambling

A significantly higher proportion of LBGs were classified as non-problem gamblers compared to the other groups (see Table 4). A significantly higher proportion of IGs were classified as non-problem gamblers compared to MMGs. A significantly lower proportion of LBGs were classified as low-risk and moderate-risk gamblers compared to the other groups, while a significantly lower proportion of IGs were classified as problem gamblers compared to both groups. The proportion of MMGs and LBGs classified as problem gamblers did not differ significantly. The mean total PGSI scores for MMGs was significantly higher (M=3.62; *SD*=4.90 than the mean for both IGs (M=2.39; *SD*=3.92) and LBGs (M=2.82; *SD*=5.13), $F(2,4591)=22.23$, $p<0.001$. The difference between IG and LBG gamblers was non-significant.

Insert table 4 about here

IGs were more likely to report that sports betting made the largest contribution to their gambling problems compared to both groups and other forms (e.g.s bingo, Keno, games of skill) compared to MMGs (Table 5). MMGs were significantly more likely to state that sports betting contributed to their problems compared to LBGs, but less likely to cite instant scratch tickets and lotteries/lotto/pool compared to both groups. IGs and MMGs were both significantly more likely to report horse or dog racing contributed to problems than LBGs. LBGs were much more likely to state EGMs contributed to their problems compared to both groups, although MMGs were more likely to cite EGMs compared to IGs.

Insert table 5 about here

Discussion

Our hypothesis that MMGs would have greater levels of involvement in gambling than IGs or LBGs was partially supported. MMGs were more likely to engage in almost all forms of gambling and participated in a greater number of activities on average, but not more frequently in any form compared to the other groups. Nonetheless, MMGs had the highest average PGSI scores and two-thirds of this group reported experiencing at least some gambling-related problems. Both MMGs and LBGs had significantly higher rates of problem gambling than IG gamblers. MMGs were more likely to attribute their problems to sports betting as compared to LBGs, but less likely to do so compared to IGs. However, race wagering and EGMs accounted for the largest proportion of problems amongst MMGs.

A significantly higher proportion of LBGs were classified as problem gamblers compared to IGs. Over half of the LBGs attributed their problems to EGMs, more than double the MMGs and six times higher than the IGs. Despite this, MMGs were as likely to play EGMs as LBGs, although LBGs were more likely to gamble weekly on EGMs than other groups. LBGs had substantially lower rates of participation in sports and race wagering than the other groups and were more likely to participate in these forms less than monthly, with lower rates of weekly betting.

IGs had higher rates of low and moderate risk gamblers than LBGs. IGs participated in the fewest forms of gambling on average and had the lowest rates of participation in instant scratch tickets, lottery products, bingo, keno, casino games, skill game betting, and EGM play. IGs had the lowest frequency of participation in EGM games, with approximately two-thirds of those who played EGMs likely to do so less than monthly. IGs had the highest rates of weekly sports betting compared to the other groups, and higher rates of weekly race betting compared to LBGs. This is consistent with sports and race betting being the most likely forms of gambling for IGs to attribute problems to, accounting for about half of all reported problems.

Results confirm that gamblers are a heterogeneous group and that subgroups can be identified based on preferred mode of gambling. Consistent with previous research, overall involvement did appear to be related to problem gambling (Gainsbury et al., in press a; Holtgraves, 2009; LaPlante et al., 2009; Philander & MacKay, in press), as shown by MMGs having the highest participation rates in multiple activities and the highest average PGSI scores. This is consistent with the analysis of UK gamblers, which found that online-only gamblers who only played a few forms of gambling were less likely to experience gambling problems (Lloyd et al., 2010). These results suggest that participating in multiple gambling activities may be a risk factor for gambling problems which is supported by IGs engaging in the lowest number of different activities and having the lowest problem gambling rates.

The results suggest that some forms of gambling are more likely to be related to gambling problems than others. LBGs had similarly high proportions of problem gambling to MMGs and were overwhelmingly more likely to attribute problems to EGMs. Over half of LBGs with problems attributed these to EGMs, which was the strongest relationship between gambling problems and a single mode reported across the sample. This is consistent with previous research suggesting that EGM play is associated with gambling problems (Abbott, 2006; Dowling et al. 2005; Gainsbury et al., in press a; Gainsbury et al., 2013; Wardle et al., 20011b). As LBGs were the most likely to play EGMs weekly, it is possible that weekly participation may be a risk factor for gambling problems, however, further research is needed to verify this hypothesis. EGMs also appear to be a specific risk in their land-based form. EGMs are available online, however they are not provided by regulated sites in Australia and participation in online EGMs appears to be relatively low (Gainsbury et al., in press a; Productivity Commission, 2010; Queensland Government, 2012; Sproston, Hing, & Palankay, 2012).

The most popular forms of Internet gambling in Australia are sports and race wagering (Gainsbury et al., in press a, b, c; Productivity Commission, 2010; Queensland Government, 2012; Sproston et al., 2012). Participation in sports and race betting in its online mode appears to be related to problems as IGs and MMGs had substantially higher rates of problems related to these forms of gambling than LBGs. This is consistent with research showing that problem Internet gamblers were more likely to bet on sports, although only MMGs were more likely to gamble on multiple forms (Gainsbury et al., 2013). LBGs were less likely to frequently bet on sports and races, suggesting that the availability and convenience of betting on these events using interactive modes facilitates more frequent betting and related problems.

Differences in subgroups of gamblers extend beyond participation and related problems and socio-demographic factors suggest that the various modes of gambling are attractive to different groups of gamblers. LBGs had a greater proportion of females, which might be accounted for by the greater number of regular EGM players in this group, as women may be more likely to use this gambling form (ANU Centre for Gambling Research, 2004). The gender difference does not appear to be due to differences in lottery-based gambling, as there were no differences in participation in these activities between groups. These findings differ from UK research which found a greater proportion of females in the online only subgroup (Wardle et al., 2011a). This may be explained by the legal availability of online bingo and casino games in the UK, which are more likely to be played by women as compared to betting (Wardle et al., 2011a). In contrast, sports and race bettors are more likely to be male (Queensland Government, 2012; South Australian Centre for Economic Studies,

2008; Sproston et al., 2012), which is consistent with our findings that MMGs and IGs have a greater proportion of males.

Age comparisons between the groups suggest that MMGs were significantly younger than IGs and LBGs and LBGs appear to be older than those who used online forms. This is consistent with previous findings that Internet gamblers are younger than land-based gamblers (Gainsbury et al., 2012; Griffiths et al., 2009; Wardle et al., 2011a; Wood & Williams, 2011), and that mixed gamblers are younger than other gamblers (Wardle et al., 2011a). Being a young male is a risk factor for problem gambling based on prevalence surveys (Gainsbury et al., in press a; Lloyd et al., 2010; Reith, 2006; Shaffer & Korn, 2002; Volberg, 1994), consistent with current findings given that MMGs had highest rates of gambling problems. MMGs were also more likely to live in a group household than other gamblers, and have a mobile phone but not a landline, but were less likely to be married. These factors suggest that this is a less settled population, although they were more likely to be in full-time employment. Considered together, this group may include a younger population with some disposable income, but fewer obligations and expenses than the other groups. This may facilitate gambling as a recreational activity, which for some leads to excessive expenditure and related problems.

IGs had some specific socio-demographic differences from the other groups. This group had higher levels of education, which is consistent with previous literature (Griffiths et al., 2009; Wood & Williams, 2011) and suggests that comfort with Internet technology is related to education levels. This group was also more likely to work in professional occupations, which may be related to higher income levels, as found in other samples of Internet gamblers as compared to land-based gamblers (Gainsbury et al., 2012). IGs were more likely to live in major cities, suggesting that using the Internet to gamble is not due to unavailability of land-based venues, but a preference for this mode of access, or that people living in cities are more comfortable using the Internet for gambling. This group was also most likely to classify themselves as professional gamblers, suggesting that this mode of access allows some gamblers to attempt to engage in this activity in a profitable manner. This is likely related to the greater proportion of sports and race wagerers in this group as online sites tend to have higher rates of return and allow the ability to search for a greater range of odds on a larger number of events than land-based operators.

Limitations

The participants were self-selected and data could not be weighted to be representative of the population. The online survey format may have attracted different types of people and is unlikely to have included non-Internet users. Consequentially, the LBGs may have been more similar to IGs and MMGs than if a

non-Internet sample and mode of survey administration were included. Future research should use a variety of recruitment and survey methods to enable a comparison of a more varied group of gamblers. The analysis was based on self-reported gambling behaviour, which is limited in its accuracy; however, this limitation is difficult to overcome without comprehensive player account data, which are not generally available from land-based gambling venues (Gainsbury, 2011).

Conclusions

The current results suggest there is an interaction between overall participation in various forms of gambling with mode of access. Land-based gamblers were most likely to nominate EGMs to be associated with gambling problems, while sports and race betting appears to be related to problems for online gamblers. Gamblers who used both online and land-based forms attribute their problems to both EGMs and race betting, with sports betting also causing problems for those who use both modes of access. Socio-demographic differences between the groups suggest that various modes of gambling are attractive to different population cohorts. This study confirms the importance of considering subgroups of gamblers as involvement in gambling and gambling problems differed significantly between participants based on their use of Internet or land-based gambling.

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Table 1 – Demographic comparison of Internet-only gamblers (IGs), mixed-mode gamblers (MMGs) and land-based gamblers (LBGs)

Factor	Levels	IGs		MMGs		LBGs	
		N	%	N	%	N	%
Gender	Female	84a	13.8	366a	14.2	572b	40.4
	Male	524a	86.2	2,204a	85.8	844b	59.6
χ^2 (2, *N*=4,594)=389.84, *p*<0.001, Φ=0.29							
Age	18 to 19	7	1.2	66	2.6	39	2.8
	20 to 24	49a	8.1	302b	11.8	151a, b	10.7
	25 to 29	66a	10.9	317a	12.3	107b	7.6
	30 to 34	77a	12.7	359a	14.0	123b	8.7
	35 to 39	45a	7.4	309b	12.0	112a	7.9
	40 to 44	64	10.5	287	11.2	137	9.7
	45 to 49	76a	12.5	236b	9.2	147a, b	10.4
	50 to 54	57a, b	9.4	246b	9.6	183a	12.9
	55 to 59	49a, b	8.1	188b	7.3	160a	11.3
	60 to 64	58a	9.5	123b	4.8	110a	7.8
	65 +	60a	9.9	137b	5.3	147a	10.4
χ^2 (20, *N*=4,594)=168.16, *p*<0.001, Φ_C=0.14							
Marital status	Married	308a	50.7	1,045b	40.7	654a	46.2
	Living with partner/de facto	78a	12.8	467b	18.2	201a	14.2
	Widowed	8	1.3	32	1.2	22	1.6
	Divorced or separated	46a	7.6	215a	8.4	164b	11.6
	Never married	168a, b	27.6	811b	31.6	375a	26.5
χ^2 (8, *N*=4,594)=49.87, *p*<0.001, Φ_C=0.07							
Highest educational qualification	Postgraduate	110a	18.1	289b	11.2	185b	13.1
	University or college degree	164	27.0	671	26.1	326	23.0
	Trade cert, diploma, TAFE	131	21.5	648	25.2	373	26.3
	Year 12	124	20.4	597	23.2	311	22.0
	Less than year 12	79	13.0	365	14.2	221	15.6
χ^2 (8, *N*=4,594)=30.82, *p*<0.001, Φ_C=0.06							

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups.

Table 1 (cont)

Factor	Levels	IGs		MMGs		LBGs	
		N	%	N	%	N	%
Employment status	Work full-time	308a	50.7	1,520b	59.1	739a	52.2
	Work part-time or casual	65a,b	10.7	264b	10.3	185a	13.1
	Self-employed	69a	11.3	234a	9.1	76b	5.4
	Unemployed and looking for work	21	3.5	72	2.8	48	3.4
	Full-time student	35	5.8	188	7.3	107	7.6
	Full-time home duties	11a,b	1.8	28b	1.1	45a	3.2
	Retired	76a	12.5	147b	5.7	136a	9.6
	Sick or disability pension	14	2.3	71	2.8	55	3.9
	Other	9	1.5	46	1.8	25	1.8
χ^2 (16, *N*=4,594)=109.30, *p*<0.001, Φ_C=0.11							
Occupation	Manager	79a, b	17.5	460b	22.3	184a	18.0
	Professional	163a	36.1	560b	27.1	280b	27.3
	Technician or Trade worker	44a, b	9.8	263b	12.7	97a	9.5
	Community or personal service worker	6a	1.3	62a	3.0	63b	6.1
	Clerical or administrative worker	40a	8.9	200a	9.7	147b	14.3
	Sales worker	25	5.5	112	5.4	56	5.5
	Machinery operator and driver	20	4.4	83	4.0	39	3.8
	Labourer	24	5.3	93	4.5	39	3.8
	Other	50	11.1	230	11.1	120	11.7
χ^2 (16, *N*=3,539)=71.22, *p*<0.001, Φ_C=0.10							
Location of residence	Major metropolitan city	417a	68.6	1613b	62.8	892b	63.0
	Major regional city	97	16.0	489	19.0	247	17.4
	Rural town/location	83	13.7	408	15.9	241	17.0
	Remote town/location	11	1.8	60	2.3	36	2.5
n.s.							

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups.

Table 1 (cont)

Factor	Levels	IGs		MMGs		LBGs	
		N	%	N	%	N	%
Household	Single person	98	16.1	388	15.1	227	16.0
	One parent family with children	28	4.6	140	5.4	92	6.5
	Couple with children	252	41.4	1024	39.8	513	36.2
	Couple with no children	141a, b	23.2	528b	20.5	370a	26.1
	Group household	65a	10.7	385b	15.0	154a	10.9
	Other	24	3.9	105	4.1	60	4.2
χ^2 (10, *N*=4,594)=35.73, *p*<0.001, Φ_C=0.06							
Mobile/land line	Mobile phone only	125a	20.6	698b	27.2	338a,b	23.9
	Landline only	20a	3.3	45b	1.8	54a	3.8
	Both mobile phone and landline	463a	76.2	1827b	71.1	1,024a, b	72.3
χ^2 (4, *N*=4,594)=28.14, *p*<0.001, Φ_C=0.06							
Professional gambler?	Professional gambler	19a	3.1	34b	1.3	4c	0.3
	Semi-professional	69a	11.3	215a	8.4	27b	1.9
	Amateur/recreational gambler	520a	85.5	2321b	90.3	1385c	97.8
χ^2 (4, *N*=4,594)=114.75, *p*<0.001, Φ_C=0.11							
ATSI status	Non-ATSI	597	99.2	2,496	98.0	1,373	98.4
	ATSI	5	0.8	50	2.0	23	1.6
n.s.							

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups.

Table 1 (cont) –

Factor	Levels	IGs		MMGs		LBGs	
		N	%	N	%	N	%
Country of birth	Australia	451a	74.2	2135b	83.1	1053a	74.4
	Not Australia	157a	25.8	435b	16.9	363a	25.6
χ^2 (2, *N*=4,594)=52.84, *p*<0.001, Φ=0.11							
Language other than English at home	No, English only	532a,b	87.5	2322b	90.4	1233a	87.1
	Yes	76a,b	12.5	248b	9.6	183a	12.9
χ^2 (4, *N*=4,594)=11.50, *p*=0.003, Φ=0.05							

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups.

Table 2 – Participation in gambling forms among Internet-only gamblers (IGs), mixed-mode gamblers (MMGs) and land-based gamblers (LBGs)

Form	IGs		MMGs		LBGs		Inferential statistics
	N	%	N	%	N	%	
Instant scratch tickets	198a	32.6	1440b	56.0	817b	57.7	χ^2 (2, *N*=4,594)=123.73, *p*<0.001, Φ=0.16
Lottery, lotto, pools	444a	73.0	2158b	84.0	1203b	85.0	χ^2 (2, *N*=4,594)=47.93, *p*<0.001, Φ=0.10
Sports betting	394a	64.8	1979b	77.0	433c	30.6	χ^2 (2, *N*=4,594)=831.81, *p*<0.001, Φ=0.43
Horse or dog race betting	335a	55.1	1998b	77.7	529c	37.4	χ^2 (2, *N*=4,594)=649.41, *p*<0.001, Φ=0.38
Bingo	17a	2.8	150b	5.8	98b	6.9	χ^2 (2, *N*=4,594)=13.36, *p*=0.001, Φ=0.05
Keno	57a	9.4	932b	36.3	370c	26.1	χ^2 (2, *N*=4,594)=182.37, *p*<0.001, Φ=0.20
Poker	69a	11.3	722b	28.1	124a	8.8	χ^2 (2, *N*=4,594)=246.27, *p*<0.001, Φ=0.23
Casino table games	78a	12.8	1053b	41.0	305c	21.5	χ^2 (2, *N*=4,594)=271.22, *p*<0.001, Φ=0.24
Betting on games of skill	24a	3.9	231b	9.0	87a	6.1	χ^2 (2, *N*=4,594)=23.16, *p*<0.001, Φ=0.07
Electronic gaming machines	129a	21.2	1499b	58.3	772b	54.5	χ^2 (2, *N*=4,594)=275.65, *p*<0.001, Φ=0.25

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups.

Table 3 – Frequency of use of each form of gambling among Internet-only gamblers (IGs), mixed-mode gamblers (MMGs) and land-based gamblers (LBGs)

Form and frequency	IGs		MMGs		LBGs	
	N	%	N	%	N	%
Instant scratch tickets						
Less than monthly	130	65.7	921	64.0	482	59.0
Monthly	46	23.2	340	23.6	200	24.5
Weekly	22a, b	11.1	179b	12.4	135a	16.5
χ^2 (4, *N*=2,455)=10.04, *p*=0.040, Φ_C=0.05						
Lottery, lotto, pools						
Less than monthly	128	28.8	697	32.3	373	31.0
Monthly	95	21.4	514	23.8	268	22.3
Weekly	221	49.8	947	43.9	562	46.7
n.s.						
Sports betting						
Less than monthly	68a	17.3	418a	21.1	226b	52.2
Monthly	65	16.5	379	19.2	92	21.2
Weekly	261a	66.2	1182b	59.7	115c	26.6
χ^2 (4, *N*=2,806)=229.40, *p*<0.001, Φ_C=0.20						
Horse or dog race betting						
Less than monthly	88a	26.3	481a	24.1	302b	57.1
Monthly	59	17.6	403	20.2	101	19.1
Weekly	188a	56.1	1114a	55.8	126b	23.8
χ^2 (4, *N*=2,862)=241.48, *p*<0.001, Φ_C=0.21						
Bingo						
Less than monthly	8	47.1	95	63.3	63	64.3
Monthly	4	23.5	26	17.3	12	12.2
Weekly	5	29.4	29	19.3	23	23.5
n.s.						
Keno						
Less than monthly	39a, b	68.4	632b	67.8	219a	59.2
Monthly	10	17.5	213	22.9	96	25.9
Weekly	8a, b	14.0	87b	9.3	55a	14.9
χ^2 (4, *N*=1,359)=12.88, *p*=0.012, Φ_C=0.07						
Poker						
Less than monthly	25a	36.2	323a	44.7	78b	62.9
Monthly	15	21.7	179	24.8	23	18.5
Weekly	29a	42.0	220a	30.5	23b	18.5
χ^2 (4, *N*=915)=19.93, *p*=0.001, Φ_C=0.10						
Casino table games						
Less than monthly	60	76.9	815	77.4	229	75.1
Monthly	10	12.8	171	16.2	49	16.1
Weekly	8	10.3	67	6.4	27	8.9
n.s.						

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups.

Table 3 (cont.)

Form and frequency	IGs		MMGs		LBGs	
	N	%	N	%	N	%
Betting on games of skill						
Less than monthly	14	58.3	119	51.5	53	60.9
Monthly	1	4.2	60	26.0	20	23.0
Weekly	9	37.5	52	22.5	14	16.1
χ^2 (4, N=342)=9.53, p=0.049, Φ_C=0.12, although post-hoc tests revealed no significant differences between the groups						
Electronic gaming machines						
Less than monthly	81a	62.8	752b	50.2	380b	49.2
Monthly	30a, b	23.3	409b	27.3	174a	22.5
Weekly	18a	14.0	338a	22.5	218b	28.2
χ^2 (4, N=2,400)=21.47, p<0.001, Φ_C=0.07						

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups.

Table 4 – Problem gambling severity index categories among Internet-only gamblers (IGs), mixed-mode gamblers (MMGs) and land-based gamblers (LBGs)

PGSI Category	IGs		MMGs		LBGs	
	N	%	N	%	N	%
Non-problem gambler	280a	46.1	825b	32.1	756c	53.4
Low risk gambler	144a	23.7	656a	25.5	265b	18.7
Moderate risk gambler	134a	22.0	685a	26.7	206b	14.5
Problem gambler	50a	8.2	404b	15.7	189b	13.3
χ^2 (6, N=4,594)=206.15, p<0.001, Φ_C=0.15						

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups.

Table 5 – Gambling form that has contributed most to gambling-related problems among Internet-only gamblers (IGs), mixed-mode gamblers (MMGs) and land-based gamblers (LBGs)

.

Form	IGs		MMGs		LBGs	
	N	%	N	%	N	%
Instant scratchies/lotteries/lotto/pools	15a, b	8.2	45b	4.1	30a	7.6
Sports betting	46a	25.0	146b	13.4	9c	2.3
Horse/dog racing	44a	23.9	328a	30.1	27b	6.8
Poker or casino table games	14	7.6	92	8.4	35	8.9
Electronic gaming machines	16a	8.7	291b	26.7	214c	54.2
Other	5a	2.7	8b	0.7	6a,b	1.5
I have not experienced problems from my gambling	44a	23.9	179b	16.4	74a, b	18.7
χ^2 (12, N=1,668)=248.72, p<0.001, Φ_C=0.27						

Note: Subscripts indicate between-group differences. Groups with the same subscripts do not differ significantly. A group with two subscripts (a,b) does not differ significantly from either of the other groups. If no subscripts are present, then there are no significant differences between the groups. This question was only asked of those with a PGSI of at least 3.

Note the significant differences for the last response – a significantly higher proportion of IGs say that they have not experienced problems related to gambling compared to those who do both online and offline gambling. LBs are in the middle.