

Australian teens and poker

Gambling prevalence, influences and implications

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This study was funded through the Community Support Fund as part of round two of the Grants for Gambling Research program.

This research investigates gambling prevalence and poker gambling among Victorian teenagers based on an online survey of 2,000 respondents. It reports teenagers' motivations, role of impulsivity and sensation seeking, age, and gender on problem gambling risk and poker gambling activities. Co-morbidity statistics relating gambling with use of alcohol, tobacco, and recreational drugs are also reported

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Australian Teens and Poker

Gambling Prevalence, Influences and Implications

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EXECUTIVE SUMMARY

This project was funded under Tender 176/06 by the Office of Gaming and Racing, Government of Victoria Department of Justice. It was conducted against the backdrop of several media reports asserting that the contemporary poker craze is luring teenagers to gamble and that televised poker tournaments and movies such as Casino Royale were instrumental in creating a new cadre of youth gamblers in Australia. Prior to this research, there were no reliable data whatsoever on teenage poker gambling. This research seeks to fill this void by providing a comprehensive picture of poker gambling among Victorian teenagers.

STUDY OBJECTIVES

The main purposes of this research were to gauge the proportion of Australian teenagers who gamble on poker and to ascertain the motivations and personality correlates of poker gamblers. Further, we were interested in knowing what attracts teenagers to poker gambling, frequency of poker gambling, venues used for playing poker, and the problem-gambling risk associated with poker players.

To contrast poker players with other teenage gamblers and non-gamblers, data from non-poker-playing gamblers and non-gamblers on personality and demographics were collected. We also sought to uncover co-morbidity between gambling and the consumption of alcohol, tobacco, and recreational drugs. Finally, we wanted to assess differences in gambling-related cognitions between poker players and non-poker players.

METHODOLOGY

Data for this project were collected using two focus groups in Queensland and a Web survey of 2,000 youth, aged 15-19, from the state of Victoria. Initially, we conducted two focus groups, comprising a total of twelve male and thirteen female students, aged 17-19, at Bond University. Participant opinions and preliminary information on teenagers' gambling behaviours, gambling motivations, poker playing patterns, and time and money spent on poker were assessed

through the focus groups. Insights generated from the focus groups formed the key inputs for the 10-page survey administered to respondents on the Internet.

The sample was provided by AussieThink Panels, owned and operated by Deloosh Pty Ltd. To participate in AussieThink online surveys, Australian consumers sign up in return for points. The Internet and social media advertising are used to recruit into the panel. If a member is selected to participate in a survey, the company sends out an invitation email. Participation in any survey is voluntary.

The questionnaire sought responses to people's level of impulsive sensation seeking, their involvement with alcohol and other drugs, poker and overall gambling participation, gambling-related cognitions, and demographic details. Wherever possible, established scales from previous research were used for data collection. Prior to being administered on the Web, the survey instrument was pre-tested on twenty-five undergraduate students at Bond University. All 2,000 surveys were usable for data analysis.

KEY FINDINGS

The report presents an exhaustive analysis of poker as well as other forms of gambling among young people in Victoria. A synopsis of the substantive findings is offered here.

- ❖ 1,094 individuals, or 54.7 percent of the 15-19 year-old surveyed for this research had gambled at least once in their life.
- ❖ 450 teenagers (22.5 percent of the sample) had gambled on poker at least once in their life.
- ❖ Around one in six teenagers surveyed had played poker for money in the 12 months preceding the date of the survey.
- ❖ Of those who had played poker for money in the past 12 months, 56.8 percent were men, and 43.2 percent were women. This challenges the commonly held stereotype of poker as a predominantly masculine pastime.
- ❖ Only 4 percent of all teenagers had ever participated in any poker tournaments across Australia.
- ❖ Only 36 teenagers reported belonging to a poker club. However, the problem-gambling risk associated with this group was disproportionately high.
- ❖ Over 90 percent of poker gamblers play poker for money less than ten times a year.

- ❖ Entertainment and social aspects are more important than money as motivations for gambling on poker. The five most important reasons for poker gambling were for fun, to be with friends, for excitement, to pass the time, and to alleviate boredom.
- ❖ The most common venues used by teenagers for poker gambling were at their own or friends' home, the casino, at school, and on the Internet.
- ❖ Contrary to many media stories, watching poker tournaments on television is not very popular among Australian teenagers. Less than one in five respondents admitted to watching poker on TV.
- ❖ The portrayal of poker on TV and in the general media does not have any clear demonstrable effect on teenagers' gambling on poker.
- ❖ The risk for problem-gambling is more than three times as high for those who have played poker for money as it is for gamblers who have never played poker. Almost 30 percent of all gamblers who have played poker fall in the moderate-risk gambling or problem-gambling category.
- ❖ More than one in four teenagers said that their parent/guardian was unaware of their poker gambling, and another one in five said that their parent or guardian approved of their poker gambling.
- ❖ There is no conclusive evidence to suggest that the popularity of poker has created a new breed of gamblers.
- ❖ Lottery is the most popular form of gambling among teenagers; more than one out of three teenagers has gambled on lottery in the past 12 months.
- ❖ Besides lottery, male teenagers like to play cards, bet on horses or dogs, bet on sports, or play pool or other sports for money. Female teenagers prefer to gamble on lottery-type games, scratch-it tickets, card games on the Internet, and slot machines.
- ❖ The overall prevalence of problem gambling in the sample was 5.9 percent which is higher than that reported in earlier studies for similar age groups in Australia. Among problem gamblers, the ratio of males to females was 1.6: 1, somewhat lower than figures reported in previous studies.
- ❖ About one in ten teenagers consumed alcohol and/or tobacco more than once a week. For recreational drugs, this number was 3.3 percent.
- ❖ Around 30 percent of the teenagers surveyed scored positive on the Two-Item Conjoint Screen (TICS) suggesting that they are very likely to have a current substance abuse disorder involving alcohol and/or drugs.

- ❖ While the frequency of use of alcohol showed weak but significant positive correlation with the Canadian Problem Index score (CPGI), gambling risk (based on CPGI score) and frequencies of use of tobacco and recreational drugs were not significantly correlated.
- ❖ After controlling for age, there was no relationship with respondent scores on the Impulsivity Sensation Seeking Scale (ImpSS) and their frequency of use of alcohol, tobacco, or recreational drugs. Poker gamblers scored higher on ImpSS than other gamblers and non-gamblers.
- ❖ Frequencies of use of alcohol, tobacco, and recreational drugs are positively inter-correlated.
- ❖ The gambling-related cognitions scale (GRCS) demonstrated a high internal reliability and high correlation with respondents' CPGI scores and could therefore prove to be an effective screen for problem gambling diagnosis among teenagers.
- ❖ Those who had gambled on poker exhibited a higher score on the gambling-related cognitions scale (GRCS) than those gamblers who had never bet on poker.

LIMITATIONS

Obtaining teenage samples that are truly representative of the population has always been a challenge for responsible gambling researchers. This study used a survey panel which may result in the respondents not being truly representative of the Victorian teenage population. Also, data were gathered from 15-19 year olds; 13- and 14-year olds were not surveyed in this study.

Using a Web-based survey may have resulted in some respondents not fully understanding a few of the survey questions, and them not having the opportunity to clarify the meaning of these questions. This could impact the magnitude of reported gambling risk and respondents' GRCS score.

Like most previous studies, our sampling frame was confined to one state within Australia. Any generalizations across the country, should, therefore be made with caution. However, the findings of this study could serve as a starting point with which to devise representative national and cross-national surveys on youth poker gambling.

CONCLUSIONS

This research has provided vital information on gambling, particularly poker gambling, among Victorian teenagers. Parents, community and school counselors, public health professionals, educators and public policy makers will find this study useful for the insights it provides on poker and teenage gambling by way of prevalence, frequency, motivations and co-morbidity.

From a methodological standpoint, this project has broadened our understanding of youth gambling. This study has tested and used some of the previously implemented scales from the gambling and addictions literature, thus providing new insights on the efficacy and psychometric properties of these scales. Such information should be of interest to scholars researching responsible gambling. Above all, this research has provided original insights on poker gambling, a heretofore neglected but increasingly crucial area in adolescent gambling research.

1. INTRODUCTION

Poker is a microcosm of all we admire and disdain about capitalism and democracy. It can be rough-hewn or polished, warm or cold, charitable and caring, or hard and impersonal, fickle and elusive, but ultimately it is fair, and right, and just.

~Lou Krieger, Poker aficionado

In 2004, Lou Krieger, author of *Poker for Dummies* and *Internet Poker*, started the College Poker Championship. Krieger states in his publicity material that “the interest in poker seems to be taking hold among college students faster than any other segment of the population” (Krieger, 2004). Krieger’s tournament has students from all over the world competing against one another for large scholarship awards. Besides weekly scholarships of \$500, the grand winner is offered \$50,000 cash, along with a charitable donation of \$10,000 to the organization of the winner's choice. Participation in the tournament is free; a person playing has to be enrolled in a college or university and must provide proof of enrollment as part of the registration process. In 2005, 25,000 students from 55 countries participated in the tournament. This tournament is but one sign of poker gone “full tilt.”

Gone are the days when poker was confined to squalid backrooms and played by cigar smoking men in their fifties or older. Poker, nowadays, has developed an eager new cadre of followers, comprising mostly of teens and adolescents. Playing poker is seen by many among our youth as the ticket to fame and fortune. Hundreds of Websites tout the “overnight success” and wealth of young professional poker players, drawing awe, admiration, and envy from young wannabe millionaires. A 2006 survey of high school students in Quebec reported that in the 12 months preceding the survey, approximately 2.5 percent of high school students reported having played Internet poker, 15 percent had played poker for money with friends and 4.7 percent had taken part in poker games with other people (Dubé & Martin, 2006). Understandably, many parents, educators, and policy makers are concerned about poker’s phoenix-like manifestation in the lives and lifestyles of teenagers.

Over the past few decades, poker's locale has evolved from typically seedy basements and abandoned warehouses to the flashiest casinos around the world – from Vilnius to Vegas, and Malmö to Macau. An interesting and chequered history dotted with celebrities, presidents, generals, movie stars, and top athletes, poker has enjoyed a following of the rich, the famous, the gifted, the leaders, and the rebels. Poker is now played more than any other card game in the world, and it has grown into a "sporting event," with mega-prize competitions and tournaments taking place every week of the year somewhere in the world.

Billed as one of the fastest growing sports, poker is offered plenty of media coverage. TV coverage of poker is not just for important events - such as the World Series of Poker (WSOP) and the World Poker Tour (WPT). Plenty of regularly scheduled shows, such as the popular *Poker After Dark* and *High Stakes Poker* are broadcast around the world on free-to-air as well as cable TV channels. The Web has played a big role in promoting poker to young audiences. In spite of recent restrictive legislation banning online gaming in several countries, poker continues to grow and thrive, both online and off, in more and more countries around the world. Given its ubiquitous presence, it should come as no surprise that Western teenagers are taking to poker in unprecedented numbers. Concomitant with poker's ascendancy in popular culture are escalating concerns about poker's role in luring teenagers toward gambling.

Gambling among teenagers is not new, and most young people partake in gambling without encountering any harm. Yet few topics raise as much provocation in media and society-at-large as youth gambling. Nowhere within the gambling space is this truer than in the case of poker. Several problem gambling researchers contend that today's young people are the first generation exposed to widespread access to gambling venues, ubiquitous gambling advertising, and general social approval of gambling. A 2008 national study from the *Institute for Research on Gambling Disorders* estimated over 70 percent of Americans, ages 14 to 19 have gambled in the past year (NCRG, 2008).

Kirn and Ressler (2004) observe that not too long ago, poker was seen as a "gritty pastime for middle-aged men, played in smoky backrooms with battered cards and grimy stacks of chips." However, over the last decade or so, poker has attracted a cult-like following among young people. Some counseling professionals have even suggested that given the rage poker has now be-

come, "Hold 'Em Poker" terminology should be used as a metaphorical intervention in counselling juveniles (Schafer-Schiumo, Colangelo, & Bordan, 2009). Several newspaper reports and anecdotal evidence in other media suggest that the soaring popularity of poker might create more problem gamblers among our youth. Loren Ackerman, initially concerned that her son Chris might turn into an addicted gambler, has written a book, *Talkin' About Poker: Straight Talk for Parents and Their Players* (2006) with Chris to educate parents about poker so that they can understand the game better and are able to communicate with their children about it in a responsible and intelligent fashion.

Are most young people vicarious pleasure seekers or are they active participants in the poker phenomenon? More specifically, is gambling on poker as popular among Australia's young people, especially teenagers, as it is made out to be in some newspaper stories and books? Is a new generation of gamblers being created thanks to poker? Does poker tournaments' broadcast on TV and tournament winners' sensational media coverage have a role to play in making poker a huge draw among teenagers?

Thus far, there has been no systematic research on the poker phenomenon in Australia. Little is known about the prevalence of Australian youth playing poker for money. Also lacking are hard data on co-morbidity (i.e. other forms of gambling, drug and alcohol dependency, etc.) when it comes to gambling on poker.

This research was conducted to seek answers to these and other pertinent issues on teen poker. Findings presented in this report will be of significant interest to parents, counsellors, educators, gambling researchers, and policy makers. The next chapter presents a brief overview of the extant research on youth gambling, particularly poker gambling.

2. LITERATURE REVIEW

As the gambling literature is replete with studies of problem gambling, we will not attempt a comprehensive literature review here. Instead, in this section, we present a short overview of the representative literature and issues related to the current study. Readers interested in a more general literature review on gambling prevalence and problem gambling should see Johansson, et al. (2009) or Petry (2007).

Concern about youth gambling among social researchers is relatively new, with no published articles prior to 1985, indicating the infancy of the field (Blinn-Pike, Lokken-Worthy & Jonkman, 2010). Previous research suggests that the younger an individual is when he or she starts gambling, the higher that person's risk of developing gambling-related problems later on (Delfabbro & Thrupp, 2003; White, et al. 2007). There exists a stream of research designed to help identify the risk and protective factors related to youth gambling, to examine antecedent conditions related to youth gambling, and to identify effective strategies for the prevention and treatment of at-risk youth (cf. Nower & Blaszczynski, 2006; Stinchfield, Hanson, & Olson, 2006; Hayer, Griffiths & Meyer, 2005; Nower, Derevensky & Gupta, 2004). Most common reasons for adolescent gambling are excitement, enjoyment, and winning money (cf. Gupta & Derevensky, 1998; Wood & Griffiths, 2002; Wood, Gupta, Derevensky & Griffiths, 2004). Relaxation, escape from problems and stresses, and alleviating depression are some other motivations associated with adolescent gambling (Jackson, et al., 2008; Wood, et al., 2004).

A review of literature related to youth gambling suggests that: gambling is more popular among males than females (Fisher, 1990; Griffiths, 1991; Gupta & Derevensky 1998; Wynne, et al. 1996); adolescent problem/pathological gamblers have lower self-esteem compared to their non-gambling cohorts; they suffer more from clinical depression (Hayer, Griffiths & Mayer, 2005); and most significant of all, that adolescent prevalence rates of pathological gamblers are two to four times that of adults (Gupta & Derevensky, 1998).

In a study of school teenagers in Romania, Lupu, Onaca, and Lupu (2002) reported a pathological gambling rate of 6.8 percent, compared to 6 percent in the U.K. Of the teenagers who did gamble, 35.3 percent reported poker as their most frequent gambling activity. Moodie and Finnigan (2006) surveyed 2,043 students aged between 11 and 16 in Scotland. They report problem gaming prevalence of 9 percent, with a further 15.1 percent deemed to be at-risk gamblers. Shaffer, et al. (1999) looked at 22 American and Canadian studies comprising almost 28,000 adolescents and found past year prevalence for at-risk gambling and serious problem gambling to be 14.8 percent and 5.7 percent respectively. Jacobs' (2000) review of 20 independent studies led him to conclude that 2.2 million adolescents in U.S. and Canada aged between 12 and 17 years of age experience serious gambling-related problems. This equates with almost 15 percent of the adolescent population. In a review of the findings of 40 population based surveys, Rossen (2001) found that rates of adolescent lifetime involvement in gambling range from 21 to 99 percent, and that regular involvement in gambling ranges from 1 to 35 percent.

Compared to the many youth gambling studies conducted in U.S. and Canada, such research is somewhat more limited in Great Britain, New Zealand, and Australia. Fisher's (1999) study of nearly 10,000 12 to 15-year-olds from 114 schools in the U.K. uncovered problem gambling prevalence of 5.6 percent. In all Australian surveys, it has been found that the prevalence of gambling-related problems tends to be significantly higher in the 18-30 age brackets (Delfabbro & Winefield, 1996; Productivity Commission, 1999). This has led some researchers to conclude that that gambling habits observed during early adulthood are likely to have developed at an earlier age (Delfabbro & Thrupp, 2003).

Moore and Ohtsuka's (1997) study of 1,017 Victorian youth aged 14 to 25 reported that about 90 percent of the under-18s and 92 percent of the 18-25 years age group had gambled for money at least some time in their lives. In another study by the same authors which focused on gambling among school-based youth in the western suburbs of Melbourne, 89.8 percent of all respondents reported having gambled for money at least once in their life (Moore & Ohtsuka, 2001). The most popular forms of gambling were cards, horses/dogs, lotteries, and betting on the outcome of pool and other games. In another study, over 1,000 school and university students were surveyed by Moore and

Ohtsuka (1997). The results suggested that the majority approved of gambling activities, and had gambled in the previous 12 months. Using a modified 10-item version of the South Oaks Gambling Screen (SOGS), the authors found that 3.1 percent of the sample could be classified as problem gamblers. A follow-up study involving 769 adolescents between 15-18 years of age confirmed these results, and reported problem gambling prevalence of 3.8 percent (Moore & Ohtsuka, 1999). Delfabbro and Thrupp (2003) conducted a school survey of 505 adolescents aged 15-17 years from six metropolitan high schools in South Australia. The results indicated that over 60 percent of teenagers were gambling annually and that 3.5 percent scored in the problematic range on the *Diagnostic and Statistical Model of Mental Disorders IV-J* (DSM-IV-J). Frequency of adolescent gambling was associated with parental and peer gambling and pro-gambling attitudes. In another study, Delfabbro, Lahn, and Grabosky (2005) conducted a prevalence survey of 926 students, 11 to 19 years of age, attending secondary schools in the Australian Capital Territory. The results revealed that over 70 percent of adolescents had gambled in the previous 12 months and that ten percent gambled at least weekly. 4.4 percent of the respondents in this study were classified as problem gamblers on the DSM-IV-J and 3.3 percent were classified as problem gamblers on the Victorian Gambling Screen. A recent study by Splevins, Mireskandari, Clayton and Blaszczyński (2010) used a self-administered battery of questionnaires distributed to 252 school students aged 12-18 in Sydney, Australia. The problem gambling prevalence rate for this group was found to be 6.7 percent. 81 percent of the total sample reported gambling within the past 12 months, with 43 percent having commenced gambling prior to age 11. In order of most popular, coin tossing, sports betting, and lotteries were the three most frequent forms of gambling.

Thus, when it comes to adolescent gambling, large-scale prevalence studies from United States, Canada, England, Europe, New Zealand, and Australia all confirm the high prevalence rates of gambling participation among youth. Across various studies, the discrepant variability of reported prevalence rates of youth gambling within the scientific literature is troubling (for a comprehensive discussion, see Derevensky, Gupta & Winters, 2003). Reported variability in problem gambling prevalence in youth is considerably greater than that in adult populations. Comparability of findings using different diagnostic instruments has also been an issue (Derevensky & Gupta, 2004). Ladouceur (2001) has

suggested that the reported rates of serious gambling problems among adolescents could be inflated. Derevensky, Gupta, and Winters (2003) identify five primary arguments that have been advanced to support the inflated rate perspective: (a) if the prevalence of problem gambling were as high as reported in most studies, more adolescents would present themselves for treatment, (b) youth may misunderstand and fail to adequately comprehend problem gambling questions, (c) the illogical nature of the discrepancy of pathological gambling rates for adults and youth, given that adults have greater access to a variety of gambling products, (d) common scoring errors in instruments such as the DSM-IV-J contribute to overestimation, and (e) current screening instruments are lacking in construct validity. In logically dismissing most of these arguments, the authors, nonetheless, advocate developing more refined instruments to approach a "gold standard" for defining youth problem gambling.

Jackson, et al. (2008) used a representative sample of 2,788 eighth grade students in Victoria to assess the degree to which a range of risk factors are associated with different levels of adolescent gambling participation. The variables of male gender, drinking alcohol, using marijuana, and few perceived rewards at school were statistically significant predictors of higher involvement in gambling activities. For males, the most important predictors for greater gambling involvement were other antisocial and risky behaviors. In contrast, dissatisfaction with peers and school connectedness were important predictors of greater gambling involvement among females. The authors argue that there is much to be gained from understanding of the nuances of gendered gambling behavior and go on to conclude that adolescent gambling is not just a problem in its own right, but is also indicative of disruptions to psychosocial adjustments and other problematic behaviors.

Some other Australian studies on teen populations have also looked at the relationship between youth gambling and psychosocial adjustment. Burnett, Ong, and Fuller (1999) surveyed 778 final year high school students aged 16-18 years. They found that weekly gambling among teenagers was associated with dissatisfaction with school, having friends who gambled, lack of social adjustment, and engagement in other high-risk behaviors such as under-aged drinking and risky driving. Jackson's (1999) study of 2,700 year 8 students drew similar conclusions. He finds that students involved with gambling (defined by the number of gambling activities engaged in) were more likely to en-

gage in risky behaviors (alcohol, smoking and drug use), were less engaged with school, and more prone to self-harm.

Derevensky and Gupta (1996) report that compared to adult gamblers, there is a more rapid movement from being a "social gambler" to becoming a "problem gambler" when it comes to adolescent gambling. Also, adolescent problem gamblers tend to suffer higher anxiety (Gupta & Derevensky, 1998; Vitaro, Ferland, Jacques & Ladouceur, 1998) and are at heightened risk for suicide ideation and attempts (Gupta & Derevensky, 1998). Problem and pathological gambling among youth has been shown to result in increased delinquency and crime, disruption of familial relationships and decreased academic performance (Fisher, 1993; Gupta & Derevensky, 1997a; Ladouceur & Mireault, 1988; Wynne, Smith, & Jacobs, 1996).

In their study of gambling among 15-17 year-olds in Ontario, White et al. (2007) reported that approximately 40 percent of the survey participants reported gambling at least once in their lifetime. 34.9 percent of the total sample reported gambling at least once in the past twelve months. The three main reasons cited as motivations for gambling were to have fun (89.2 percent), to win money (70.3 percent), and to take risks (28.4 percent). This research is one of the very few empirical studies to provide some information on poker play among teenagers. The authors state that 45 percent of all teenage gamblers in Ontario had played poker in the past twelve months. 94.3 percent of the poker players reported playing poker with friends, followed by family (52 percent), workmates (16.8 percent) and in illegal clubs (6.7 percent). Twenty-one percent reported playing poker for money on the Internet. Most of the youth who gamble on poker (85.8 percent) mentioned "fun" as the reason for playing, followed by "great way to hang out with friends" (66.9 percent), "winning money" (63.4 percent), and the perception of poker as a "cool game" (57.1 percent).

In a recent comprehensive review of adolescent gambling literature, Blinn-Pike, et al. (2010) report that of the hundred or so studies on adolescent gambling published over the last 25 years, over 90 percent deal with documenting the prevalence, frequency, or types of adolescent gambling. Four discuss measurement, diagnosis, and instrument development; three focus on develop-

ing educational programs aimed at preventing adolescent gambling; and one study discusses adolescent problem gambling treatment.

In our own review, we find only three articles within the gambling literature that focus specifically on poker. Of these, one discusses the mushrooming popularity of poker on U.S. college campuses (Hardy, 2006), one looks at distorted cognitions, motivation, and alexithymia among poker players (Mitrovic & Brown, 2009), and one reports characteristics of undergraduate poker players in Canada (Shead, Hodgins & Scharf, 2008). Since the worldwide popularity of poker has reached an all-time high (Schaefer-Schiumo, Colangelo & Bordan, 2009), greater effort needs to be devoted to studying poker players, especially among the youth. Doing so across different contexts will validate the limited previous research and provide new insights with which to make further theoretical advances (Cunningham & Green, 1984).

3. DATA COLLECTION

Data collection for this project involved two focus groups and a Web-based survey of 2,000 Victorian youth, aged 15-19. Prior to data collection, approval for the project was obtained from the Bond University Human Research Ethics Committee (BUHREC). Data were gathered in two phases. In the first phase, we conducted two focus groups in March 2010, comprising of 13 female and 12 male Bond University students, aged between 17 and 19 years. During the focus groups, students talked about how often they played poker, whether they engaged in other forms of gambling besides poker, their frequency of poker and other forms of gambling participation, use of tobacco, alcohol, and recreational drugs, the amount spent on gambling in a typical session, and disposable income. The focus groups were helpful in understanding teenager mentality when it comes to gambling in general and poker in particular. As such, data from the focus groups were very helpful in formulating the final questionnaire.

The questionnaire was designed considering the objectives of the current research, an exhaustive review of problem gambling and adolescent gambling literature, and specific inputs as a result of the two focus groups. The questionnaire was pre-tested on 25 teenagers aged between 17 and 19 at Bond University.

In June-July, 2010, we collected data from 2,000 Victorian teenagers, aged between 15 to 19 years, using a consumer panel. The sample was provided by AussieThink Panels. AussieThink Panels is owned and operated by Deloosh Pty Ltd. To participate in online surveys, Australian consumers sign up in return for points. Points allocated depend on the survey, and roughly equate to around \$3 per survey. AussieThink members then redeem points for reward cards. On registration, AussieThink members provide demographic and psychographic information about themselves. The Internet and social media advertising are used to recruit into the panel. If a member is selected to participate in a survey, the company sends out an invitation email. Participation is voluntary.

Given the sensitive nature of this topic for some respondents, we clearly stated at the beginning of the survey that participants were not required to answer any questions that they deemed to be too personal or intrusive. The Senior Research Ethics Officer's contact details at Bond University were also listed in case participants had any concerns with the conduct or nature of this research. At the conclusion of the survey, we provided a link to the support services page of Swinburne University's problem gambling site for those interested in more information about gambling-specific or general counselling services.

The online questionnaire took 20-25 minutes to complete. It comprised of questions relating to respondents' level of impulsive sensation seeking, use of alcohol, tobacco, and recreational drugs, questions relating to emotional problems, relationship problems, drug or alcohol-related problems, and problems encountered in school. Several questions related to respondents' gambling behaviours and attitudes, poker playing attitudes and activities, and proclivity for problem gambling were also included.

The sample comprised of 1003 females and 997 males. Table 1 presents details on the age and gender of respondents. Respondents are pretty equally distributed across age and gender.

A majority of the respondents (97.3 percent) were born in Australia, 1.6 percent in New Zealand, and 1.1 percent in other countries. Virtually all respondents (98.7 percent) spoke English at home. 90 percent of respondents' fathers and 92 percent of respondents' mothers were born in Australia. 88.6 percent of the survey participants went to school or university full-time, 3.8 percent worked full-time and 46.5 percent worked part-time.

86.7 percent of respondents lived at home with one or both parents, while 59.2 percent lived with both birth parents. With regard to religion, 73.2 percent described themselves as having no firm religious beliefs, 12.7 percent described themselves as Catholics, and 12.3 percent described themselves as Christians.

Table 1: Sample Age and Gender Characteristics

Age (in years)	Frequency	Gender		Total
		Male	Female	
15	Count	202	176	378
	% within age-group	53.4	46.6	100.0
	% within gender	20.3	17.5	18.9
	% of Total	10.1	8.8	18.9
16	Count	204	196	400
	% within age-group	51.0	49.0	100.0
	% within gender	20.5	19.5	20.0
	% of Total	10.2	9.8	20.0
17	Count	199	216	415
	% within age-group	48.0	52.0	100.0
	% within gender	20.0	21.5	20.8
	% of Total	10.0	10.8	20.8
18	Count	194	212	406
	% within age-group	47.8	52.2	100.0
	% within gender	19.5	21.1	20.3
	% of Total	9.7	10.6	20.3
19	Count	198	203	401
	% within age-group-	49.4	50.6	100.0
	% within gender	19.9	20.2	20.1
	% of Total	9.9	10.2	20.1
Total	Count	997	1003	2000
	% within age-group	49.9	50.1	100
	% within gender	100.0	100.0	100.0
	% of Total	49.9	50.1	100.0

Data from the survey respondents has provided us with a reservoir of information on teen gambling, problem gambling, and participation in other risky behaviours, namely use of alcohol tobacco, and recreational drugs. Next, we shall discuss key findings from our research.

4. FINDINGS

The scope of this research was intentionally broad. Information on several aspects of respondents' lifestyle was collected in the course of this study. We gathered and analysed data related to overall participation in risky behaviours such as drinking, use of nicotine and recreational drugs, and gambling. Wherever possible, established scales from earlier research were used to measure constructs. Respondents' level of impulsive sensation seeking (cf. Zuckerman & Kuhlman, 2000) and gambling related cognitions were measured (cf. Raylu & Oei, 2004), as was the prevalence of substance use disorder using the Two-Item Conjoint Screen (TICS, Brown, et al. 2001). Particular emphasis was placed upon assessing people's poker-related beliefs and behaviours.

OVERALL PARTICIPATION IN RISKY BEHAVIOURS

Although the focus of this study was on poker, we wanted to find out about the various types of risky behaviours on the part of young people as they advance through the teen years. To ascertain participation in risky behaviours, we asked respondents the following questions: (1) How often did you have a drink containing alcohol in the past year; (2) How often do you chew, smoke, or inhale tobacco; (3) How often do you use recreational drugs (marijuana, ecstasy, cocaine, speed, etc.); and (4) Have you ever gambled in your life?

369 respondents or 18.5 percent of the sample had never engaged in any of these risky behaviours in their entire life. As would be expected, the more the respondents' age, the greater the likelihood that they had participated in at least one of the risky behaviours. Thus while 54.7 percent of 15 year-olds had never gambled in their lifetime, and had not consumed alcohol, tobacco or recreational drugs in the past 12 months, this percentage drops to .7 percent by the time they reach age 19. Age-wise statistics on participation in risky behaviours are presented in Table 2.

We assessed whether gender impacts people's participation in gambling, or consumption of alcohol, tobacco, and recreational drugs. There were no differ-

ences between males and females with regard to overall participation in risky behaviours (Pearson Chi Square = .66, $p = .42$).

Table 2: Respondent Age and Engagement in Risky Behaviours

Respondent Age (in years)	15	16	17	18	19
Engaged in gambling or consumption of alcohol, tobacco, or recreational drugs	176 (46.6%)	278 (69.5%)	398 (95.9%)	381 (93.8%)	398 (99.3%)
Did not engaged in gambling or consumption of alcohol, tobacco, or recreational drugs	202 (53.4%)	122 (30.5%)	17 (4.1%)	25 (6.2%)	3 (0.7%)

*To be read: 176 respondents or 46.6 percent of 15 year-olds had gambled at least once in their life *or* consumed alcohol, tobacco, or recreational drugs in the past 12 months.

GENERAL GAMBLING BEHAVIOUR

Compared to most societies, Australian youth have a wide array of gambling options to choose from. One objective of this research was to explore where poker fits in within these choices and to assess prevalence of poker relative to other gambling options.

1,094 individuals or 54.7 percent of the respondents reported gambling at least once in their lifetime. This percentage is far lower than the around 90 percent reported by Moore and Ohtsuka (1997; 2001) in their Victorian studies but more than the 40 percent reported by White, et al. (2007) in their survey of 15-17 year-olds in Ontario, Canada. Broken down by gender, 55.7 percent of all males and 53.7 percent of all females in the current study had gambled at least once in their life. Differences in gambling participation across males and females are not statistically significant (Pearson Chi Square = .75, $p = .39$). Similarly people's religious beliefs or lack thereof had no impact on whether they had ever gambled in their life.

We collected information on the various forms of gambling activities on the part of Victorian youth. Frequency and type of gambling was assessed by a slightly amended version of Moore and Ohtsuka's (1997) Gambling Behaviour Scale which relates to frequency of gambling over the past 12 months across 12 different types of games (e.g., 'Played cards' or 'Bet on sports'). Frequency

is measured on a 4-point Likert-type scale where 0 = (*Not in the last year or never*) and 3 = (*Frequently, once a week or more*). Scores can also be summed across the different games to create a total frequency score ranging from 0 to 36. In each case higher scores indicate higher frequencies of gambling. Although responses on the questions were not added together in the present study, the Gambling Behavior Scale had acceptable internal reliability, $\alpha = .77$. Table 3 presents data on the type of games and frequency of gambling participation by Victorian teenagers.

Table 3: Types of Games and Frequency of Participation

Gambling Activity	Frequency and Number of Respondents (%)			
	Not in last year or never	Sometimes (less than once a month)	Fairly often (a few times a month)	Frequently (once a week or more)
Played Cards	1465 (73.3)	444 (22.2)	61 (3.1)	30 (1.5)
Bet on Horses/Dogs	1624 (81.2)	278 (13.9)	75 (3.8)	23 (1.2)
Bet on Sports	1641 (82.1)	255 (12.8)	68 (3.4)	36 (1.8)
Lottery or Scratch-It Tickets	1295 (64.8)	500 (25.0)	157 (7.9)	28 (2.4)
Bet on Gaming Tables	1780 (89.0)	190 (9.5)	29 (1.5)	1 (0.1)
Poker Machines at Casino	1727 (86.4)	226 (11.3)	43 (2.2)	4 (0.2)
Poker Machines Outside of the Casino	1697 (84.9)	235 (11.8)	64 (3.2)	4 (0.2)
Bingo	1774 (88.7)	205 (10.3)	19 (1.0)	2 (0.1)
Played Pool or Other Games for Money	1756 (87.8)	204 (10.2)	37 (1.9)	3 (0.2)
Casino-type Games on the Internet	1849 (92.5)	121 (6.1)	30 (1.5)	0 (0)
Slot Type Games on Internet	1882 (94.1)	96 (4.8)	21 (1.1)	1 (0.1)
Card Games on the Internet	1767 (88.4)	164 (8.2)	53 (2.7)	16 (0.8)

As can be seen from the Table 3, an overwhelming majority of the respondents had not participated in any gambling activity over the last year (or never participated in it ever). These results are somewhat inconsistent with those reported in Delfabbro and Thrupp's (2003) study of South Australian high school students and Delfabbro, Lahn and Grabosky's (2005) prevalence study of 926 11-19 year-olds in the ACT. In the former study, over 60 percent of teenagers

reported gambling within the previous year. In the latter, over 70 percent of respondents reported gambling in the previous 12 months and ten percent reported gambling frequency of once a week or more. In the current study, lottery is the only form of gambling in which more than 10 percent of the respondents participated a few times a month or more. Playing slot machines on the Internet is the gambling activity least frequently engaged in by Victorian teenagers.

We wanted to assess whether males and females differ in their choice of gambling activity for those who gamble once a month or more. Table 4 lists these statistics.

Table 4: Number of Males and Females Participating in Various Gambling Activities Once a Month or More

Type of Gambling	Males	Females	Total
Played Cards*	67	24	91
Bet on Horses/Dogs*	67	31	98
Bet on Sports*	68	36	104
Lottery or Scratch-It Tickets	104	101	205
Bet on Gaming Tables	20	10	30
Poker Machines at Casino	22	25	47
Poker Machines Outside of the Casino	34	34	68
Bingo	7	14	21
Played Pool or Other Games for Money*	30	10	40
Casino-type Games on the Internet	14	16	30
Slot Type Games on Internet	9	13	22
Card Games on the Internet	34	35	69

*Difference between number of male and female participation is significant at $p < .001$.

As seen from Table 4, among regular gamblers, males far outnumber females when gambling on cards, horses/dogs, sports betting, betting at gaming tables, or betting on the outcome of games such as pool. For lottery, poker

machines (in casinos or elsewhere), and casino or card-type games on the Internet, there is about equal participation across gender. Females outnumber males in gambling on bingo and slot-type games on the Internet. The top three gambling activities on which teenagers gamble once a month or more are lottery, sports betting, and betting on horses/dogs. Based on the data in Table 3, 10.25 percent of all Victorian teenagers gamble on the lottery once a month or more.

We went on to assess the popularity of various forms of gambling among the 1087 respondents who had gambled at least once in their life. Of the various forms of gambling, seven activities accounted for over 92 percent of all respondents' preferences. 119 teenagers, or 10.9 percent of the 1087 gamblers, specifically listed poker as being their most favourite. Table 5 lists the most favourite gambling activities mentioned by the respondents.

Table 5: What is Your Most Favourite Form of Gambling?

Gambling Activity	Number (%)
Playing Cards	282 (25.9)*
Betting on Lottery-Type Games	237 (21.8)
Betting at Gaming Tables	144 (13.2)
Betting on Sports	106 (9.8)
Betting on Horses/Dogs	102 (9.4)
Playing Slot Machines	85 (7.8)
Playing Pool/Other Games for Money	48 (4.4)

**To be read: 282 individuals or 25.9 percent of the individuals who have ever gambled rated gambling on cards as their most favourite gambling activity.*

As evident from Table 5, playing cards, lotteries, and betting on gaming tables at the casino are the top three favourite forms of gambling. These results are somewhat consistent with those reported by Moore and Ohtsuka (2001) who ranked cards, horses/dogs, lotteries, and betting on the outcome of pool or other games as the most popular forms of gambling among school-based youth in western Melbourne suburbs.

GAMBLING AND POKER GAMBLING: LIFETIME PARTICIPATION

It was mentioned earlier that 54.7 percent of the sample had engaged in some form of gambling at least once in their life. As would be expected, the proportion of people who have ever gambled and/or played poker for money increases with age. For instance, less than 30 percent of 15 year-olds reported gambling at least once in their lifetime. This percentage increases to 88.5 percent in the case of 19 year-olds. Table 6 provides statistics on age and lifetime gambling. Differences in lifetime participation by age are statistically significant (Pearson Chi-Square = 348.23, d.f. = 4, $p < .001$). Four hundred and fifty teenagers, or 22.5 percent of the sample had played poker for money at least once in their life and 308 (15.4 percent) had done so in the past 12 months. These figures are similar to those reported in the 2006 survey of high school students in Quebec (Dubé and Martin, 2006).

Table 6: Age-wise Breakdown of Teenagers Who Have Gambled During Lifetime

Age	Have you ever gambled in your life?		Total
	Yes	No	
15	112 (29.6%)	266 (70.4%)	378
16	142 (35.5%)	258 (64.5%)	400
17	237 (57.1%)	178 (42.9%)	415
18	248 (61.1%)	158 (38.9%)	406
19	355 (88.5%)	46 (11.5%)	401
Total	1094 (54.7%)	906 (45.3%)	2000

41.1 percent of all teenage gamblers have gambled on poker, and 28.2 percent have done so in the past 12 months. The percentage of those who have gambled on poker within the previous 12 months is significantly lower than that reported in White, et al. (2007) study of Canadian 15-17 year-olds (45.3 percent). Of the 450 respondents who had gambled on poker at least once in their life, 245 were males and 205 were females. Thus, poker players have a slightly higher proportion of males (24.6 percent) than females (20.4

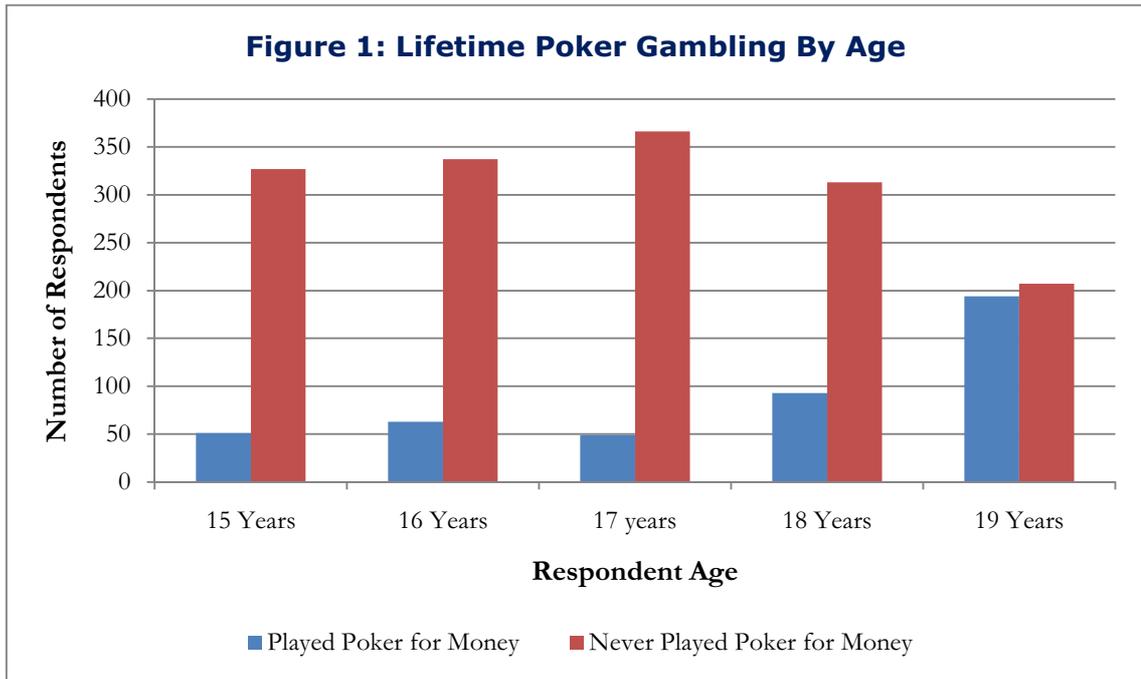
percent). These differences are statistically significant (Pearson Chi-Square = 4.9, $p < .05$). 175 males (17.6 percent of all male respondents) and 133 females (13.3 percent of all female respondents) had played poker for money in the last 12 months. Thus, while poker gambling attracts proportionately higher number of males than females, it would be misleading to assume that gambling on poker is largely a male pastime.

Over 90 percent of those who gambled on poker within the past 12 months did so ten times or less within the year. 4.8 percent gambled 24 times (about twice a month) or more. Forty-three respondents or 14 percent of those who gambled on poker in the past 12 months, spent four or more hours each week playing poker.

Table 7: Age-wise Breakdown of Teenagers Who Have Played Poker for Money During Lifetime

Age	Have you ever played poker for money?		Total
	Yes	No	
15	51 (13.5%)	327 (86.5%)	378
16	63 (15.8%)	337 (84.3%)	400
17	49 (11.8%)	366 (88.2%)	415
18	93 (22.9%)	313 (77.1%)	406
19	194 (48.4%)	207 (51.6%)	401
Total	450 (22.5%)	1550 (77.5%)	2000

Table 7 provides data on poker participation and age. Almost half of all the 19-year-olds surveyed had played poker for money. For 15-year-olds, this ratio was under 15 percent. These differences in proportion of players gambling on poker by age group are statistically significant (Pearson Chi-Square = 209.30, d.f. = 4, $p < .001$). Figure 1 illustrates the differences in gambling on poker across age groups. It is unclear why the proportion of poker gamblers among 17 year-olds is the lowest compared to other age groups.



POKER ON TV AND POKER CLUB MEMBERSHIP

There exist several TV channels in Australia (e.g. Fox Sports, ESPN, Channel One, Channel 10) that regularly broadcast poker tournaments. Some gambling scholars and policy makers worry that poker coverage on TV will create additional gamblers.

Asked whether they watched poker tournaments on TV, 374 teenagers or 18.7 percent of the sample replied in the affirmative. Tables 8 and 9 provide more insights on these statistics.

Table 8: Number of Respondents Who Watch Poker Tournaments on TV and Have Gambled in Their Lifetime

Watch Poker on TV	Have you ever gambled in your		Total
	Yes	No	
Yes	221	153	374
No	873	753	1626
Total	1094	906	2000

As seen from Table 9, 145 of the 450 teenagers who have played poker for money watch poker tournaments on TV (32.2 percent). This is in contrast to 229 of the 1550 respondents who have never gambled on poker but watch poker tournaments on TV (14.8 percent). These differences are statistically significant at $p < .001$ (Pearson Chi-Square = 69.84, d.f. = 1).

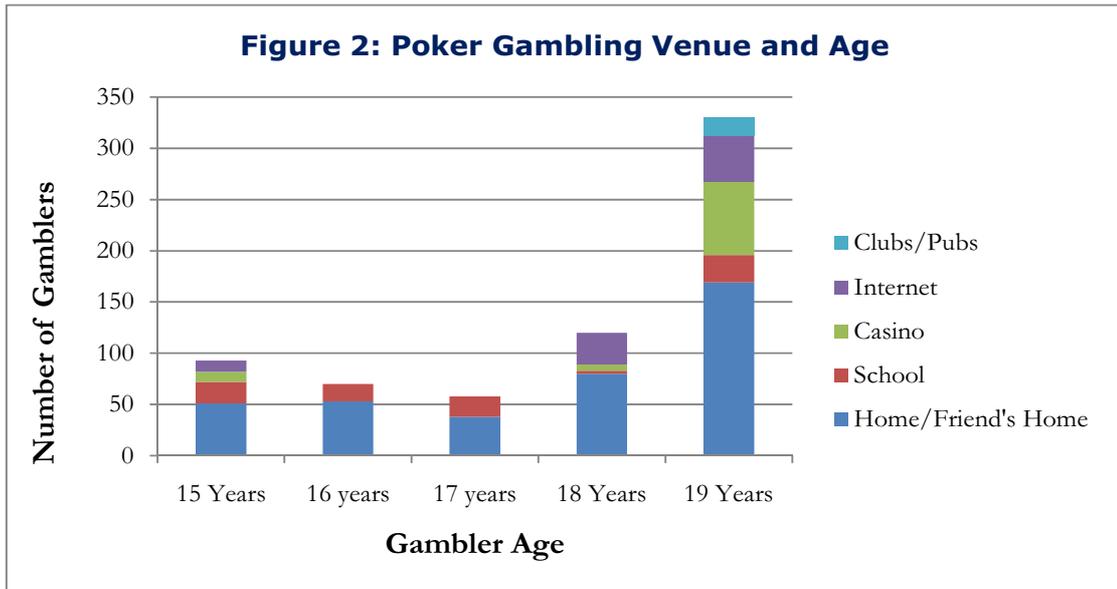
Table 9: Number of Respondents Who Watch Poker Tournaments on TV and Have Played Poker for Money

Watch Poker on TV	Have you ever played poker for money?		Total
	Yes	No	
Yes	145	229	374
No	305	1321	1626
Total	450	1550	2000

Only 36 respondents, or 1.8 percent of the sample, indicated that they were a member in a poker club. This finding was surprising given that one club alone – the Australian Poker League – boasts of having more than half a million members. Of some concern is the finding that 18 of the 36 (50 percent) respondents who are members of a poker club were classified as “Problem Gamblers” and another 8 (22.2 percent) were in the “Moderate Risk Gambling” group. However, these numbers are far too small to make definitive statistical inferences.

VENUES USED IN PLAYING POKER FOR MONEY

Respondents used several venues to play poker for money. In order of the most used venues, these were: at their own or friends’ home (391), the casino (144), at school (89), the Internet (87), and clubs or pubs (18). Of the 450 teenagers who have played poker for money, most have used more than one venue for gambling.



An interesting statistic is that almost 20 percent of those who have played poker for money, have done so at school, and almost just as many on the Internet. Eleven percent of poker gamblers agreed (or strongly agreed) with the statement, "I enjoy gambling on poker using the Internet." Gambling on poker at home or at the casino seems to be most prevalent among poker gamblers. Table 10 lists statistics relating gaming venue by gender of the respondent. It is interesting to note that an equal number of males and females gamble on poker at casinos despite the fact that more males than females gamble on poker overall.

Table 10: Poker Venues and Respondent Gender

Gambling Venue for Poker	Males	Females	Total
At one's own or friends' home	216	175	391
At casinos	72	72	144
At school	57	31	88
On the Internet	53	34	87
At clubs or pubs	10	8	18

Figure 2 presents a breakdown of poker gambling venues by respondent age. As expected, most respondents who gambled on poker at the casino were 18 years of age or older, 18 being the legal age in Australia to enter casinos. It

is intriguing that ten fifteen year-olds reported gambling on poker at a casino and 11 report playing poker for money on the Internet.

MOTIVATIONS

We wanted to understand the motivations of the 308 people who had played poker for money in the past 12 months. Respondents were asked to indicate the importance of various reasons that prompted them to gamble on poker (1=unimportant; 5=very important). The results are shown in Table 11.

Clearly, the reason most teenagers gamble on poker is for the fun aspect of gambling. Being with friends, the excitement of gambling, passing the time, and overcoming boredom are other important reasons. These reasons are somewhat different in importance to those provided by White, et al. (2007), where the top five cited reasons for gambling on poker were fun, hanging out with friends, winning money, cool game, and thrill.

Table 11: Motivations for Poker Gambling

Reasons for Gambling on Poker	Mean Importance	S.D.
1. For fun	4.47	.69
2. To be with my friends	4.02	1.00
3. For excitement	3.64	1.03
4. To pass the time	3.43	.97
5. To overcome boredom	3.37	1.27
6. To display my skills	2.94	1.26
7. Desire to get rich/make money	2.52	1.23
8. To escape the stresses of life	2.25	1.31
9. To impress my friends or partner	2.21	1.19
10. To enhance my own self image (make myself feel im-	1.88	.96
11. To overcome loneliness	1.87	1.14
12. Out of compulsion/addiction	1.72	.96
13. To imitate celebrities and movie/TV stars	1.53	.90

In our study, "making money" was deemed as being only a moderately important motivation overall. However, 70 respondents or 22.7 percent of those who had played poker in the last 12 months ranked this motivation as being "important" or "very important." "Imitating celebrities and movie/TV stars" ranked last in terms of importance when it comes to poker gambling. Seventeen teenagers or 5.5 percent of those who gambled on poker in the past 12 months, indicated that compulsion (addiction) was an important or very important determinant of their gambling. Sixty-one respondents or 21.8 percent of the sample indicated "escape from stress" as being important or very important motivator for gambling. Elsewhere in the questionnaire, when asked to indicate their level of agreement with the statement, "Playing poker for money has become somewhat of a compulsion for me," 32 teenagers (7.1 percent of poker gamblers) responded that they either agreed or strongly agreed with this statement.

These findings suggest that for the vast majority of Victorian teenagers, gambling on poker is a social and entertaining pastime. For a minority, gambling on poker occurs as an outlet to escape life's stresses or due to self-confessed addiction. When poker players (those who had gambled on poker at least once in their life time) responded to questions on the Canadian Problem Gambling Index (CPGI), 18.4 percent fell under the "problem-gambling risk" group. This is in contrast to teenagers who had gambled (on anything) at least once in their life, where the magnitude of problem gamblers was 5.4 percent. Clearly, there is a higher prevalence of problem gambling among poker gamblers compared to gamblers in general.

PARENT/GUARDIAN APPROVAL AND AWARENESS OF TEENAGERS' POKER GAMBLING

Previous research has shown that parents who model or approve of gambling behaviour were more likely to have children who engaged in higher rates of gambling or were pathological gamblers (Buchta, 1995; Fisher, 1993; Gupta & Derevensky, 1997b; Ladouceur et al., 1994; Lesieur & Rosenthal, 1991; Makela, 2000). Since poker gambling is a relatively recent phenomenon in Australia, we wanted to assess parental awareness of poker gambling on the part of their teenage children. More than a quarter of parents or guardians (27.3

percent) were unaware of the fact that their child was gambling on poker. Thirty-eight percent of parents and guardians were aware of their child gambling, but neither condoned nor disapproved of this activity. An additional 20.8 percent of parents approved such activity on the part of the child. Only 10.7 percent of parents reportedly disapproved of poker gambling on the part of their child.

BOYFRIEND/GIRLFRIEND OR SPOUSAL APPROVAL AND AWARENESS OF TEENAGERS' POKER GAMBLING

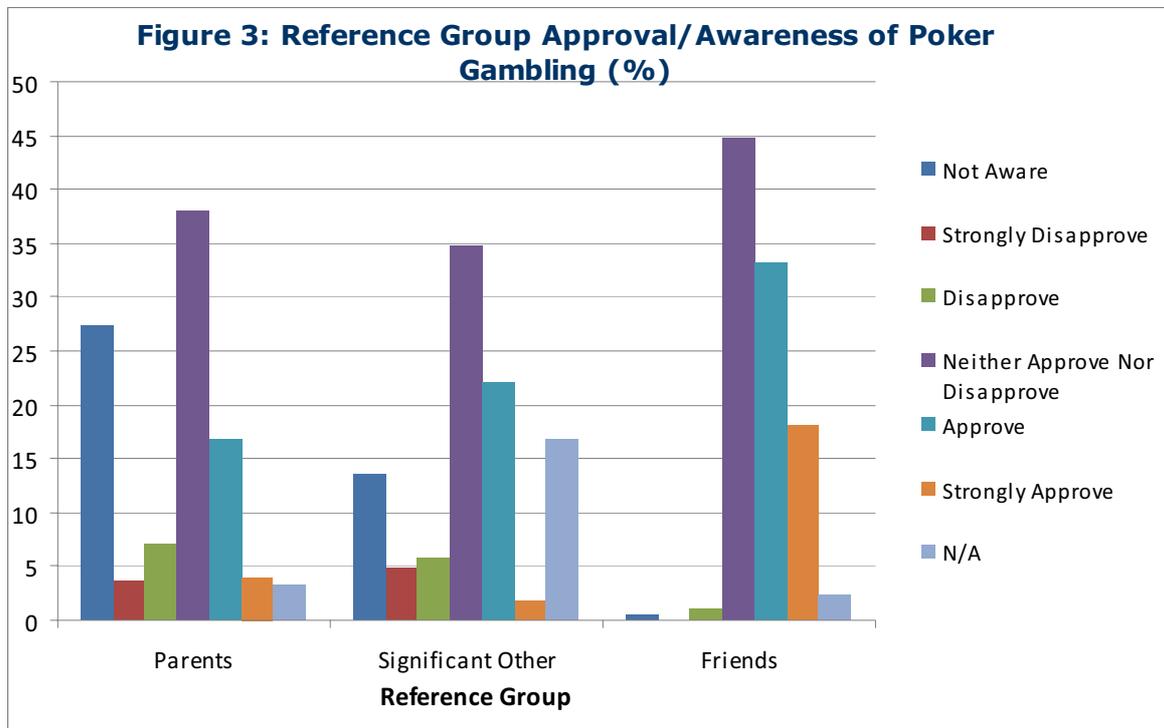
Awareness and approval numbers change somewhat when it comes to a significant other. We asked respondents what their spouse or boyfriend/girlfriend thought of their gambling on poker. Seventeen percent of those who had gambled on poker in the past year responded that they did not have a spouse or a boyfriend or girlfriend. As in the case of parent/guardian, 10.7 percent indicated that their significant other either disapproved of their gambling, while 34.7 percent said that there was neither approval nor disapproval. Almost a quarter (24 percent) indicated that their spouse or boyfriend/girlfriend approved of their poker gambling. Only 13.6 percent of the respondents indicated unawareness of their gambling on the part of their spouse or boyfriend/girlfriend.

FRIENDS' APPROVAL AND AWARENESS OF TEENAGERS' POKER GAMBLING

Recall that "being with friends" was a very important motivator among teenagers who gambled on poker. It should therefore come as no surprise that a majority of respondents (51.3 percent) indicated that their friends approved of their poker gambling. Almost an equal number (44.8 percent) reported that their friends neither approved nor disapproved of their gambling. Taken together, the awareness and approval of gambling among the reference groups provide interesting insights into opinions and awareness of the focal person's gambling activity.

Figure 3 illustrates awareness and approval status related to poker gambling on the part of the respondents. It is interesting to note that not a single teenager reported strong disapproval of his or her poker gambling by friends. Across the three reference groups (i.e. parent/guardian, significant other, and

friends), there is a tendency to neither endorse nor approve poker gambling on the part of the teenager.



IS GAMBLING ON POKER FOLLOWED BY OTHER FORMS OF GAMBLING?

Several researchers in responsible gambling are concerned about the way poker is glamorized and promoted in popular media (Hoskins, 2006; Monaghan & Derevensky, 2008). The popularity of poker has also fuelled speculation that poker has created a new generation of gamblers, and that gambling on poker will induce people to partake in other forms of gambling as well. In our survey, 88 respondents (19.7 percent of poker gamblers) indicated that they started engaging in other forms of gambling after they started gambling on poker. On the other hand, 155 (almost 35 percent) poker gamblers admitted to have engaged in other forms of gambling before they started gambling on poker. Thus, while poker may provide a gateway to other gambling activities for some teenagers, there is no unequivocal support for the suggestion that poker gambling will lead to other forms of gambling.

PROBLEM GAMBLING AMONG TEENAGERS

“Problem gambling is gambling behavior that creates negative consequences for the gambler, others in his or her social network, or for the community” (Ferris & Wynne, 2001, section 1.2, p.6). Analogously, the report, *Problem Gambling and Harm: Towards a National Definition* (2005) provides defines problem gambling as “characterised by difficulties in limiting money and/or time spent on gambling which leads to adverse consequences for the gambler, others, or for the community.”

The two most popular existing measures of problem gambling, and the ones used extensively in problem gambling research, are the *Diagnostic and Statistical Model of Mental Disorders* (DSM, across several editions) and the *South Oaks Gambling Screen* (SOGS). However, both these tools do not sufficiently differentiate between various levels of gambling behaviours (e.g. low risk problem gambling vs. non problem gambling) as they have been constructed almost exclusively on clinical samples (Booker, Clara, & Cox, 2009). We therefore deemed it inappropriate to utilize either of these measures to classify sub-groups of gamblers in the general population of Victorian teenagers.

We assessed the incidence of problem gambling among Victorian teenagers using the Canadian Problem Gambling Index (CPGI, 2001), also known as the Problem Gambling Severity Index (PGSI). Since its launch a decade ago, CPGI has been used in all Canadian provinces and in several other jurisdictions, including Australia, Norway and Iceland. As a result, a number of researchers have gained significant experience and insight in the use of CPGI. According to its authors, the prevalence rate for problem gambling obtained with the CPGI is roughly equivalent to the prevalence rate obtained using DSM-IV (Ferris & Wynne, 2001). Booker, Clara, and Cox (2009) used a large nationally representative sample of over 36,000 individuals to test CPGI’s reliability and validity. Their research validated the CPGI as an accurate measure of problem gambling, and the authors recommend the instrument’s appropriateness for use in future studies, especially in the analysis of co-morbidity.

Based on responses to nine questions, the CPGI classifies the gambling risk across individuals into five categories: non-gambling, non-problem gambling, low risk gambling, moderate risk gambling, and problem gambling. Items used

to classify individuals into the five gambling categories are presented in Table 12. As expected, the means for each of the statements assessing problem gambling are quite low for the sample of 1,094 respondents who have gambled at least once in their lifetime. Variance for each CPGI item is at least twice as high as the mean, suggesting a high dispersion in people’s responses to the CPGI items. The relatively low means for items 8 and 9 in Table 12 are to be expected. The sample of teenagers surveyed in this study is still too young for many to have experienced severe gambling-related health problems or major financial problems. Nonetheless, the psychometric properties exhibited by the CPGI in our study are impressive.

Table 12: The Canadian Problem Gambling Index Items: Means and Standard Deviations

In the last 12 months how often have you [or have, for item 6]:	Mean	S.D.
1. Bet more than you could really afford to lose?	.30	.60
2. Needed to gamble with larger amounts of money to get the same feeling of excitement?	.28	.64
3. Gone back another day to try and win back the money you lost?	.20	.61
4. Borrowed money or sold anything to get money to gamble?	.35	.71
5. Felt that you might have a problem with gambling?	.18	.55
6. People criticized your betting or been told that you had a gambling problem, regardless of whether or not you thought it was true?	.20	.56
7. Felt guilty about the way you gamble or what happens when you gamble?	.33	.68
8. Experienced any health problems due to gambling, including stress or anxiety?	.10	.39
9. Experienced any financial problems for you or your household because of gambling?	.08	.33

Scoring: 0 = Never, 1 = Sometimes, 2 = Most of the time, 3 = Almost always.

Respondents were classified into various groups based on CPGI guidelines (cf. Ferris & Wynne, 2001). Since 906 respondents in the sample had never gambled on anything in their life, they were classified as “Non-Gamblers” (45.3 percent). Of those who had gambled, 616 (30.8 percent of the sample) scored zero on the CPGI, which put them into the “Non-Problem Gambler” group. 285 teenagers, or 14.3 percent of the sample, scored between 1 and 2.5, thus putting them into the group of “Low-Risk Gamblers”. Seventy-five respondents (3.8 percent) fell under the category of “Moderate Risk Gamblers,” having scored between 3 and 7.5 on the CPGI. The remaining 118 teenagers (5.9 per-

cent) scored more than eight on the CPGI and thus fell under the category of “Problem Gamblers.” The CPGI (or PGSI) scale exhibited very high reliability, (Cronbach’s $\alpha = .93$). The item-total correlations were all .6 or higher, suggesting high internal consistency.

When compared to population distribution across the five gambling risk categories for Victorian adults (Hare, 2009), the teenage numbers show remarkable variation. Table 13 depicts numbers from both studies.

Table 13: Comparing Risk for Problem Gambling Between Victorian Adults (Hare, 2009) and Teenagers

Group	Non-Gamblers (%)	Non-Problem Gamblers (%)	Low-Risk Gamblers (%)	Moderate-Risk Gamblers (%)	Problem-Gamblers (%)
Adults	29.63	64.31	5.70	2.36	0.70
Teenagers	45.30	30.80	14.30	3.80	5.90

Clearly, the reported incidence of low-risk gambling, moderate-risk gambling and problem-gambling is far higher among teenagers than among adults. These differences may simply be due to difference in respondent age (i.e., teenagers undergoing an experimentation phase with regard to gambling) or they may have to do with teenagers growing up with easier access to gambling, multiple gambling options, and the general acceptance of gambling in contemporary society.

Table 14: CPGI Group Frequencies and Gender

Gender	Problem Gambling Group (Count and %)					Total
	Non-gambling	Non-problem	Low risk gambling	Moderate risk gam-	Problem gambling	
Male	442 (44.3)	305 (30.5)	123 (12.3)	54 (5.4)	73 (7.3)	997
Female	464 (46.2)	311 (31.0)	162 (16.2)	21 (2.1)	45 (4.5)	1003
Total	906 (45.3)	616 (30.8)	285 (14.3)	75 (3.8)	118 (5.9)	2000

In accordance with findings from previous studies, there were a significantly higher proportion of males than females among moderate-risk gamblers and problem gamblers. The ratio of problem gamblers for males and females was 1.6:1, which is much lower than the 3.5:1 ratio reported by Moodie and Finni-

gan (2006) in their study of 2,043 11-16 year-olds in Scotland. Females outnumbered males among low-risk gamblers. Gender-based differences in group membership were significant at $p < .001$ (Pearson Chi-Square = 27.1, d.f. = 4). These results are depicted in Table 14.

Table 15: Problem-Gambling Group Membership and Respondent Age

CPGI Group	Age (In years)					Total
	15	16	17	18	19	
Non-gambling	266	258	178	158	46	906
Non-problem gambling	67	95	175	95	184	616
Low risk gambling	41	42	26	88	88	285
Moderate risk gambling	1	0	20	22	32	75
Problem gambling	3	5	16	43	51	118
Total	378	400	415	406	401	2000

Gambling risk varies by age group. As can be seen from Table 15, membership in all groups except the “non-gambling” group increases as respondents’ age increases. These differences in group membership are highly significant (Pearson Chi-Square = 461.85, d.f. = 16, $p < .001$).

POKER AND PROBLEM GAMBLING

To better understand the problem gambling risk associated with poker, we looked at the CPGI risk categories across three sub-samples. The first sample included people who had gambled at least once in their lifetime ($n = 1094$). The second group included people who reported having gambled on poker at least once in their life ($n = 450$). The third sub-sample comprised of people who had gambled at least once in their life but had never gambled on poker ($n = 644$). Group membership across the three sub-samples is listed in Table 16.

The interesting statistics here pertain to gambling risk distribution among poker players. Teenagers who have gambled on poker have almost three and a half times the number of problem gamblers as those who have never bet on poker (18.4 percent vs. 5.4 percent). Thus, while gambling activities of 70 percent of those who have gambled on poker at least once in their life fall into low-risk or non-problem gambling categories, almost 30 percent face moderate or high problem gambling risks.

Table 16: Problem-Gambling Group Membership and Gambling on Poker

CPGI Group	Gambler Type Based on Lifetime Gambling (Number and %)		
	Have Gambled But Never on Poker	Have Gambled on Poker	All Gamblers
Non-problem gambling	426 (66.1)	190 (42.2)	616(56.3)
Low risk gambling	155 (24.1)	130 (28.9)	285 (26.1)
Moderate risk gambling	28 (4.3)	47 (10.4)	75 (6.9)
Problem gambling	35 (5.4)	83 (18.4)	118 (10.8)
Total	644 (100)	450 (100)	1094(100)

We also compared mean scores on the CPGI between those who have gambled on poker and those who have gambled on other things besides poker. Mean CPGI score for poker gamblers was 3.21 (S.D. = 5.08), while the mean for those who have gambled on other things besides poker was 1.18 (SD = 3.02). The average CPGI score for poker gamblers falls in the “moderate risk gambling” category while that for those who have gambled on other things falls in the “low risk gambling” category. The differences in mean are significant at $p < .01$ ($t = 8.27$, d.f. = 1,092).

ALCOHOL CONSUMPTION

Besides gambling in general, and poker gambling in particular, we were also interested in other risky activities partaken by Victorian teenagers. Previous research has indicated that adolescent problem gambling is often accompanied by behaviours such as drug abuse, tobacco and alcohol use, and other types of delinquent or illegal behaviour (Griffiths & Wood, 2000; Jacobs, 2000). Understanding teenagers’ use of alcohol, tobacco, and recreational drugs was therefore undertaken to estimate co-morbidity in risky behaviours.

We asked respondents about their use of alcohol. The three item AUDIT Alcohol Consumption Questions (AUDIT-C; Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998) was used to assess frequency and level of drinking, and to identify heavy drinking. The three questions about alcohol consumption appear to be a “practical, valid primary care screening test for heavy drinking and/or active alcohol abuse or dependence” (Bush, et al., 1998, p. 179). Item one ‘How often did you have a drink containing alcohol in the past year?’ is rated on a 5

point scale where 0 = (*never*), 1 = (*monthly or less*), 2 = (*2 to 4 times a month*), 3 = (*2 to 3 times a week*), 4 = (*4 or more times a week*). Item two 'How many drinks containing alcohol did you have on a typical day when you were drinking in the past year?' is rated on a 5 point scale where 0 = (*1 to 2 drinks*), 1 = (*3 to 4 drinks*), 2 = (*5 to 6 drinks*), 3 = (*7 to 9 drinks*), 4 = (*10 or more drinks*). Item three 'How often did you have six or more drinks on one occasion in the past year?' was rated on a 5 point scale where 0 = (*never*), 1 = (*less than monthly*), 2 = (*monthly*), 3 = (*weekly*), 4 = (*daily or almost daily*). Scores from the three items are summed, ranging from 0 to 12 where higher scores reflect more severe drinking behavior. The AUDIT-C showed acceptable internal consistency for the three questions, as indicated by an alpha reliability of .72.

The frequency of use of alcohol is shown in Table 17. Around a third of the respondents had not consumed any alcohol in the previous 12 months. Just under 35 percent of all 15-19 year-olds reported drinking more than once a month.

Table 17: Frequency of Use of Alcohol

Frequency of Use	Number	Percent	Cumulative Percent
Never	628	31.4	31.4
Monthly or Less	684	34.2	65.6
2 or 3 times a month	502	25.1	90.7
2 to 3 times a week	163	8.2	98.9
4 or more times a week	23	1.2	100.0
Total	2000	100.0	100.0

Only 1.2 percent of 15-19 year-olds drank four or more times a week, and 9.4 percent drank twice a week or more. Somewhat surprisingly, but consistent with the research conducted by Barnes and Farrell (1992), gender had little to do with frequency of alcohol consumption. Differences in the frequency of use of alcohol between males and females were not significant (Pearson $\chi^2 = 1.64$, $p = .80$). These results are shown in Table 18.

Table 18: Respondent Gender and Frequency of Alcohol Use

Alcohol Consumption	Gender		Total
	Male	Female	
Never	314	314	628
Monthly or less	350	334	684
2 to 4 times a month	246	256	502
2 to 3 times a week	75	88	163
4 or more times a week	12	11	23
Total	997	1003	2000

Frequency of use of alcohol varies by age. Generally speaking, alcohol usage and frequency rise as respondent age increases. These results are shown in Table 19. It appears that alcohol consumption sets in around seventeen years of age for most Victorian teenagers.

Based on the statistics shown in Table 19, 72.8 percent of 15 year-olds have not had any alcohol in the past year. This figure drops to 53.2 percent by the time respondents reach age 16. For 17-, 18- and 19-year-olds, these numbers are 11.1 percent, 17.0 percent, and 6.2 percent respectively. It is comforting to note that no one under eighteen years of age reported drinking four or more times a week.

Table 19: Alcohol Consumption by Age

Alcohol Consumption	Age (in years)					Total
	15	16	17	18	19	
Never	275	213	46	69	25	628
Monthly or less	55	115	222	149	143	684
2 to 4 times a month	28	51	94	144	185	502
2 to 3 times a week	20	21	53	33	36	163
4 or more times a week	0	0	0	11	12	23
Total	378	400	415	406	401	2000

While just over 31.4 percent of those surveyed did not have an alcoholic drink within the past 12 months, there is some evidence of binge drinking among those who drink. When asked, "How many drinks containing alcohol did you have on a typical day when you were drinking in the past year?" 23.8 per-

cent of the respondents indicated having more than five drinks, and 4.5 percent report having 10 or more drinks on occasions when they did drink.

Table 20: AUDIT-C Score Distribution

AUDIT-C Score	Frequency	Percent	Valid Percent	Cumulative Percent
.00	718	35.9	35.9	35.9
1.00	199	10.0	10.0	45.9
2.00	205	10.3	10.3	56.1
3.00	140	7.0	7.0	63.1
5.00	243	12.2	12.2	75.3
6.00	114	5.7	5.7	81.0
7.00	86	4.3	4.3	85.3
8.00	113	5.7	5.7	90.9
9.00	57	2.9	2.9	93.8
10.00	66	3.3	3.3	97.1
11.00	48	2.4	2.4	99.5
12.00	11	.6	.6	100.0
Total	2000	100.0	100.0	100.0

Respondent score frequencies on the AUDIT-C scale are presented in Table 20. A cut-off score of 4 or more suggests having an issue with heavy drinking and/or alcohol abuse or dependence. 36.9 percent of Victorian teenagers scored five or more on AUDIT-C.

Risk of problem gambling has often been linked to use of alcohol among adolescents (Gupta & Derevensky, 1998). To explore the association between alcohol abuse or dependence and problem gambling, we assessed the correlation between AUDIT-C scores and CPGI scores for the 1094 individuals who had gambled at least once in their life. The correlation coefficient between AUDIT-C and CPGI was significant at $p < .01$ (Spearman's $\rho = .174$), thus validating the existence of co-morbidity between alcohol abuse/dependence and problem gambling.

USE OF TOBACCO

Statistics assessing frequency of tobacco use among 2,000 Victorian teenagers are depicted in Table 21. Over 80 percent of teenagers in Victoria never use

tobacco, which is indeed a welcome indicator. However, 8.6 percent report using tobacco on a daily basis.

Table 21: Frequency of Use of Tobacco

Frequency of Use	No. of Respondents	Percent	Cumulative Percent
Never	1610	80.5	80.5
Less than monthly	155	7.8	88.3
Monthly	22	1.1	89.4
Weekly	41	2.1	91.4
Daily or almost daily	172	8.6	100.0
Total	2000	100.0	100.0

When analysed by gender, the results provide interesting insights. Table 22 provides statistics on tobacco use and gender. While the percentage of teenagers who never use tobacco is almost the same across males and females (around 80 percent), 7.3 percent of all males use it on a daily basis. For females, this number increases to 9.9 percent. In other words, 42.4 percent of all daily tobacco users are men, while 57.6 percent are women. Unlike alcohol consumption which typically increases with age, the numbers for tobacco use are quite different. Daily tobacco use peaks at 16-17 years of age, after which it falls. These details are presented in Table 23.

Table 22: Tobacco Use and Gender

Frequency of Use	Gender		Total
	Male	Female	
Never	806	804	1610
Less than monthly	88	67	155
Monthly	13	9	22
Weekly	17	24	41
Daily or almost daily	73	99	172
Total	997	1003	2000

Among the statistics on tobacco consumption is a worrisome trend among 16-year-old females. Only 16 males or 7.8 percent of the 16-year-old males report using tobacco on a daily basis. For 16-year-old females, this number increases to 33, or 16.8 percent of all 16-year-old girls. Future research needs to

explore why tobacco use among 16-year-old females is twice that of males of the same age.

Table 23: Frequency of Tobacco Use and Respondent Age

Frequency of Use	Age (in years)					Total
	15	16	17	18	19	
Never	330	341	314	323	302	1610
Less than monthly	21	9	38	52	35	155
Monthly	0	0	9	1	12	22
Weekly	0	1	6	15	19	41
Daily or almost daily	27	49	48	15	33	172
Total	378	400	415	406	401	2000

RECREATIONAL DRUG USAGE

Respondents were queried on their use of recreational drugs such as marijuana, ecstasy, speed, cocaine, and others. Frequency of use of recreational drugs was assessed by asking the question, "How often do you use recreational drugs (marijuana, ecstasy, cocaine, speed, etc.)?" A 5-point scale was provided for responses, where 0 = *never*, 1 = *monthly or less*, 2 = *2 to 4 times a month*, 3 = *2 to 3 times a week*, 4 = *4 or more times a week*. Results on data obtained on recreational drug use appear in Table 24.

Table 24: Frequency of Use of Recreational Drugs

Frequency of Use	Fre- quency	Percent	Cumulative Percent
Never	1741	87.1	87.1
Less than monthly	185	9.3	96.3
Monthly	9	.5	96.8
Weekly	8	.4	97.2
Daily or almost daily	57	2.9	100.0
Total	2000	100.0	N/A

As seen in Table 24, over 87 percent of Victorian teenagers have never engaged in drug use. Close to 3 percent of respondents report using recreational drugs on a daily basis. In this regard, we found significant differences across males and females. Daily use of recreational drugs was only around 1.9 percent

among males. For females, the percentage of recreational drug use on a daily basis rises to 3.8 percent.

Statistics relating frequency of use of recreational drugs and user age are provided in Table 25. It should come as no surprise that the percent of people who have never used drugs decreases as their age increases. Thus, while 95.2 percent of 15 year-olds never use drugs, this number drops down to 75.8 percent for 19-year-olds. Incidentally, the percentage of 19-year-olds who never use recreational drugs is the same as the percentage of 19-year-olds who never use tobacco, around 76 percent. However, 8.2 percent of 19 year-olds use tobacco on a daily compared to 2.2 percent who use recreational drugs on a daily basis.

Table 25: Respondent Age and Frequency of Use of Recreational Drugs

Frequency of Use	Age (in years)					Total
	15	16	17	18	19	
Never	360	350	359	368	304	1741
Less than monthly	5	26	47	26	81	185
Monthly	0	0	0	2	7	9
Weekly	1	7	0	0	0	8
Daily or almost daily	12	17	9	10	9	57
Total	378	400	415	406	401	2000

We used the "Two-Item Conjoint Screen" (TICS) to assess alcohol and other drug problems among respondents (Brown, et al. 2001). A conjoint screen question is defined as, "a question that inquires simultaneously and in aggregate about experiences with alcohol and other drugs" (Brown, et al. 2001, p.95). At least one positive response to the TICS can detect current substance use disorders with around 80 percent sensitivity and specificity. The two-items comprising TICS used in this study sought "yes" or "no" responses to the questions, "In the last year, have you ever drunk or used drugs more than you wanted to," and "Have you felt you wanted or needed to cut down on drinking or drug use in the last year?" Five hundred and seventy-two respondents or 28.6 percent of the sample scored positive on the TICS, indicating that they are likely to have a current substance abuse disorder involving drugs or alcohol, or both. The number of females with positive TICS responses outnumbered the

number of males (311 to 261). The difference in reported substance use disorder between females and males is statistically significant (Pearson $\chi^2 = 5.71$, $p < .05$, two-tailed).

COMORBIDITY IN SUBSTANCE USE

When two disorders occur in the same person, simultaneously or sequentially, they are described as co-morbid. Existence of co-morbidity also implies interactions between the disorders that affect the course and prognosis of both.

To assess the co-morbidity in substance use, we correlated frequencies of use of alcohol, tobacco, and recreational drugs. The results are presented in Table 26. Frequencies of use of alcohol, tobacco, and recreational drugs are all significantly correlated.

Table 26: Correlations between Frequency of Use of Alcohol, Tobacco, and Recreational Drugs

	Alcohol	Tobacco	Recreational Drugs
Alcohol	1.000		
Tobacco	.358**	1.000	
Recreational Drugs	.242**	.646**	1.000

**Correlation is significant at the .001 level (1-tailed).

Tobacco and recreational drug usage are most highly correlated, followed by usage of alcohol and tobacco, and alcohol and recreational drugs. Controlling for age and gender did not appreciably change these correlations.

Interesting patterns were observed with regard to CPGI group membership and substance abuse. The percentage of those who consume alcohol four or more times a week is .7 percent for non-gamblers, zero percent for moderate risk gamblers, and 2.5 percent for problem gamblers. For tobacco usage, 9.7 percent of non-gamblers inhale or smoke tobacco on a daily or almost daily basis compared to 5.3 percent of moderate risk gamblers and 5.9 percent of problem gamblers. For recreational drugs, the usage percentage for a daily or almost daily basis is 4.2 percent for non gamblers, 2.7 percent for moderate risk gamblers and 2.5 percent for problem gamblers. These figures are inconsistent with many earlier studies which suggest that problem gamblers are

more likely to drink alcohol and use drugs than other gambling groups (cf. Ladouceur, et al., 1994; Maden, Swinton & Gunn, 1992; Moodie & Finnigan, 2006; Stinchfield, 2000; Winters, Stinchfield & Fulkerson, 1993).

IMPULSIVE SENSATION SEEKING

In his foreword to the book, *The Impulse Factor*, Travis Bradberry writes, "Few things in life can lead one to greatness or ruin as rapidly and decisively as impulsivity, which is why I find it strange that it's so poorly understood" (Tasler, 2008, p. ix). Such comments notwithstanding, there has been an increasing body of research over the last two decades exploring the relationship between personality traits such as impulsivity (Eysenck & Eysenck, 1977) and sensation seeking (Zuckerman, 1984; Robbins & Bryan, 2004) and involvement in risky behaviours. Gambling, tobacco usage, and consumption of alcohol and recreational drugs are all deemed as risky behaviours, and previous research suggests that participation in these behaviours is indicated by high levels of impulsivity and sensation seeking.

Impulsivity has been conceptualized in a variety of ways. Moeller et al. (2001) suggest these definitions can be distilled into three elements: (a) decreased sensitivity to negative consequences of behaviour; (b) rapid and unplanned reactions to stimuli before complete processing of information; and (c) lack of regard for the long-term consequences (also see Nower & Blaszczynski; 2006). Zuckerman and Kuhlman (2000, p. 1000) incorporate all three elements in their conceptualization when they define impulsivity as "the tendency to enter into situations, or rapidly respond to cues for potential reward, without much planning and deliberation and without consideration of potential punishment or loss of reward." Impulsivity could be viewed as a deficit in the capacity for inhibiting dangerous reward-seeking behaviour.

Sensation seeking has been characterized as, "...a trait defined by the seeking of varied, novel, complex and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience" (Zuckerman 1994a). Sensation seeking has been found to be associated with participation in a number of risky activities including criminal activities, sexual behaviour, smoking, heavy drinking, drug use, reckless driving, and gambling (Zuckerman & Kuhlman, 2000). Zuckerman (1994b) has

combined sensation seeking and impulsivity in a supertrait called impulsive sensation seeking (ImpSS).

For this study, scores on the ImpSS were computed by summing up responses to the 19-item Impulsive Sensation Seeking Scale adapted from the Zuckerman-Kuhlman Personality Questionnaire (Zuckerman & Kuhlman, 2000). Participants were asked whether statements such as, "I like doing things just for the thrill of it," and, "Before I begin a new job, I make complicated plans," were either true (coded 1) or false (coded 0). After reverse coding relevant items, the summed possible scores ranged from 0 to 19, with higher numbers indicating higher impulsive sensation seeking trait. The ImpSS scale showed acceptable reliability (coefficient alpha reliability [α] = .76). Pertinent statistics for the ImpSS measure are provided in Table 27.

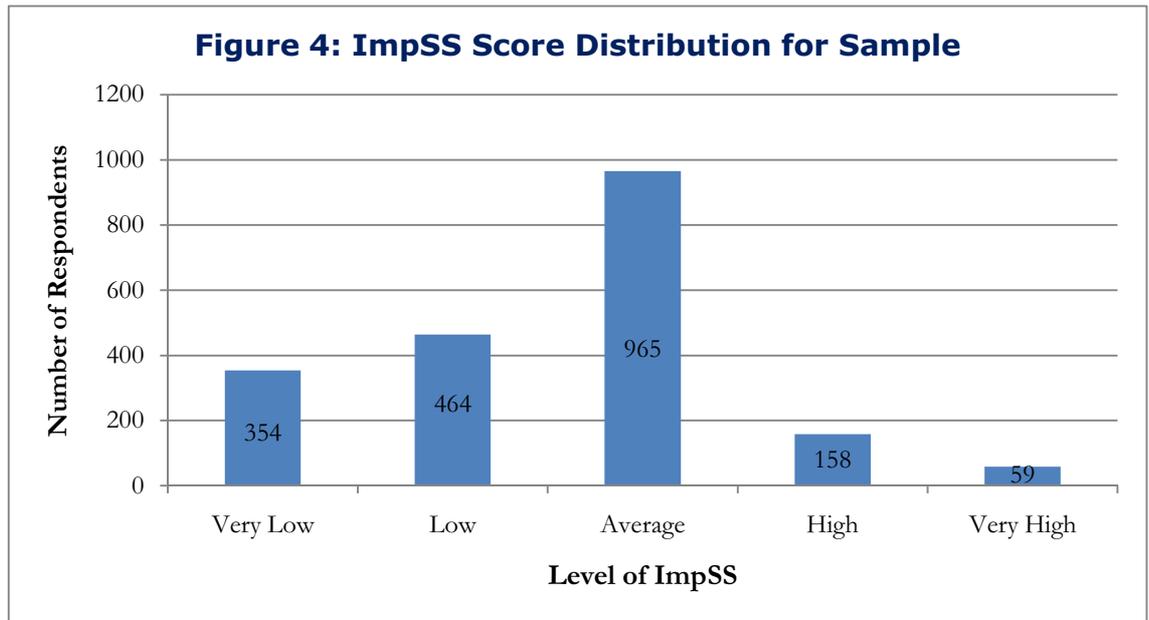
Table 27: Summary Statistics for ImpSS Scale

Mean	9.49
Median	10.00
Mode	12.00
Std. Deviation	3.95
Skewness	-.078
Std. Error of Skewness	.055
Range	19.00
Minimum	.00
Maximum	19.00

Previous studies using the ImpSS scale have found significant differences in the average scores of males and females, with males scoring significantly higher than females (cf. McDaniel & Zuckerman, 2003; Zuckerman & Kuhlman, 2000). This was not the case with the Victorian teenager sample. The average ImpSS score for males was 9.50, while that for females was 9.47 ($t = .18$, $p = .86$).

We grouped respondents into different categories of Impulsive Sensation Seeking based on their scores. Those scoring between zero and 27 percent on the ImpSS were classified into the "Very Low" (ImpSS) group; those scoring between 28 percent and 41 percent were categorized into the "Low" group, 41-

72 percent in the “Average” group, 72-85 percent in the “High” group, and 85-100 percent were classified in the “Very High” group. Figure 4 graphically depicts the respondent scores on ImpSS. Slightly less than 90 percent of all respondents scored at the “average” level or lower on ImpSS. Only 3 percent of the respondents could be categorized in the “Very High” group.



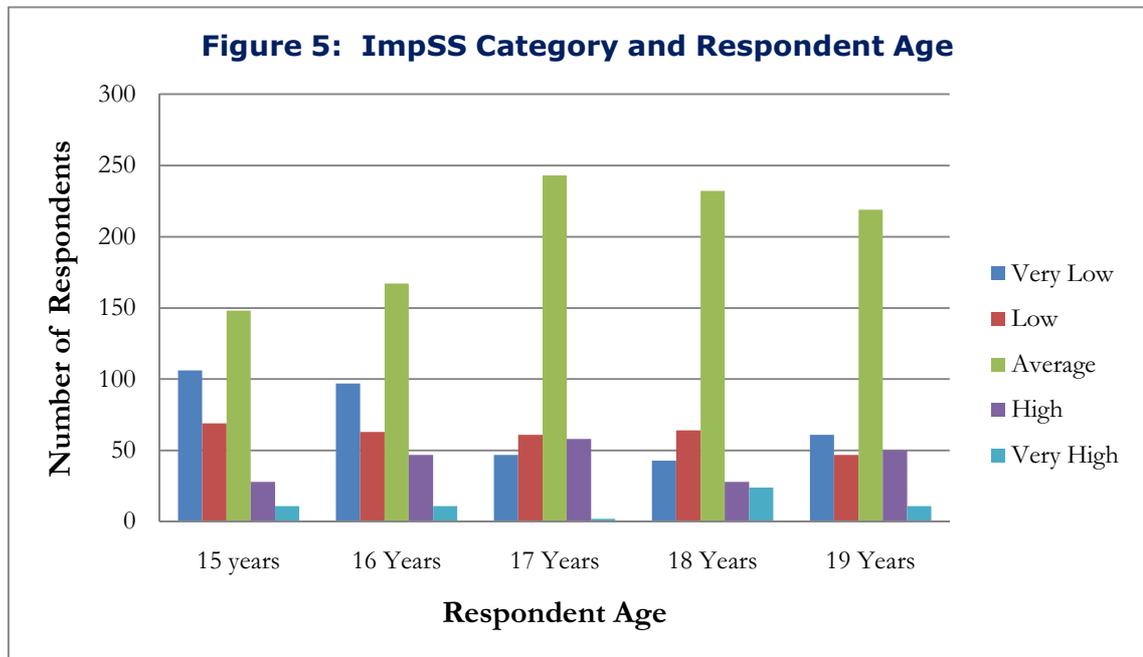
We then proceeded to ascertain ImpSS group membership within each age bracket. These findings are illustrated in Figure 5. There are significant differences in ImpSS group membership across age (Pearson Chi-Square = 122.57, d.f. = 16, significant at $p < .001$ [two-sided]).

Table 28: Impulsivity Sensation Seeking Scores Across Gambler Groups

Group	Mean ImpSS Score	S.D.
Have Never Gambled in Life	8.59	4.03
Have Gambled, But Not on Poker	10.02	3.83
Have Gambled on Poker	10.52	3.56

The relationship between age and ImpSS is not exactly linear. Furthermore, there are variations in mean ImpSS for males and females of the same age. Figure 6 illustrates the relationship between mean ImpSS score and respondents’ age, broken down by gender. Across the sample, males score the highest mean ImpSS at age 19 whereas females score the highest mean ImpSS at

age 18. Lowest mean ImpSS score for males happens to be at 17 years of age, whereas lowest mean ImpSS score for females is when they are at age 15. The differences in mean ImpSS scores by age are significant for both males and females (at $p < .001$).



Based on previous studies, we expected ImpSS to relate significantly to gambling, playing poker for money, and to the frequency of use of alcohol, tobacco, and recreational drugs. We also wanted to assess whether ImpSS scores for those who played poker for money differed from those who did not gamble at all and those who gambled on other things besides poker. As expected, those who had gambled at least once in their life scored higher on the ImpSS scale than those who had never gambled ($t = 5.40, p < .001$). Those who had played poker for money scored higher on ImpSS than those who had gambled on other activities ($t=2.19, p < .05$). Table 28 shows these results.

Table 29 provides subscale statistics for those who have played poker for money and those who have gambled, but never on poker. Compared to other gamblers, poker players score significantly higher on the Sensation Seeking subscale ($t = 2.16, p < .05$). While poker players score somewhat higher than other gamblers on the Impulsivity subscale, these differences fall short of reaching statistical significance ($t = 1.45, p = .15$).

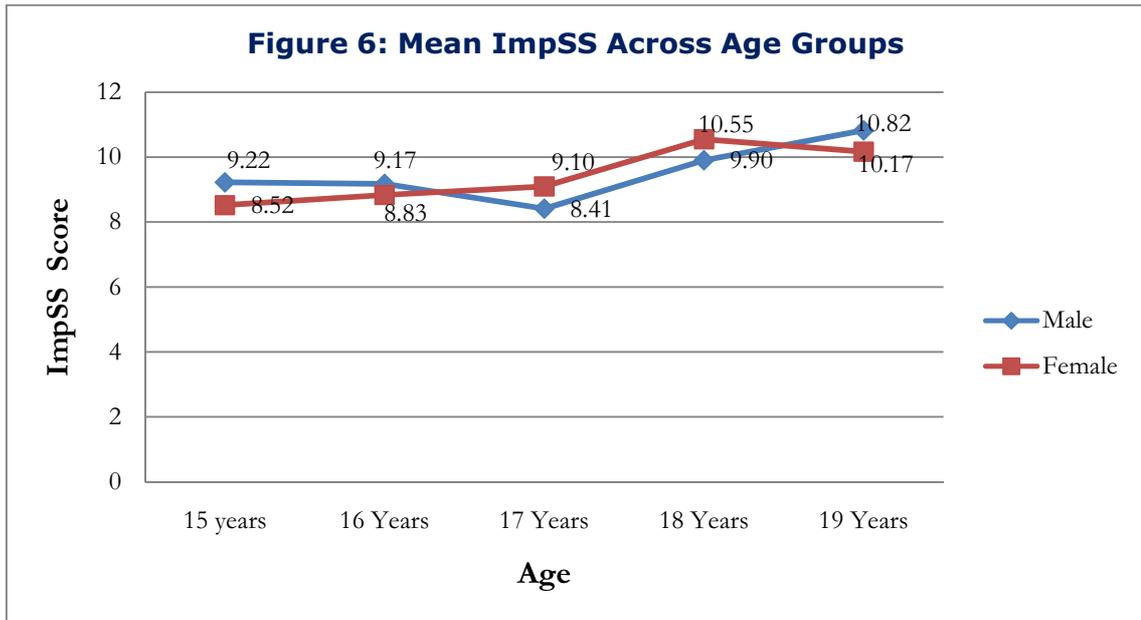


Table 29: Scores for Poker Players versus Other Gamblers on Sensation Seeking and Impulsivity

Trait	Have you ever played poker for money?	No. of Respondents	Mean	S. D.	Std. Error Mean
Sensation Seeking	Yes	450	6.88	2.39	.11
	No	644	6.56	2.50	.10
Impulsivity	Yes	450	3.64	1.95	.09
	No	644	3.46	1.96	.08

The ImpSS scale is comprised of two subscales: Impulsivity and Sensation Seeking. The Impulsivity subscale contains eight items whereas the Sensation Seeking subscale is made up of eleven items. To shed further light on impulsivity and sensation seeking tendencies of poker players vis-à-vis other gamblers, we decomposed the ImpSS scores into its two components.

Impulsive sensation seeking reflects the tendency to be willing to take risks for the sake of having novel, varied, and intense experiences (Zuckerman, 1984) and has been consistently linked to risk behaviours including substance use and risky sex (Wagner, 2001). Horvath and Zuckerman (1993) found sensation seeking to be a strong predictor of risky behaviours (crime behaviours, risky financial behaviours, social violations, and AIDS risk behaviours). Within a community sample of young adult women, Stein, Newcomb, and Bentler (1994)

found that sensation seeking predicted greater use of alcohol and more AIDS-related risk behaviours. In a study of 765 adolescents, Vitaro, Ferland, Jacques, and Ladouceur (1998) concluded that impulsivity was an important risk factor for both gambling and substance abuse. We would therefore expect a positive correlation between ImpSS and the frequency of use of alcohol, tobacco, and recreational drugs among Victorian teenagers. The results are presented in Table 30.

Table 30: Intercorrelations between Impulsive Sensation Seeking and Frequency of Use of Alcohol, Tobacco, and Recreational Drugs

	1.	2.	3.	4.
1. Alcohol Consumption	1.000	.		.
2. Tobacco Consumption	.358**	1.000		
3. Recreational Drugs Consumption	.242**	.646	1.000	
4. ImpSS	.069**	.023	.035	1.000

**The correlation is significant at $p < .001$.

As seen from Table 30, ImpSS scores correlate weakly but significantly with frequency of use of alcohol ($p < .001$). While tobacco and recreational drug consumption correlates positively with the ImpSS score, these differences are not statistically significant. The same pattern held when the Impulsivity subscale and the Sensation Seeking subscale scores were correlated with consumption of alcohol, tobacco, and drugs. While in the expected direction, tobacco and recreational drug consumption does not correlate significantly with Impulsivity or Sensation Seeking.

THE GAMBLING RELATED COGNITIONS SCALE (GRCS)

Research has indicated that gambling behaviours are partly sustained by attitudes and beliefs about gambling. Gamblers exhibit a variety of cognitive distortions, such as overestimation of their gambling skills, illusion of control over chance events, skewed temporal orientation, superstitious beliefs, selective memory and interpretive biases. Collectively, these behaviours have been termed as gambling-related cognitions (cf. Myrseth, Brunborg & Eidem, 2010). Ladouceur and Walker (1996) propose that the motivational component of

gambling activity (i.e., monetary gain and the desire to beat the game) combines with gamblers' erroneous beliefs, prompting them to repeatedly engage in the activity despite mounting losses. Griffiths (1994) has investigated the role of cognitive bias and skill in gambling activity and found that regular gamblers made significantly more irrational verbalizations than non-regular gamblers. Haroon, Baboushkin, Derevensky and Gupta (2001) report that lottery gamblers engage in faulty cognitive rationalizations when selecting lottery tickets that they perceived to be more likely to win. Similarly, in the experimental investigations of Ladouceur and his colleagues (cf. Gaboury & Ladouceur, 1989; Ladouceur, Gaboury, Bujold, Lachance & Tremblay, 1991), gamblers attributed causal significance to variables correlated with gambling outcomes, predicting outcomes, and "explaining losses situationally but wins dispositionally."

Raylu and Oei (2004) have proposed the Gambling Related Cognitions Scale (GRCS) to screen for a range of gambling-related cognitions. These include common gambling-related cognitions such as the ability to predict or control gambling outcomes via personal skill or salient cues, engaging in gambling to enhance one's self-worth, and the perceived inability to stop the gambling addiction.

Participants in the Raylu and Oei (2004) study were between 16 to 73 years of age, and drawn from a Queensland-based community population. Cronbach's alpha for the GRCS in their study was .93, and the scale effectively discriminated between problem gamblers and non-problem gamblers. We wanted to use the same GRCS scale in our study to explore whether the instrument can shed light on teenage gambling. The reliability for GRCS in the current study was higher than that reported by Raylu and Oei (2004). Cronbach's alpha in our Victorian teenagers' study was .96.

DIMENSIONS UNDERLYING GRCS

In discussing the psychometric properties of GRCS, Raylu and Oei (2004) attest to the psychometric properties of the scale. They conducted confirmatory factor analysis to support the five-factor GRCS. The five factors, labelled as GRCS subscales, are: gambling expectancies, illusion of control, predictive control, inability to stop gambling, and interpretive bias.

We conducted principal components analysis on the 23 GRCS items. Kaiser's Myer-Olkin measure of sampling adequacy was .94, indicating that the patterns of correlation are relatively compact, and so factor analysis should produce distinct and reliable factors (Field, 2000). Bartlett's Test of Sphericity was highly significant ($p < .001$), indicating relationships across the variables. The factors were subjected to orthogonal rotation to maximize dispersion of the loadings within factors and produce more interpretable factors (Field, 2000).

In the course of factor analysis, we failed to detect a five-factor model based on principal components analysis extraction (eigen values > 1) and the scree test. Rather, a two factor solution emerged, accounting for 60.1 percent of the total variance. The first factor accounted for 52.7 percent of the total variance, while the second factor contributed 7.5 percent toward total variance. Furthermore, the second factor could not be readily interpreted from a theoretical perspective. Based on the guidelines provided by Carmines and Zeller (1979), we can conclude that GRCS is a unidimensional construct. GRCS' unidimensionality could explain part of the analysis performed by Raylu and Oei (2004), where a high level of co-variation between the five GRCS factors was detected, thus suggesting a single higher order model.

GRCS MEANS AND INTERCORRELATIONS

Mean GRCS score for the 1,094 teenagers who reported gambling at least once in their lifetime was 40.53 (out of a maximum possible score of 115) and the standard deviation was 16.41. We correlated the GRCS score with the CPGI score, after controlling for age and gender. Partial correlation between respondents' GRCS score and the problem gambling score assessed by CPGI was .66 ($p < .001$), indicating that 44 percent of the variance in CPGI scores was accounted for by the GRCS scores. The correlation between GRCS and CPGI score was .72 for males and .57 for females. This amount of variance in CPGI scores explained by GRCS in the current study is considerably higher than the 18 percent reported by Raylu and Oei (2004) in their community sample study.

Since males have a higher mean CPGI score than females, it could be expected that males have a higher mean GRCS score than females. Mean GRCS score for males was 42.06, while that for females was 38.95. This difference in mean score is statistically significant ($t = 3.15$; $d.f. = 1092$, $p = < .01$). Males, on an average, scored higher than females on 21 of the 23 GRCS items. The

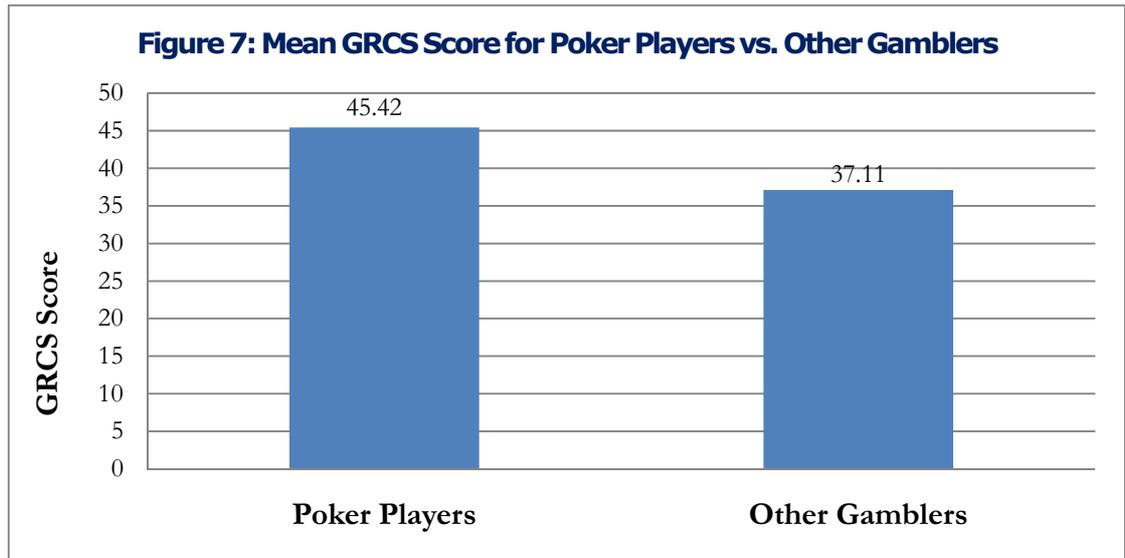
two scale items where males did not score higher were, “It is difficult to stop gambling as I am so out of control” (mean = 1.51 for both sexes) and “Specific numbers and colours can help increase my chances of winning” (mean = 1.67 for males and 1.68 for females). Thus, the differences in problem gambling group membership between males and females are associated with the differences in gambling related cognitions.

Table 31: Means and Standard Deviations of GRCS Scores for Four Gambling Groups

Gambling Group	Mean	N	S.D.
Non-problem gambling	34.13	616	12.45
Low risk gambling	39.77	285	12.90
Moderate risk gambling	51.09	75	8.72
Problem gambling	69.04	118	11.90
Total	40.53	1094	16.41

In order to investigate whether the GRCS could discriminate between the various gambling groups, participants were divided into four groups based on their CPGI scores: Non-problem gambling, low risk gambling, moderate risk gambling, and problem gambling. Results of ANOVA showed that there was a significant difference between the four groups in relation to their GRCS score ($F = 285.89, p < .001$). Means and standard deviations of GRCS scores across the four gambling groups are presented in Table 31. These results suggest that GRCS is a worthwhile screen for teenage populations.

We looked at GRCS scores for poker gamblers vis-à-vis other gamblers (see Figure 7). Poker players scored considerably higher on GRCS (mean = 45.42, S.D. = 17.41) compared to those gamblers who have never played poker for money (mean = 37.11, S.D. = 14.76; $F = 72.29, p < .001$). This difference in score may be due to poker players considering themselves to be more skilled at gambling than other gamblers (Wilson, 2006). In explaining the possibility of more erroneous gambling-related cognitions among poker players, Shead, Hodgins, and Scharf (2008, p.175) write, “More specifically, there is a strong interaction between luck and skill in poker which has the potential to result in very rigid irrational beliefs that are common among problem gamblers.”



The higher level of GRCS scores among poker players suggests that gambling-related cognitions are partly driven by the specific gambling activity people engage in. Future research needs to explore the possibility of devising activity-specific screens to detect problem gambling risks associated with various forms of gambling.

5. CONCLUSION

Media reports over the past decade or so have proclaimed that poker has taken the youth by storm in many countries. In the January 2005 article in *Plugged In* magazine titled, "TV Poker Tutors Teens," author Tom Neven writes, "Mention 'poker night' and what comes to mind? Probably aging men sitting around a card table smoking cigars and drinking beers. But these days, you are as likely to find kids dealing stud while eating pizza and downing soft drinks." Another story in the May 28, 2007 issue of *The Australian* reads, "Popularized by blockbuster movies such as *Casino Royale*, Texas Hold 'Em tournaments and games around the kitchen table are sparking concerns that poker could soon rival slot machines as a source of problem gambling." The same story cites South Australian "No Pokies" MP Nick Xenophon as saying that the boom in televised Texas Hold 'Em competitions and world championships has "opened the gate to a whole new generation of potential gamblers".

Despite mounting concerns in many quarters, little was known thus far about the prevalence of poker gambling among youth or about the seriousness of its consequences. This is the first large scale study of teen poker players in Australia. It was designed with the intent of understanding overall gambling prevalence, poker gambling prevalence, problem gambling prevalence, and evidence of co-morbidity among youth gamblers in Victoria. The analysis presented in this report paints a comprehensive picture of teen gamblers and also presents other vital data on risky behaviours typically associated with being a teenager. By so doing, this research has provided valuable insights to gambling researchers, policy makers, youth counsellors, and parents. This concluding chapter will: (a) provide a précis of key takeaways from this research, (b) state the limitations of this study, and (c) provide directions for future research.

POKER GAMBLING

We reported that 54.7 percent of our sample of 15-19 year-olds had gambled at least once in their lifetime. Gender does not seem to play a role in whether a person had gambled or not, but age certainly does. While fewer than 30 per-

cent of all 15-year-olds admitted to have gambled at least once, this number approaches almost 90 percent for 19 year-olds.

Four hundred and fifty teenagers or 22.5 percent of the sample reported having played poker for money at least once in their life. The number of respondents admitting to having played poker for money varies with age. Under 12 percent of all 17 year-olds reported having played poker for money at least once in their life, while almost 50 percent of all 19 year-olds admit to having gambled on poker. With the exception of 17 year-old respondents, the proportion of teenagers who have gambled on poker increases with age. While more males than females have played poker for money, the differences are not as large as would be expected (24.57 percent for males vs. 20.44 percent for females).

Around one in six teenagers we surveyed had played poker for money in the preceding 12 months. Of the 308 teenagers who have played poker for money in the previous 12 months, 56.8 percent are men, and 43.2 percent are women. It would therefore be erroneous to assume that poker gambling is a pastime among predominantly male teenagers.

Contrary to what some media reports have indicated, watching poker on television is not very popular among Victorian teenagers. Less than one in five respondents reports watching poker tournaments on TV. Not surprisingly, TV viewership of poker tournaments is higher among those teenagers who gamble on poker.

Only four percent of teenagers had ever participated in a poker tournament organized by the various pubs and clubs in Australia. Also surprising was the low poker club membership, with only 36 teenagers indicating that they belonged to a poker club. Within this small group, however, 50 percent were classified as problem gamblers and another 22 percent were categorized as engaging in moderate-risk gambling.

Most poker players have used multiple venues for gambling on poker. These include: at their own or friends' homes (391), the casino (144), at school (89), on the net (87), and in pubs and clubs (18). An equal number of males and females reported gambling on poker at a casino.

The frequency of poker gambling among Victorian teenagers is quite low, with over 90 percent of those who had gambled on poker in the previous year reporting that they gambled less than ten times a year. Less than five percent of all poker gamblers played poker more than twice a month. The low gambling frequency notwithstanding, 32 or 7.1 percent of those who have ever gambled on poker indicated that poker had become somewhat of a compulsion for them.

Teenage poker players are driven largely by hedonic and social motives as opposed to pecuniary gains. The five most important reasons for playing poker were: for fun, to be with friends, for excitement, to pass the time, and to alleviate boredom. "Making money" ranked seventh in importance among the thirteen possible motives presented to respondents, while "imitating celebrities and movie/TV stars" ranked the last. Sixty-one teenagers checked "escape from stress" as being an important or very important reason for poker gambling.

Questions pertaining to parental awareness and approval of poker gambling present some interesting statistics. Across the sample, more than a quarter of the respondents reported parental unawareness regarding their poker gambling while 38 percent of teenagers said that their parents/guardians were aware of their poker gambling but were nonchalant about it. Around one in five teenagers' parent/guardian approved poker gambling on the part of the child, and only one in ten parents reportedly disapproved of the child's gambling on poker. These statistics are of some concern as previous research demonstrates higher rates of problem gambling among children whose parents generally approve of gambling.

When it comes to friends, around half of all poker gamblers reported that their friends approved of their gambling behaviour, and almost an equal number indicated an ambivalent stance among their friends regarding poker gambling. Recall that "being with friends" is the second most important reason given for poker gambling.

It is difficult to definitively assess whether poker's popularity has opened the floodgates to a whole new generation of young gamblers as some commentators have suggested. In our sample, 35 percent of poker gamblers admitted to have engaged in other forms of gambling before they started playing poker for money. On the other hand, less than 20 percent said that poker was their gateway to other forms of gambling. These figures indicate that there is no un-

equivocal support for the suggestion that poker gambling leads to other forms of gambling.

GENERAL GAMBLING PARTICIPATION

As previously mentioned, just over half of all Victorians aged 15-19 years have gambled at least once in their life. People's religious beliefs had no impact on determining gambling participation.

Lottery seems to be the most prevalent form of gambling among teenagers with over one-third of the respondents having participated in it over the previous twelve months. Just over ten percent of respondents gamble on lottery or scratch-it tickets once a month or more. Other popular forms of gambling were playing cards, betting on horses or dogs, betting on sports, and betting on slot machines at a casino or elsewhere. However, with the exclusion of lottery, teenage participation in all forms of gambling over the previous twelve months was less than 30 percent.

Males and females differed in their choice of games. Besides lottery-type games, males preferred playing cards, betting on horses or dogs, betting on sports, or playing pool or other games for money. Females preferred to gamble on lottery or scratch-it tickets, card games on the Internet, and slot machines. One hundred and nineteen respondents, or 10.9 percent of those who had gambled at least once in their life, mentioned poker as their favourite form of gambling.

PROBLEM GAMBLING PREVALENCE ACROSS GROUPS

The Problem Gambling Severity Index (also known as the Canadian Problem Gambling Index or CPGI) was used in this research to classify people into various groups based on the severity of risk associated with their gambling. Around 15 percent of all teenagers fell in the "low-risk" gambling category, four percent in the "moderate-risk" category, and about six percent in the "problem gambling-risk" category. More than three quarters of all respondents were either non-gamblers or non-problem gamblers. It is worthwhile noting that the percentage of problem gamblers in our study is more than eight times as high as that reported for Victorian adults by Hare (2009), thus lending further sup-

port to the oft-repeated assertion that problem gambling rates among teenage populations are several times higher than those for adults.

Among the problem gamblers, the ratio of males to females was 1.6 to 1. Additionally, while 5.4 percent of males fell into the moderate-risk gambling group, this figure was only around 2 percent for females. The risk associated with gambling increases with age, with the gambling activities of one in eight 19 year-olds falling into the problem gambling category.

Gambling risks associated with poker players were far higher compared to those gamblers who have never bet on poker. 10.4 percent of all poker players fell in the moderate risk category and 18.4 percent fell within the problem-gambling category. For non-poker playing gamblers, these figures were 4.3 percent and 5.4 percent respectively. Thus, almost 30 percent of all gamblers who have played poker face moderate or very high risks associated with their gambling.

COMORBIDITY

Teenage is a time for experimenting with various activities and substances. Several researchers have proposed that there exists a high level of comorbidity across teenagers' risky behaviours. Besides gambling, we looked at alcohol, tobacco, and recreational drug usage among our sample.

About 10 percent of all teenagers consumed alcohol and/or tobacco more than once a week. For recreational drugs, this number was 3.3 percent. The use of tobacco peaks at age 16-17 and then falls dramatically. The "Two-Item Conjoint Screen" (TICS, Brown, et al. 2001) was used to assess alcohol and drug problems among the sample. Around 30 percent of the sample scored positive on the TICS, suggesting that are likely to have a current substance abuse disorder involving alcohol, or drugs, or both.

Our analysis showed high correlations between the frequencies of use of alcohol, tobacco, and recreational drugs. Tobacco and recreational drugs showed the highest correlation (.65) followed by alcohol and tobacco (.36), and alcohol and recreational drugs (.24). Interesting patterns emerged with regard to CPGI group membership and substance abuse. 9.7 percent of all non-gamblers consume tobacco on a daily basis compared to 5.9 percent of all problem gamblers. For recreational drugs, these figures are 4.2 percent and 2.5 percent re-

spectively. Only alcohol consumption shows a small but significant correlation with problem gambling risk. These results are somewhat inconsistent with earlier studies indicating that compared to the normal population, problem gamblers are more likely to engage in substance abuse.

IMPULSIVE SENSATION SEEKING

It was anticipated that gambling risk and frequency of use of alcohol, tobacco, and recreational drugs would relate positively with respondents' score on the impulsive sensation seeking scale (ImpSS). The trait of impulsive sensation seeking exhibited positive but very weak correlations with frequency of alcohol, tobacco, and recreational drugs' consumption. Only in the case of alcohol consumption was the correlation with ImpSS statistically significant.

As expected, those who had gambled at least once in their life scored higher on ImpSS than those who had never gambled. Poker gamblers scored a lot higher on ImpSS than those who gambled on other activities. When the ImpSS scale was disaggregated into its subcomponents, i.e. Impulsivity and Sensation Seeking, poker players scored significantly higher than other gamblers on Sensation Seeking. While poker gamblers scored higher than other gamblers on the impulsivity subscale, these differences were not statistically significant.

While previous studies have consistently recorded significant differences in ImpSS scores for males and females, such was not the case with our sample. The average ImpSS score for male teenagers was 9.50 (the scores could range from 0 to 19), while that for females was 9.47. The difference in mean scores falls way short of statistical significance. Males' highest mean ImpSS score was at age 19, whereas females scored the highest mean ImpSS at age 18. Within our sample, the relationship between age and ImpSS score was not exactly linear.

GAMBLING-RELATED COGNITIONS

Problem gambling is typically associated with erroneous beliefs and unrealistic expectations about gambling. Gamblers exhibit a variety of cognitive distortions which are classified as gambling-related cognitions. We used the Gambling-

Related Cognitions Scale (GRCS, Raylu & Oei, 2004) to assess its suitability as a gambling screen for teenage populations.

Internal reliability of the GRCS was very strong in our study (Cronbach's $\alpha = .96$). Partial correlation between GRCS score and CPGI score, after controlling for age and gender, was .66. Thus, GRCS alone explains around 45 percent of the variance in CPGI scores. The amount of variance explained as well as high scale reliability suggests that GRCS is an appropriate screening instrument in diagnosing problem gambling among teenagers. Results of ANOVA showed that there was a significant difference between four gambling groups (non-problem gambling, low-risk gambling, moderate-risk gambling, and problem gambling) in relation to their GRCS scores.

When GRCS scores for poker gamblers were compared to other gamblers, poker gamblers scored significantly higher than those gamblers who had never bet on poker. The combination of luck and skill that determines winning or losing on poker may account for higher GRCS scores among poker players. High GRCS score for poker players also indicates the appropriateness of using cognitive therapy as a means of counselling problem poker gamblers.

Our analysis of the GRCS led to only one dimension underlying the 23 scale items. We failed to detect the five factor model along which the GRCS was originally constructed by Raylu and Oei (2004).

LIMITATIONS

Youth gambling studies in the past have used various sampling and data collection methods (e.g., telephone surveys vs. school-based screens, community vs. convenience samples), different instruments and measures (SOGS-RA, DSM-IV, CPGI), and adopted varying cut-off scores with different instruments. These variations make it difficult to meaningfully compare problem gambling prevalence and other findings across studies.

The strength of our research is the large sample size of 2,000 Victorian teenagers. For the most part, all 2,000 surveys were complete, and used in various analyses. We used a panel for our research. Use of a survey research panel enabled us to reach teenagers who were in school, at a university, and also those who were working or unemployed. Thus our survey represented teenagers across a broader spectrum of occupation.

Conversely, using panel data always raises a question about the representativeness of the sample, as respondents self-select themselves to participate in the survey. Even though part of this concern is alleviated by the large sample size, there is no way to ascertain that the sample is truly representative of the entire Victorian teenage population. Given the sensitivity involved in studying gambling-related issues, and the age of the population being studied, obtaining a truly representative sample will always be a challenge for adolescent gambling researchers.

This research was done using a sample drawn from the State of Victoria, where there is only one casino, though multiple opportunities exist for other forms of gambling. The results could be different for teenagers in other states such as Queensland which has more than one casino or where gambling access and opportunities vary from those in Victoria.

Though it would have been desirable to study of teenagers of all ages, the sample we actually surveyed was between the 15 to 19 age group. Responses and prevalence rates among 13 year-olds and 14 year-olds were missing from our analysis. These age groups are not well-represented in panels, and researching them would have involved an entirely different data collection procedure. Projecting from the findings of this research, we can surmise that the overall gambling participation rate, aggregate problem gambling prevalence, and proportion of teenagers who gamble on poker would have been lower had 13 and 14 year-olds also been included in the research.

A Web survey precludes any opportunities for respondents to clarify any of the survey questions that may not have been well-understood. To minimize ambiguity and lack of comprehension in the final survey instrument, we carried out focus groups on the key topics addressed in the survey. The survey instrument was also pre-tested on 25 teenagers attending Bond University. Despite these precautionary measures, there is always the possibility that the precise meaning of some of the survey questions could have eluded a small minority of respondents.

Constraints by way of questionnaire length and associated respondent fatigue pre-empted us from asking some vital questions pertaining to teenage gambling. These include a battery of questions related to parental gambling history and parental attitudes toward gambling, the age of onset of gambling,

and the relationship between gambling and personality traits such as excitability, extroversion, and anxiety. However, since we wanted to explore the uncharted territory of poker gambling among teenagers, this trade-off seemed very reasonable.

Like most previous studies on adolescent gambling, our research was confined to one state within Australia. As such, findings from this study may not justifiably be generalized to other countries or even to other provinces within Australia. Future research employing national and cross-national samples will be invaluable to shed light on issues such as access, culture, and regulatory influences impacting youth gambling. Likewise, meta-analyses of extant studies on teenage gambling will also broaden our understanding of the aetiology and consequences of youth gambling.

DIRECTIONS FOR FUTURE RESEARCH

Studies dealing with poker gambling in general, and teenage poker gambling in particular, are scarce in the responsible gambling literature. Clearly, there is imbalance between the popularity of poker and its attendant concerns on the one hand and the paucity of available information on poker gamblers on the other. Referring to poker's popularity in the United States, Hardy (2006, p.35) writes, "One indicator of the widespread nature of poker playing is that poker sets are available everywhere, from Toys R Us to supermarkets. Poker is so popular that playing card manufacturers doubled production of poker sets, and poker paraphernalia were among the top-selling December holiday gifts in 2004. Teen playing seems to have fuelled most of these sales." The poker mania evident in many societies, including Australia, makes it imperative for responsible gambling scholars to conduct further studies on poker gambling.

It would be interesting to study the pathways to poker gambling among the youth population. Where and how young people learn poker, the age at which they start playing the game for money, age-wise breakdown of the money spent playing poker in a given time period, and the time spent on this activity would also be areas worthy of attention.

This study has made a start in assessing where teens play poker, their motivations for playing, personality correlates of poker gamblers as measured by the traits of impulsivity and sensation seeking, and the problem gambling

prevalence among poker players. Among other things, we discovered that almost three-fourths of poker gamblers who belong to a poker club face moderate or severe problem gambling risks. However, under 2 percent of the sample we surveyed actually belonged to a poker club. Future research on poker club members using a large sample is needed to precisely determine the prevalence of problem gambling among members. Should the results from our study hold consistent with larger samples, policy measures could be considered regarding the ways in which poker clubs advertise, recruit their members, and organize poker tournaments.

Although poker gambling has been generally viewed as a largely male-dominated pastime, our research indicated that a substantial number of females also gamble on poker. Future research across various age groups is needed to determine whether poker playing among female teenagers is a passing fad or an activity that carries into adulthood.

The high prevalence of problem gamblers among poker players also deserves further attention. Research is urgently needed to understand why problem gambling rates among teenager poker gamblers are more than three times as high as those gamblers who do not bet on poker. Investigation along these lines may lead to development of special screens and counselling approaches specific to young poker gamblers.

Gambling-related cognitions of poker players need further scrutiny. Focused research is needed to determine unique characteristics of the game as well as participants which lead to higher cognitive distortions among poker players relative to other gamblers.

On issues relating to co-morbidity, our research uncovered a weak positive correlation between CPGI scores and the frequency of alcohol consumption. No systematic relationships between gambling risk and participation in other risky behaviours were evident in our sample. This is in contrast to earlier studies where several scholars have attested to the link between gambling severity and substance abuse among adolescent populations. Also lacking in our research was any evidence linking use of tobacco and recreational drugs to the trait of impulsive sensation seeking, a finding that has consistently surfaced in many previous studies. Further research is needed to explain this anomaly.

The last major theoretical issue requiring scholarly attention that comes to mind relates to the discrepancy in adolescent problem gambling prevalence across extant studies. A lot of variability in reported problem gambling rates arises from the diversity of scales used to diagnose problem gambling. In this study, we used the CPGI, which has been judged to be superior to other instruments such as the SOGS, DSM-IV and the Victorian Gambling Screen in terms of its overall rationale, psychometric properties, and ease of administration (Booker, Clara & Cox, 2009; McMillen, Marshall, Ahmed & Wenzel, 2004). However, the construct validity of the CPGI has recently been questioned given its derivation from scales designed to assess gambling severity among clinical populations (Svetieva & Walker, 2008). Clearly, there is a need for further developing psychometrically sound, comprehensive instruments that approach a gold standard for diagnosing youth problem gambling.

6. REFERENCES

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7. APPENDIX: QUESTIONNAIRE USED FOR SURVEY

Poker and Gambling Among Victorian Teenagers

We appreciate your participation in this research. This research is sponsored by the Department of Justice, Government of Victoria and is conducted by Professor Sudhir Kale of Bond University. The survey seeks to better understand gambling and poker playing among Victorian teenagers. Your responses to this survey are totally anonymous. Any information you provide will be held in the strictest confidence and no single respondent will be identified by name.

If you do agree to participate, you may withdraw your consent at any time, without any consequences. Participants will not be required to answer any questions they deem to be too personal or intrusive.

As an incentive, participants will be invited to provide their contact information solely for the purposes of including them in a sweepstakes to win one of five \$100 department store gift vouchers.

If you have any queries or would like to be informed of the aggregate research finding, please contact Sudhir Kale on (07) 5595 2214 or skale@bond.edu.au.

Should you have any concerns with regard to the conduct or nature of this research, please feel free to contact:

Senior Research Ethics Officer

Bond University Human Research Ethics Committee

c/o BURCS

Bond University

QLD 4229

Tel: (07) 5595 4194

Fax: (07) 5595 1120

Email: buhrec@bond.edu.au

Section 1

RISK-TAKING PROFILE

Listed below are a series of questions to assess your sensation-seeking disposition. Please complete the following questions. There are no right or wrong answers, everyone is an individual, just respond to the statement. For each statement, choose either true or false. If you do not like either choice, mark the choice you dislike the least.

1. I like to have new and exciting experiences and sensations even if they are a little frightening. True False
2. I like doing things just for the thrill of it. True False
3. I sometimes do "crazy" things just for fun. True False
4. I sometimes like to do things that are a little frightening. True False
5. I enjoy getting into new situations where you can't predict how things will turn out. True False
6. I'll try anything once. True False
7. I prefer friends who are excitingly unpredictable. True False
8. I like "wild" uninhibited parties. True False
9. I would like the kind of life where one is on the move and traveling a lot, with lots of change and excitement. True False
10. I am an impulsive person. True False
11. I like to explore a strange city or section of town by myself, even if it means getting lost. True False
12. I would like to take off on a trip with no preplanned or definite routes or timetables. True False
13. Before I begin a complicated job, I make careful plans. True False
14. I very seldom spend much time on the details of planning ahead. True False
15. I tend to begin a new job without much advance planning on how I will do it. True False
16. I usually think about what I am going to do before doing it. True False
17. I often do things on impulse. True False

18. I often get so carried away by new and exciting things and ideas that I never think of possible complications. True False

19. I tend to change interests frequently. True False

Section 2

ALCOHOL AND OTHER DRUGS

This section looks at behaviours related to consumption of alcohol, tobacco, and recreational drugs. Remember your responses are anonymous and confidential.

1. How often did you have a drink containing alcohol in the past year? (consider a drink to be a can or bottle of beer, a glass of wine, a wine cooler, or a shot of liquor (like scotch, gin or vodka))

Never _0 Monthly or less _1 2 to 4 times a month _2
2 to 3 times a week _3 4 or more times a week _4

If you answered "Never," go to question 4.

2. How many drinks containing alcohol did you have on a typical day when you were drinking in the past year?

1 to 2 drinks _1 3 to 4 drinks _2 5 to 6 drinks _3 7 to 9 drinks _4 10 or more drinks _5

3. How often did you have six or more drinks on one occasion in the past year?

Never _0 less than monthly _1 monthly _2 weekly _3 daily or almost daily _4

4. In the last year, have you ever drunk or used drugs more than you meant to? Yes _1

No _0

5. Have you felt you wanted or needed to cut down on your drinking or drug use in the last year? Yes _1 No _0

6. Do you chew, smoke, or inhale tobacco?

Never _0 less than monthly _1 monthly _2 weekly _3 daily or almost daily _4

7. How often do you use recreational drugs (marijuana, ecstasy, cocaine, speed, etc.)?

Never _0 less than monthly _1 monthly _2 weekly _3 daily or almost daily _4

Section 3

POKER AND GAMBLING

The following questions relate to your activities concerning poker and gambling.

1. Do you watch Poker Tournaments on TV? Yes ₁ No ₂
2. If yes, roughly, how many hours a week do you spend watching Poker on TV? _____
3. Are you a member of any Poker Club (e.g. National Poker League, Australian Poker League)? Yes ₁ No ₂
4. Have you ever played poker for fun or money anywhere (including Internet)?
Yes ₁ No ₂
5. How did you learn to play Poker?
Don't Know How ₁ From Books ₂ From Friends ₃ From the
Internet ₄ From Parents or Relatives ₅ From TV ₆
Other (Please Specify _____) ₇
6. Do you or have you played in Poker tournaments organized by various pubs and clubs in Australia? Yes ₁ No ₂.
If yes, how many tournaments have you played in so far? _____
7. Have you ever gambled in your life? (We are only interested in the gambling you have done **which involves real money**, that is, do not include gambling for sweets, tokens, favours, etc. This includes gambling on cards, scratchies, lottery, sports, horses, dogs, pokies, and so on.)
Yes ₁ No ₂

If "No," please go to Section 5.

8. Have you ever played poker for money? Yes ₁ No ₂

If "No", please proceed to **Section 4.**
9. If you have played poker **for money**, where did you play (check all that apply)?
At my home or friends' homes ₁ At School ₂
At the Casino ₃ On the Internet ₄
At clubs or pubs ₅ Other (please specify) _____ ₆
10. Approximately, how long have you been playing poker for money? _____ years _____ months
11. What is the **largest** amount of money you have **ever** lost on Poker **in one week**?
\$ _____

12. What is the largest amount of money you have **ever** won on Poker in one week?

13. Have you played Poker for money in the last 12 months? Yes ₁ No ₂

If No, go to Question 20.

14. Over the last 12 months, approximately how many times have you played Poker for money?

15. If you have played Poker for money in the past 12 months, how many hours a week do you typically spend **in a week** on this activity?

16. In the **12 months**, what is the **largest** amount of money you lost on Poker **in one week**?

\$ _____

17. In the last year, what is the **largest** amount of money you have won on Poker **in one week**?

\$ _____

18. If you have played poker for money **in the last 12 months**, we would like to know what motivates you to play. Listed below are some of the reasons young people play poker for money. How important are each of the following reasons to you? If you have not played Poker for money in the last 12 months, go to Q. 19.

Reason for Playing	Unimportant	Of Little Importance	Moderately Important	Important	Very Important
1. Desire to get rich/make money	<input type="radio"/>				
2. To pass the time	<input type="radio"/>				
3. To impress my friends or partner	<input type="radio"/>				
4. For fun	<input type="radio"/>				
5. To be with my friends	<input type="radio"/>				
6. To overcome loneliness	<input type="radio"/>				
7. For excitement	<input type="radio"/>				
8. To imitate celebrities and movie/TV	<input type="radio"/>				

Reason for Playing	Unimportant	Of Little Importance	Moderately Important	Important	Very Important
9. To enhance my own self image	<input type="radio"/>				
10. To display my skills	<input type="radio"/>				
11. Out of compulsion/addiction	<input type="radio"/>				
12. To escape the stresses of life	<input type="radio"/>				
13. To overcome boredom	<input type="radio"/>				
14. Others: Please specify _____	<input type="radio"/>				

19. If you have played Poker for money in the last twelve months, we would like to know the attitudes of people close to you concerning your gambling on Poker. Please choose the option that best captures your response.

	Not Applicable	Not Aware of my Poker Gambling	Strongly Disapprove of my Poker Gambling	Disapprove of my Poker Gambling	Neither Approve or Disapprove of my Poker Gambling	Approve of my Poker Gambling	Strongly Approve of my Poker Gambling
Parents/ Guardian		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boyfriend Girlfriend, or Spouse		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Understanding Your Views

Listed below are a series of statements related mostly to Poker. Please mark the answer that most accurately reflects your level of agreement with each statement. There are no right or wrong answers.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. Playing Poker for money has made my life more exciting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I enjoy talking about Poker with my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. At least one of my parents disapproves of my playing Poker for money.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. If I lose money on Poker, I cannot wait to play again and win it back.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I am a strong believer in my power of intuition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I enjoy gambling on Poker using the Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. You can make a lot of money on Poker if you are smart.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I admire people like Joe Hachem who have won millions of dollars playing Poker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. When it comes to winning or losing money on Poker, you create your own luck.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I gamble on Poker to get away from the stresses of life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Winning on Poker is more a matter of luck than skill.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I feel miserable when I lose money on Poker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Overall, I have won more money on Poker than I have lost.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Shows about Poker and Poker tournaments on TV have been an influence on my Poker gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. More and more of my friends are taking up gambling on Poker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Playing Poker for money is sexy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Media such as radio, newspapers, magazine, and TV motivate me to my play Poker for money.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Media coverage of Poker is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
accurate and realistic					
19. My parents' approval or disapproval of gambling means a lot to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I used to engage in other forms of gambling even before I started gambling on Poker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. I have started engaging in other forms of gambling AFTER I started gambling on Poker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Poker tournaments organized by clubs and pubs have played a role in my playing poker for money.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Celebrities have had a part to play in my taking up Poker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. My partner or girl-friend/boyfriend approves of my playing Poker for money.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Playing Poker for money has become somewhat of a compulsion for me.					

Section 4

NOW SOME GENERAL QUESTIONS ABOUT GAMBLING

1. Please indicate how often you have played on each of these over the **last 12 months**. We are only interested in the gambling you have done **which involves real money**, that is, do not include gambling for sweets, tokens, favours etc.

Done which of these for money?	Not in the last year (or never)	Sometimes (less than once a month)	Fairly Often (a few times a month)	Frequently (Once a week or more)
1. Played cards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Bet on horses/dogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Bet on sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Bought lottery or scratch-it tickets, e.g., Tattsлото	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Bet on gaming tables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Played poker machines at a casino	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Done which of these for money?	Not in the last year (or never)	Sometimes (less than once a month)	Fairly Often (a few times a month)	Frequently (Once a week or more)
7. Played poker machines outside a casino (e.g., at a hotel or club)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Played bingo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Played pool or other game and bet on results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Played casino type games on the Internet (e.g., roulette)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Played poker machine/slot machine type games on the internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Played card games on the internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Bet on something else (What?) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. What is your most favourite form of gambling (choose from above)? _____

3. In the **last 12 months**, what is the **largest** amount of money you lost **in one week**?

\$ _____

4. What is the **largest** amount of money you have **ever** lost in one week?

\$ _____

5. In the last 12 months, what is the **largest** amount of money you have won gambling in one week?

\$ _____

6. What is the largest amount of money you have won in a week in gambling **ever**?

\$ _____

7. Here are a few questions about your gambling activities **over the past 12 months**. Using the scales below, for each question, please choose one option that most applies to you.

Thinking about your gambling over the past 12 months, how often	Never	Sometimes	Most of the time	Almost always
Have you bet more than you could really afford to lose?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you gone back another day to try to win back the money you lost?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you borrowed money or sold anything to get money to gamble?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt that you might have a problem with gambling?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have people criticized your betting or told you that you had a gambling problem, regardless of	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt guilty about the way you gamble, or what happens when you gamble?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has your gambling caused you any health problems, including stress or anxiety?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has your gambling caused any financial problems for you or your household?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Your Thoughts about Gambling

8. Below are a few items on what you're thinking about or feeling when you're gambling. Please indicate (by ticking in the boxes) the extent to which you agree with the value expressed in each statement.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. Gambling makes me happier	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I can't function without gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Praying helps me win in gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Losses when gambling, are bound to be followed by a se-	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree	Dis-agree	Neither Agree nor Disagree	Agree	Strongly Agree
ries of wins					
5. Relating my winnings to my skill and ability makes me continue gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Gambling makes things seem better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. It is difficult to stop gambling as I am so out of control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Specific numbers and colours can help increase my chances of winning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. A series of losses will provide me with a learning experience that will help me win later	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Relating my losses to bad luck and bad circumstances makes me continue gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Gambling makes the future brighter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. My desire to gamble is often overpowering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I collect specific objects that help increase my chances of winning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. When I have a win once, I will definitely win again	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Relating my losses to probability makes me continue gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Having a gamble helps reduce tension and stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I'm not strong enough to stop gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. I have specific rituals and behaviours that increase my chances of winning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. There are times that I feel lucky and thus, gamble those times only	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Remembering how much money I won last time makes me continue gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. I will never be able to stop gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. I have some control over predicting my gambling wins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. If I keep changing my numbers, I have less chance of winning than if I keep the same numbers every time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 5

HELP SEEKING

Please answer the following questions by ticking the appropriate box or giving requested information.

1. During the past 12 months, did you feel you needed help for (check as many options as you wish):

- Emotional problems/issues
- Relationship problems/issues
- Drug or alcohol problems
- Gambling problems
- Academic/educational issues/needs
- Other issues/needs (what) _____
- I did not feel I needed help for any of these issues

2. Did you actually seek help for these issues?

- No, I have not had any of these issues _1
- No, I had problems/issues but did not seek any help _2
- Why not? _____
- Yes, I have sought help for these issues _3

Section 6

DEMOGRAPHIC INFORMATION

Please answer the following questions by ticking the appropriate box or giving requested information.

1. What was your age on 30 April, 2010 (in years)? _____
2. What is your gender? Male _1 Female _2
3. Are you: Single _1 Partnered (e.g., married or steady boyfriend/girlfriend)
4. What is postcode of your residence in Australia? _____
5. What country were you born in? _____

6. What country was your mother born in? _____
7. What country was your father born in? _____
8. What language do you speak at home? _____
9. What religion are you? _____ (state 'no religion' if you have no firm beliefs)
10. How long have you lived in Australia (please tick the box that is most accurate for you)?
- All my life _1 10 years or more (but not my whole life) _2
Between 5 and 9 years _3 Between 2 and 4 years _4
More than 1 year but less than 2 years _5 Less than 1 year _6
11. Do you go to school (or university) full-time? Yes_1 No_2
12. Do you work full-time? Yes_1 No_2
13. Do you work part-time? Yes_1 No_2
14. If you work full-time or part-time, how much money do you make in a week (after taxes)?
\$ _____
15. Do you live at home with one or both parents? Yes_1 No_2
- If so, which of the following best describes your living situation?
- Live with both birth-parents _1 Live with birth mother, but not father _2
Live with birth father but not mother _3 Other _4
16. How much spending money do you get **per week** from your parents? \$ _____
17. What is your approximate household income per year before tax? \$ _____

Thank you very much for completing this survey. Your participation is greatly appreciated. Your contribution to this survey is anonymous.

AGAIN OPTIONAL LINK BACK TO SERVICES INFORMATION

Click here if you would like to be directed to the support services page to find information about gambling specific or general counselling services available to you.

(Link to Swinburne PG Site)

