The Virtual Jackpot!

Contexts of youth gambling in Queensland: Phase 2

Prepared by

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EXECUTIVE SUMMARY

This project, involving an extensive literature review and results from a descriptive study of almost 400 young people in South East and Regional Queensland, provides information for policy and programmes addressing youth gambling.

The age range for respondents was 15 to 25 years with a median age of 19 years. Respondents were employed (27.3%), at school (20.0%), at TAFE or undertaking an apprenticeship (19.5%), at University (15.4%), unemployed (16.7%) and one percent was involved in other activities.

Fifty-five percent of the sample were residents of Brisbane or the Sunshine Coast and 45% were from Bundaberg and Hervey Bay. With the exception of participation in gambling at table games in casinos, there were no significant differences in gambling behaviour between the different locations.

Seventy-nine percent of respondents reported that they had gambled in the past year. There were no differences between the age groups, gender and geographical location of respondents. The median age at which both male and female respondents first gambled was 15 years.

Scratch lotto tickets, raffles and poker machines were the most common types of gambling and nearly half of respondents had tried three or more types of

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gambling in the year preceding the survey. Males were more likely to participate in card games than females (31.7% compared to 13.1%) and less likely to play Bingo than females (8.2% compared to 15.7%).

In relation to the context in which respondent gambled, 60.0% of young people gambled with friends and 10.0% gambled alone - findings that highlight the social nature of the gambling experience for young people. Similar to the effects of gender on the types of gambling participation, gender differences were found in regards to the context in which young people gambled. Compared with males, females were more likely to gamble with their partner and parents and less likely to gamble with friends.

While nearly half of respondents had played video or computer games, this was not reflected in participation in gambling on the internet with only 3.7% reporting that they had gambled on the internet using money. There were few aspects of internet gambling that appealed to respondents.

The prevalence of problem gambling using the South Oaks Gambling Screen-Revised Adolescent (SOGS-RA) was estimated at 7.9% (based on scores of 4 or greater). Males were more likely to be in this category. The influence of family role models was apparent, with young people more likely to have gambled in the year prior to the survey if their parents gambled. Twentythree percent of young people reported negative effects from a family member's gambling behaviour.

Overall, respondents stated that the consumption of alcohol did not make them more likely to gamble but those who gambled and drank alcohol acknowledged that they were more likely to spend more money if they were drinking alcohol.

The study has revealed a deficit in knowledge related to gambling with only half the sample aware of concepts such as probability and odds for different types of gambling. Only 40.0% young people had received information about gambling from their parents and 37.0% had obtained this at school although whether this was curriculum based is unclear.

Findings from this research contribute to the growing body of research concerned with the gambling behaviour of young people in Queensland.

1.0 INTRODUCTION

The Virtual Jackpot! Contexts of youth gambling in Queensland was a research project funded by the Office of Liquor, Gaming and Racing (formally Queensland Government Office for Gaming Regulation) and conducted in partnership with the University of Queensland. The purpose of the research is to provide information on young people's gambling patterns that can assist the Office of Liquor, Gaming and Racing to address the issue of gambling addiction. It consists of two phases:

Phase 1 provided qualitative data that examined the social construction of gambling behaviours in young people. The information was used to develop a comprehensive survey instrument relevant to the target group.

Phase 2 of the project used quantitative methods to identify any association between the development of gambling behaviours and the socio-cultural and environmental contexts of young people in Queensland.

The specific objectives of the research project were:

- To determine the prevalence of gambling behaviours amongst young people in Queensland;
- To identify patterns associated with the development and maintenance of gambling behaviours in young people;

- To identify specific socio-cultural and environmental risk and protective factors associated with the development and maintenance of gambling behaviours in young people;
- To examine theoretical approaches and public health initiatives that may contribute to the development of effective strategies to address the specific risk and protective factors identified.

The Research Questions

- What specific risk and protective factors associated with the socio-cultural and environmental contexts of young people in Queensland contribute to or prevent development and maintenance of gambling behaviours?
- What theoretical approaches and public health initiatives addressing specific risk and protective factors associated with the development and maintenance of gambling behaviours in young people, have provided positive evidence-based outcomes?

The project may provide useful information for the development of effective prevention programmes targeting young people in Queensland.

2.0 LITERATURE REVIEW

A framework for the literature review relating to youth gambling was devised to incorporate the objectives of this research project and thus facilitate the process of determining whether these objectives had been met. The objectives were dealt with under the following headings:

Epidemiology

- To determine the prevalence of gambling behaviours amongst young people in Queensland;
- To identify patterns associated with the development and maintenance of gambling behaviours in young people.

Definitions and Theories

 To examine theoretical approaches and public health initiatives that may contribute to the development of effective strategies to address the specific risk and protective factors identified.

Methods used to measure risk

 To identify the methods that have been used in both Australian and International contexts to determine the specific socio-cultural and environmental risk and protective factors associated with the development and maintenance of gambling behaviours in young people.

2.1 Epidemiology

2.1.1 The Australian context

Gambling has been part of the Australian culture since the late 18th century commencing with the introduction of Two-Up, a game popular with English and Irish settlers and convicts. By the 1850s it was being played on the goldfields of the eastern colonies and spread across the country with subsequent populations shift in response to gold rushes. Its popularity was further enhanced through its uptake by World War I soldiers, and to the present day this game of chance is a regular and legally sanctioned part of ANZAC Day activities (Australian Institute for Gambling Research, 1999).

In Australia, increased participation in gambling has led to its acceptance as a normal leisure pursuit. This has provided an impetus for the gambling industry to provide an increased range of opportunities to gamble and greater diversity in the types of gambling available. As the incidence of gambling has increased, expenditure and therefore income has grown for those States and Territories that have legalised or liberalised access to gaming machines. Gambling expenditure in Australia in 1998 was more than double what it was in the preceding decade and more than triple the expenditure of 15 years before.

In 1999, the Productivity Commission estimated that gambling industries accounted for 1.5% of Australia's Gross Domestic product (GDP) and that Australia was one of the heaviest gambling nations in the world. From 1997-

1998, the Australian population spent \$11 billion on gambling which provided \$3.5 billion in taxes and accounted for 3.0% of disposable income or \$800 per capita annually (Australian Bureau of Statistics, 1997–1998). In 2000-2001, this expenditure had increased by 21% to \$944 per head of the adult population (Australian Bureau of Statistics, 2000-2001).

Given these figures it is clear that gambling provides significant revenue that in turn, funds many services within the community. Additionally, gambling arguably represents an important social tradition that provides valued entertainment for many (Costello & Millar, 2000). Recognition must be afforded to the positive features of gambling, namely the contribution gambling makes to general and gambling industry revenue, the opportunities it provides for employment and the enjoyment of participants. However, the potential for gambling to lead problematic participation and in turn psychological, behavioural, social, legal and familial consequences must also be acknowledged (Productivity Commission, 1999).

In relation to young people, problematic gambling patterns can be seen in approximately 4.0% - 8.0% of adolescents between 12 and 17 years of age, and another 10.0% - 15.0% are at risk of developing a serious problem (Derevensky & Gupta, 2004; Derevensky, Gupta, Winters, 2003; Hardoon, Derevensky, 2002; Jacobs, 2000; National Research Council, 1999). Young People who participate in gambling at an early age (primary school) have been shown to have a higher

likelihood of progressing to problem gambling and this behaviour has been shown to correlate with other risk-taking behaviours such as alcohol and other drug use and smoking (The South Australian Centre for Economic Studies, 2008;Jackson, Dowling, Thomas, Bond & Patton, 2008). It is therefore evident that steps must be taken to quantify the problem and in turn, strategies need to be developed and evaluated to address the burden on the individual, their family and society. Research on the prevalence and context of youth gambling in Australia and other developed countries is now gaining some momentum but an increased emphasis on such research is required in order to provide accurate baseline data.

Researchers support the view that gambling habits in early adulthood are the result of behaviours that have developed between 11 and 17 years of age (The South Australian Centre for Economic Studies, 2008). Recognition that problem gamblers are likely to start gambling at an earlier age has led to research involving school students so that accurate data are available on the prevalence and types of youth gambling, the characteristics of those who gamble and the circumstances in which this occurs. In 2003-2004, Delfabbro, Lahn and Grabosky (2005) studied a sample of 926 school students (mean age of 14.5 years) from years 7 to 12 in the Australian Capital Territory. Seventy percent reported that they had gambled in the previous 12 months and one in ten students said they gambled weekly or more often. Not surprisingly, rates were higher in older and more senior students (64.1% of Year 7 students had gambled

compared to 80.5% of Year 12 students). The most popular types of gambling were Bingo/scratch cards (41.0%), private card games (40.0%), racing (32.0%) and gambling on sporting events (26.0%).

Delfabbro et al. (2005) found that the social context of adolescent gambling varied according to the gambling activity. Card games were usually with friends, poker machine and internet gambling were solitary and racing, lottery and scratch lotto were more likely to be undertaken with parents. The latter explains the access to scratch cards whose purchase is restricted to people 18 years and over. Seventy-two percent of students reported that their parents gambled and students were more likely to gamble if their parents also gambled. Problem gamblers were also more likely to participate in other risky behaviours. They were more likely to smoke, to report high levels of drug use both legal and illegal and to report drinking alcohol on a weekly basis.

American studies have also found a correlation between parental gambling and the uptake of gambling by young people. Wickwire et al established that if parents gambled, students were 2.8 times more likely to report at-risk or problem gambling behaviour. Conversely, young people were less likely to report atrisk/problem gambling if their parents disapproved of gambling (Delfabbro, Lahn and Grabosky (2006). In 2007, a study in South Australia looked specifically at the 13-17 year age group and compared the findings with research undertaken in 2001. Annual participation in gambling (56.0%) in 2007 was similar to the previous findings but a reduction in regular or weekly gambling in this group was noted (15.0% down to 6.0%). This may be related to increased expenditure on mobile phones and a resultant reduction in disposable income. While the percentage of young people gambling on lottery products had declined, participation in card games for money had increased. Males were more likely than females to have gambled in the past year and to gamble regularly. While there were no significant ethnic or geographic differences in participation, Aboriginal and Torres Strait Islander participants spent significantly more money than other students on poker machines, sports gambling, bingo and internet gambling (Wickwire, Whelan, Meyers & Murray, 2007).

There are a number of barriers to accurately determining the participation of young people in gambling. Firstly, there is no agreed age range for subjects. The selection of cohorts for estimates of youth gambling across Australian studies varies in age and occupation, making accurate estimates of prevalence and incidence difficult. Age groups used in recent studies include the ages of 13-17, 15-17 and 18-30 (Wickwire et al., 2007; Lambos, 2007; Delfabbro & Thrupp, 2003). Secondly, samples often include school and university students as well as employed and unemployed youth. While there is value in including youth from a range of occupational backgrounds, studies often have insufficient power to

enable accurate assumptions to be made. Thirdly, and possibly most importantly, difficulties in assessing prevalence rates are compounded by the variety of screening tools in use. Since rates are dependent on the screening tools used, the strengths and weaknesses of each should be calculated with consideration given to a standardised approach that will enable comparisons between studies and permit observation of trends. In response to this dilemma, Derevensky and Gupta compared a number of measures currently in use and made recommendations for the use of the Diagnostic and Statistical Manual Version IV, Juvenile Criteria (DSM-IV-MR-J) for the measurement of gambling prevalence in adolescents but also supported the use of the South Oaks Gambling Screen- Revised Adolescent (SOGS-RA) (South Australian Centre for Economic Studies, 2003).

The review of a decade of gambling research in Australia and New Zealand conducted by Delfabbro and LeCouteur (2003) provides a useful profile of gamblers and the contexts of gambling. Age and gender differences were particularly obvious in the literature on gambling. Participation in racing, sports gambling, video card games and casino table games were found to be higher for males with the lower participation by females attributed to less disposable income and a preference for slower-paced activities. A higher demand for gambling products such as casino games, racing and sports betting was noted in the 18 to 35 year age group.

Electronic gaming machines, including poker machines are easily accessible to most Australian adults. They represent a form of gambling with the highest average amount of expenditure in Queensland (Queensland Government, 2002). The fact that poker machines are only available in licensed premises, may explain, in part, why the issue of under-age gambling has received scant attention. However, Delfabbro and LeCouteur (2003) suggest that the inability to attend licensed venues will not necessarily prevent under-age gamblers from gaining access to forms of gambling available to those aged 18 years and older since older friends and siblings can be co-opted to place bets on their behalf.

Young people have embraced the technological changes of the past decade and studies have investigated whether this phenomenon extends to gambling behaviour. Although, research is still in its infancy, studies to date indicate that electronic forms of recreational gaming such as internet gambling are the least popular amongst young people (Defabbro et al., 2005; O'Neil, Whetton & Duerrwald, 2003). However, prevalence rates for pathological gambling on the internet, amongst young people have been found to be quite high (Derevensky & Gupta, 2007). For example, Byrne (2007) found that 18.8% of young people who play on the internet were pathological gamblers and 22.5% of internet gamblers were at risk of a gambling problem.

In examining the gambling behaviours of Australian apprentices and school students, Dowling, Clarke, Memery and Corney (2005) found high rates of

gambling and gambling-related problems and low rates of treatment-seeking behaviours for the problem. Apprentices were most likely to gamble on games of skill, racing and casino table games. Forty percent of Year 8, over 60.0% of Year 10-12 students and 85.0% of 18-24 year olds had gambled in the previous year (Dowling et al., 2005). In some studies this high rate of participation in gambling has been linked to the portrayal of gambling in the popular media (Delfabbro et al., 2005; Dervensky & Gupta, 2007; Byrne, 2007). Gambling is widely advertised and often glamorized in the media (Secomb, 2004), which has in turn been found to influence young people's attitudes and desires to gamble (Delfabbro et al., 2005). Further, gambling-themed toys and the inclusion of popular sporting events in the gambling scene are likely to appeal to young people and promote their participation in gambling activities (Monaghan & Derevensky, 2008).

With gambling largely accepted as part of the Australian culture, the capacity for gambling activities to produce serious personal and social consequences is often overlooked. Moore and Ohtsuka (1997) surveyed 1,017 young people between the ages of 14 and 25 who were attending Secondary School or University in the western suburbs of Melbourne and found lower levels of gambling behaviour and instances of problem gambling behaviour than previously reported in the UK and Canada. While reported participation rates in gambling were lower than reported in other Australian studies, the results for the most common forms of gambling in which subjects participated, were similar to the findings of previous studies

(Delfabbro et al., 2005). The most frequent forms of gambling were lottery tickets (14.1%), betting on pool or other games of skill by those participating in the game (13.6%) and betting on sports by non-participants (8.8%). People aged 18 years or more were more likely to gamble at age restricted sites such as casinos and hotels. Further, findings that boys were more likely to engage in gambling and scored higher on the problem-gambling scale were comparable with other Australian studies (Delfabbro et al., 2005; Wickwire et al., 2007).

Further research conducted by Moore and Ohtsuka (1997) examined the risk that the experience of boredom, as a result of leisure time, poses for problem gambling in young people aged 15 – 18 years. It was revealed that the more leisure time a young person possessed and the greater amount of this time that was unstructured was associated with more gambling for both males and females. The more time young people spent socialising was also associated with higher levels of gambling for boys. It was hypothesized that this was a result of sporting activities providing access to gambling venues. Problem gambling rates had declined in comparison to a similar sample in 1998. The authors postulate that this may be due to increased publicity and/or education about the potential problems with gambling, the reduction in the novelty value of gambling and strengthening of the screening for underage gamblers (Moore and Ohtsuka, 1997).

Recent evidence of the gambling behaviour of a younger age group is also provided by Jackson et al who, in 2007 investigated gambling participation rather than levels of problem gambling in 2,788 Victorian eighth grade students (Jackson et al., 2008). Concurring with previously reported studies, males had a higher prevalence of gambling participation than females (Delfabbro et al., 2005; Wickwire et al., 2007; Moore & Ohsuka, 2000). Male gender, together with alcohol consumption, use of cannabis and few perceived rewards at school, were identified as predictors of greater involvement in gambling. The study found that 41.0% of the sample had gambled in some form over the 12 months prior to the study and that 8.0% had engaged in three or more types of gambling (Jackson et al., 2008). This level of participation in gambling was considerably lower than gambling prevalence reported by Delfabbro et al. (2005) in a sample of students of a similar age. Among other causes, Jackson et al propose that this dissimilarity in participation rates may be due to differing methodologies and sampling methods, and highlight the need for further studies on gambling participation and levels of gambling in this younger adolescent population.

2.1.2 The International context

USA

A study conducted by the Oregon Gambling Addiction Foundation in 1998 used a random sample of 1000 young people, aged 13-17 to assess the extent of pathological and probable pathological gambling (Carlson & Moore, 1998). Using the South Oaks Gambling Screen Revised for Adolescents (SOGS-RA) the study

found 11.2% were classified as Level 2 gambling (potentially pathological, in transition) and 4.1% as Level 3 (pathological).

In relation to the causal factors associated with the commencement and continuation of gambling and other risk taking behaviours of young gamblers, the findings from the Oregon study were consistent with those of Australian studies (Australian Bureau of Statistics, 2001-2002; Delfabbro et al., 2005; Delfabbro et al., 2006; Derevensky & Gupta, 2000). The young people that had participated in the survey were more likely to gamble and were more likely to begin gambling at an earlier age if one or both of their parents gambled. The study found that participating in gambling at an early age (primary school) was more likely to lead to problem gambling and that gambling was correlated with other risk-taking behaviours such as alcohol, tobacco and other drug use.

Canada

Canadian researchers have contributed much to the knowledge base about young gamblers and the context in which they gamble. In view of the similarities in lifestyles and standards of living between Canadian and Australian populations, much of their work is useful in understanding the Australian situation.

In 2007, Ellenbogen, Derevensky and Gupta merged data from five studies of Canadian adolescents and young adults with a combined sample of 7,819 participants to explore gender differences in the characteristics and prevalence of levels of gambling (Ellenbogen, Derevensky & Gupta, 2007). Gambling severity was measured using the DSM-IV-MR-J, Gambling Activities Questionnaire (Gupta & Derevensky, 1996), and a measure of depression symptomatology. The sample revealed 289 (226m 63f) Probable Pathological Gamblers (PPG), 601 (412m 189f) At-risk gamblers and 4,423 (2,112m 2,311f) Social gamblers. In general, males and females with gambling problems demonstrated similar commonalities concerning aetiology, negative gambling-related consequences and risk factors. Both genders preferred similar types of gambling, card playing and pathological gambling was associated with weekly gambling and comorbidity with other adolescent problems (such as, low academic achievement and drug use). On average males were found to report more gambling problems and more likely to note physiological and psychological signs of an addiction. Conversely, females who reported signs of gambling problems, were more likely than males to indicate experiencing more negative consequences associated with excessive gambling. Despite some differences, the results point to a similar treatment strategy for adolescent boys and girls with problem gambling behaviours (Ellenbogen et al., 2007).

In a prevalence study of youth gambling problems in Canada, Huang and Boyer (2007) found that 61.0% of a sample of 5,666 15-24 year olds, had gambled in the 12 months prior to the study. Similar to Canadian studies, the prevalence of gambling and gambling problems was higher in males than in females

(Ellenbogen, 2007). Young people, particularly males, were found to be at greater risk for gambling problems than adults.

A meta-analysis of 119 prevalence studies on gambling behaviour by Schaffer, Hall and Biltin (1999), revealed that there has been a significant increase in the prevalence estimates for problem gambling in adults during the past 20 years. The prevalence estimates for Level 2 (potential pathological or at-risk) and Level 3 (the most severe category of disordered or pathological gambling) were higher in adolescents than in adults. While Schaffer et al. (1999) carried out their research in 1999, it is significant that these findings remain consistent with recent estimates of the prevalence of youth gambling problems (Huang & Boyer, 2007).

Scotland

A study conducted by Moodie (2008), examined gambling prevalence in 1,483 Scottish University students. It was revealed that 4.0% of the sample could be classified as problem gamblers and 3.9% of the sample could be classified as probable pathological gamblers according to the Gamblers' Beliefs Questionnaire (GBQ) and South Oaks Gambling Screen (SOGS) (Moodie, 2008).

These rates can be contrasted with results from a study by the same author of 2,043 school students aged 11-17 in 2006 where 9.0% of the sample were considered to be problem gamblers and a further 15.1% were considered to be 'at-risk' (Moodie, 2008). The study involved 45 colleges and universities across

Scotland and resulted in a sample of 1,482 students and 492 staff. Two-fifths (38.6%) of students gambled on a weekly basis with lotteries the most favoured form of gambling overall but fruit machines (poker machines) were the most common choice for problem gamblers and probable pathological gamblers. Probable pathological gamblers were found to have significantly higher scores on winning expectancy and rational beliefs when compared with the non-problem gambling group.

The lack of research into the gambling habits of students in Britain and, in particular, Scotland, is noted by the researchers. Students represent 10.0% of the adult population of Scotland and because of their age range and student lifestyle are likely to be associated with increases in other risk-taking behaviour.

There are remarkable similarities in the evidence relating to youth gambling for the developed countries highlighted in this review. The use of an integrative approach is therefore crucial to the development and expansion of the knowledge base on this issue. Across Australian and International studies, a number of findings on youth gambling are consistent - namely the higher participation of males, the potential for problem gambling for those who participate at an early age, the correlation of problem gambling with other risk taking behaviours and the perception of gambling as a social activity. The need for a standardised and appropriate measure to quantify the level of participation in youth gambling is required, if accurate trends are to be identified.

2.2 Definitions and theories

Gambling has been defined in economic terms as 'staking money (or other material items) on uncertain events driven by chance' although gambling can also includes activities that do not involve remuneration (Productivity Commission, 1999). These activities may include games of chance or risk-taking in the hope of achieving an advantage or benefit. Alternatively, gambling can involve the placing of bets on particular events which are not entirely related to chance (e.g. sports such as cricket, football and racing or even events such as Olympic host cities, celebrity baby names and other media events). Further use of the term gambling can denote participation in reckless or hazardous behaviour such as smoking, drink-driving and substance abuse that may lead to detrimental health outcomes (Lea, Tarpy & Webly, 1987). So we can gamble with or without money, in situations that are governed entirely or only somewhat by chance.

Although gambling poses no major economic or social consequences for the majority of participants, some gamblers progress to a stage described as 'problem' or 'problematic' gambling. While a number of theoretical approaches to the definition of problem gambling are described in the literature (see Methods used to measure risk), a simple and apt description of problem gambling is provided by the Australian Government Ministerial Council on Gambling (South Australian Centre for Economic Studies, 2005). 'Problem gambling is 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.' Similarly, the Queensland Responsible Gambling Strategy (Queensland Government Treasury, 2002) has suggested that problem gambling behaviour exists where gambling activity results in a range of adverse consequences. These consequences may place the safety and wellbeing of gambling consumers or their family and friends at risk and these negative impacts extend to the broader community (Queensland Government Treasury, 2002). It concludes that responsible gambling is most likely to occur in a regulated environment where the potential for harm associated with gambling is minimised and people make informed decisions about their participation.

The circumstances surrounding an individual's first experience of gambling activities have been shown to be crucial indicators for the subsequent gambling behaviour of youth. An enjoyable gambling experience is likely to result in a repeat of the behaviour and efforts to gain greater access to gambling activities, however the initiation to gambling is complex and involves biological, psychological, behavioural and sociological factors. Theories on the characteristics and risk factors for pathological gambling include parental gambling, impulsivity, substance abuse, psychiatric co-morbidity and the influence of genetics and neurotransmitters (Diclemente, Story & Murray, 2000). However, in the absence of accurate and scientific data on adolescent gambling caution is expressed over the acceptance of preconceived notions about gambling behaviour in young people. Knowledge gained will be important in

informing gambling-related public policy that is necessary to protect the vulnerable cohorts such as young people (Shaffer, 2004).

Similar to other addictive behaviours, problem gambling in young people is multidimensional. It involves bio-psycho-social determinants including a physiological predisposition, environmental stressors, social and familial influences, psychological processes and individual personality characteristics. It is the result of a complex set of interrelating factors from biology, family history to social norms and existing policies and therefore needs to be viewed from multiple perspectives which include the intrapersonal, interpersonal, institutional community and public policy influences on gambling behaviour (Howard & Shaffer, 2004; Derevensky & Gupta, 2004; Messerlian, Derevensky & Gupta, 2005).

Moore and Ohtsuka (1997) suggested that in view of the amount of money expended on legal gambling, occasional gambling could be seen as a normative behaviour among adults. They also noted that the gambling behaviour of young people was largely unknown. Rational decision-making was found to be a predictor of gambling activity, non-rational factors such as beliefs about winning, perceived control, personality variables and gender differences were also found to be related to gambling behaviour among young people. They proposed the Theory of Reasoned Action as described by Ajzen and Fishbein (1980) as a useful theoretical framework and starting point in understanding gambling behaviour in young adults. This model proposes that attitudes toward a certain behaviour, knowledge and beliefs about its likely outcomes and intentions to carry out the behaviour are associated with carrying out the behaviour.

In contrast to the findings of Moore and Ohtsuka (1997), a study conducted by Miller and Howell (2005) did not find the Theory of Reasoned Action to be a suitable model for predicting gambling behaviour in young people. Examination of secondary student's adoption of lottery products revealed that norms, attitudes and perceived behavioural control were predictors of intention in lotto play, not actual behaviour. These results indicated that premeditated decision making does not necessarily lead to purchase (Miller & Howell, 2005).

Another divergent view is offered by Jacobs' General Theory of Addictions which postulates that two independent and predisposing factors need to be present for an individual to be at risk of developing an addictive behaviour such as gambling. These factors are physiological and psychological: an abnormal physiological resting state and psychologically-feelings of inferiority, rejection, inadequacy and/or guilt and low self esteem (Jacobs, 1986). Gupta and Derevensky (1998) have also found strong support for the application of this theory for adolescent gamblers although consider that the path to addiction may be different for males and females. A higher incidence of risk taking behaviours such as substance abuse, truancy and petty crime was identified in their research on adolescent problem gamblers, reinforcing the notion that the causal factors of problem gambling are multifaceted.

Further research by Gupta and Derevensky (2004) has included an assessment of the coping styles of young people who gamble excessively. They established that they were more likely to exhibit coping mechanisms that were emotionbased, avoidant and distraction-oriented than social gamblers and non-gamblers. These findings have significant implications for the development of prevention and treatment programmes for youth gambling. The authors concluded that any programmes directed at young people who gamble excessively should include strategies to enhance coping and ways of dealing with stress related problems (Gupta & Derevensky, 2004).

Because of the relatively recent phenomenon of internet usage, particularly by young people, there is little published scientific research currently available on the websites (and their content) that are most popular with young people. Concurrent with the increasing availability of services and entertainment online, is the growth of global online gambling facilities. There is therefore a need to explore participation in, and the issues surrounding, the range of emerging environments for gambling (Korn, Gibbins & Azmier, 2003).

Theories relating to gambling and in particular problem gambling, are hindered by the fact that occasional gambling is viewed as a normative behaviour. Both

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rational and non-rational decision-making appear to be predictors of gambling activity but in view of the association of problem gambling behaviour with poor coping skills and risk taking behaviours such as smoking and alcohol consumption, the issue is complex and multi-factorial.

2.3 Methods used to identify risk and protective factors

A number of instruments have been utilised to measure the prevalence and risk factors for adolescent problem gambling. Instruments such as, the Gamblers Anonymous Twenty Questions (GA-20), The Canadian Problem Gambling Index (CPGI) and The Victorian Gambling Screen (VGS) have been used in both national and international, prevalence and exploratory studies.

Due to the increasing concern regarding young people's gambling behaviour three screens have been developed to specifically measure problem gambling patterns in adolescent cohorts. These measures are the Massachusetts Gambling Screen (MAGS), the SOGS-RA and the Diagnostic and Statistical Manual of Mental Disorders-IV-Multiple Response-Adapted for Juveniles (DSM-IV-MR-J).

Gamblers Anonymous Twenty Questions (GA-20)

The GA-20 was developed by Gamblers Anonymous to assist problem gamblers diagnose themselves and seek assistance (Derevensky and Gupta, 2000). The twenty items identify situations and behaviours that are typical of pathological

gamblers, such as financial difficulties, personal consequences and social costs. An individual receiving a score of seven is considered to be a pathological or compulsive gambler (Cluster & Custer, 1978). The few studies examining the measure's psychometric properties have revealed it possess adequate construct validity (Kuley & Jacobs, 1988) and excellent internal consistency (Ursua and Uribelarrea, 1998).

While widely utilised in the adult population, the GA-20 has also been used in adolescent studies. Research conducted by Ursua and Uribelarrea (1998), using a Spanish version of the GA-20, revealed that the GA-20 identified the largest number of adolescent pathological gamblers when compared with the SOGS-RA and DSM-IV-J. The authors argue that the GA-20 is as useful as other diagnostic instruments and its discrimination power is a major strength.

The Canadian Problem Gambling Index (CPGI)

Feris and Wynne (2001) developed the CPGI to measure the prevalence of gambling behaviours, problem gambling, correlates of problem gambling and demographic variables. It is based on the DSM and SOGS however, is intended for use in community prevalence surveys, rather than clinical settings.

The CPGI consists of 9 items, scored on a four point scale in reference to the previous twelve months. Problem gambling is classified by a score of 8 or more, with scores of one to seven being classified as being at low or moderate risk.

Since its conception the CPGI has been used in multiple prevalence studies in Canada, Australia, Norway and Iceland (McCready & Adlaf, 2006). In 2001 the Queensland government administered the CPGI to adults as part of the Queensland Household Survey. Studies have demonstrated that the CPGI possesses excellent reliability (Alpha and test-retest reliability), as well as concurrent and criterion validity. Criticisms of this measure are related to its construct validity, as it lacks a strong theoretical foundation (The South Australian Centre for Economic Studies, 2003).

The Victorian Gambling Screen (VGS)

The VGS was developed due to concerns regarding the suitability of using American gambling screens in the Australian context The South Australian Centre for Economic Studies, 2003). The VGS, developed by researchers from the Flinders Medical Centre, comprises of three factors (21 items) - gambling enjoyment, gambling-related harm and harm to partner (Ben-Tovim, Esterman, Tolchard, Battersby & Flinders Technologies, 2001). Items are scored on a four point Likert scale, with a score of 21 out of 60 on the Harm to Self subscale indicating problem gambling behaviour (The South Australian Centre for Economic Studies, 2003). Assessment of the VGS revealed very good reliability (acceptable Alpha and test-retest reliability) and a high standard of criterion validity.

Delfabbro, Lahn and Garbosky (2006) conducted a study assessing the psychosocial correlates of problem gambling in Australian students. The VGS was altered slightly to render it suitable for an adolescent cohort. The item referring to hiding signs of gambling that referenced 'spouse, partner, children' was removed and replaced with a reference to 'other important people in your life'. It was revealed that the VGS is a conservative measure in an adolescent population and full scale scores are highly correlated with DSM-IVJ scores (Delfabbro et al., 2006).

Massachusetts Gambling Screen (MAGS)

The MAGS (Shaffer, LaBrie, Scanlan & Cummins, 1994) is a brief clinical screening instrument developed to assess the prevalence of problem and pathological gambling amongst a general population of adolescents. The 26 scale items incorporate the DSM-IV criteria to measure a number of indices of pathological and non-pathological gambling (Derevensky & Gupta, 2000). Initially administered to 856 high school students the measure was found to be a reliable, valid and effective instrument (Shaffer et al., 1994).

Since its conception the MAGS has had limited use in gambling research. Derevensky and Gupta (2000) purport that as it is modeled so closely upon the DSM-IV, the benefits of selecting it are unclear. Further, the measure relies on a binary response (yes/no) for most questions which limits its utility.

The South Oaks Gambling Screen- Revised for Adolescents (SOGS-RA)

The South Oaks Gambling Screen (SOGS) (Winters et al., 1993) was developed to measure adult gambling based on the medical model of pathological gambling. The SOGS-RA, a revised version of the SOGS was reworded to ensure it was age appropriate and the scoring scheme was adjusted. Further, the SOGS-RA emphasises the frequency of gambling behaviour and the behavioural indices often accompanied by problem gambling, rather than a heavy emphasis on money (Derevensky & Gupta, 2000).

The 16-item scale (with four items being omitted from scoring) assesses negative behaviours and feelings experienced as a result of gambling involvement in the 12 months prior to completing the survey (Winters et al., 1993). The items include lying about gambling, gambling more often than intended, conflict with family and friends and borrowing/stealing to gamble (O'Neil, Whetton, & Duerrwald, 2003).

Gambling severity is measured on three levels, namely "no problem" gambling, "at-risk" gambling and "problem" gambling. The narrow definition of gambling severity, developed by Winters (1993) requires a score of four or more to be classified in the problem gambling level. Alternatively a broader definition has also been developed (Poulin, 2002) requiring a total score of two or more, accompanied with weekly or regardless of the SOGS-RA score, a frequency of daily gambling. Several studies have examined the validity of the SOGS-RA (Poulin & Barker, 1998; Poulin, 2002). Winters et al. (1993) report satisfactory reliability and validity measures (adequate construct validity as well as discriminating between regular and non-regular gamblers). Ferris, Wynne and Single (1999) has recommended that further testing is required with adolescent females given the low rate of female problem gamblers in the original sample. However, this problem is common to many adolescent instruments (Derevensky & Gupta, 2000).

The SOGS measures are one of the most frequently used instruments to assess gambling in both adults and in young people, and to provide population estimates (Wiebe, Cox & Mehmel, 2000). The SOGS-RA has been administered in a variety of settings and populations, particularly in the American and Canadian contexts (O'Neil et al., 2003). Other countries such as Lithuania, Iceland and Norway have also used the measure in their gambling research (Skokauskas, Burba, & Freedman, 2009; Tor olason & Gudmundur, 2006; Rossow, 2006). Within Australia the SOGS and SOGS-RA have also featured in gambling studies exploring young people's behaviour. For example, the Productivity Commission (1999) used the SOGS to measure the patterns of gambling and prevalence of problem gambling in young people aged 18 to 25 years in a national study. More & Ohtsuka (1997, 2000, 2001) conducted a series of research based on the SOGS-RA exploring adolescents gambling behaviour in the state of Victoria.
As with other gambling screens, the SOGS and its revised successors have attracted a considerable amount of criticism (South Australian Centre for economic Studies, 2005). One of the most critical of these is that it tends to give rise to an unacceptably high rate of false positives when utilised in non-clinical samples (Shaffer et al., 1997). In comparison to the DSM-IV-MR-J, the SOGS-RA has been found to be less conservative when estimating the prevalence of adolescent gambling (Derevensky & Gupta, 2000).

Diagnostic and Statistical Manual of Mental Disorders-IV-Multiple Response-Adapted for Juveniles (DSM-IV-MR-J)

The DSM-IV-MR-J developed by Fisher (2000) is a variation of the Diagnostic Statistical Manual-IV Adapted (DSM-IV-J). The DSM measures are based on the adult diagnostic criteria for pathological gambling as defined by the American Psychological Association. The DSM-IV-MR-J was designed to measure past year gambling amongst adolescents aged 11 to 16 years (O'Neil et al., 2003). It consists of 12 items corresponding to nine criteria, including progression and preoccupation, tolerance, withdrawal and loss of control, escape, chasing, lies and deception, illegal acts, family and academic disruptions and financial bailout. A score of four or more indicates a serious gambling problem (Derevensky & Gupta, 2000).

The juvenile screen differs from that of the adult version in several significant ways. Importantly, the context of any items referring to the finance of gambling

activities has been altered. For example, respondents are asked to identify whether or not they support their gambling activities from money allocated for "school lunch" and "bus transportation." Further, questions pertaining to theft involve theft within the home, outside the family and shoplifting, rather than forgery, fraud and embezzlement (Derevensky & Gupta, 2000).

Studies exploring the psychometric properties of the DSM-IV-MR-J have revealed it possesses adequate internal consistency reliability; all items are discriminatory and construct validity is reliable (Fisher, 2000). However, the screen has not been fully validated and has not been used in large scale national studies (O'Neil et al., 2003).

Similar to the SOGS measures, DSM-based screens are the most widely quoted tests for problem gambling in international research (O'Neil et al., 2003). Nationally, the DSM screens have been used to measured adolescent gambling behaviour in several studies. For example, Delfabbro et al. (2006) used the DSM-IV-J in the ACT to examine the relationship between problem gambling and irrational gambling-related cognitions in high school students. In South Australia, the DSM-IV-J has been used in a series of studies by Delfabbro (Delfabbro and Thrupp, 2003; Delfabbro, Lahn & Grabosky, 2005) to examine adolescent gambling and more recently, it has been used by Lambos, Delfabbro & Puglies (2007).

Methodological Considerations

When examining gambling research, a problem encountered is the question as to whether or not studies reporting prevalence data using different measures are comparable (Derevensky & Gupta, 2000). (Whilst it would be ideal to identify the 'best' measure to examine gambling in young people, the reality is no existing single test instrument is perfect (Productivity Commission, 1999). There is agreement amongst researchers that each measure has a unique set of strengths and weaknesses and as with the difficulties inherent in conceptualising problem gambling, no "gold" measurement standard exists (Delfabbro et al., 2005; O'Neil et al., 2003).

Given that the SOGS-RA and DSM-IV-MR-J are so widely utilised O'Neil (2003) has recommended that use of these measures in adolescent gambling studies is likely to facilitate better international comparisons.

3. METHODOLOGY of current study

3.1 Study Design

This was a cross-sectional study of a target group of young people aged 15-24 from five sub groups encompassing school, university and TAFE students/apprentices, employed and unemployed people. The sample was one of convenience and was drawn from young people living in Brisbane, the Sunshine Coast, Bundaberg and Hervey Bay.

3.2 Sampling frame

The sampling frame of young people in this age group consisted of:

- 330,000 in SEQ (Brisbane and the Sunshine Coast); and
- 30,000 in Wide Bay (Bundaberg and Hervey Bay).

3.3 Questionnaire

The questionnaire consisted of 43 questions and initially yielded 89 variables. Content of most questions reflected results obtained from the qualitative data from *Virtual Jackpot: Contexts of youth gambling in Queensland: Phase 1.* Specifically, the measure included questions regarding: demographic information, gambling habits, gambling context, gambling amongst significant others, familial problem gambling (these items were adapted from scales developed by Jackson, 1999), attitudes towards gambling, the appeal of internet gambling and knowledge of gambling probability and odds. The twelve scored items from the SOGS-RA were included to measure prevalence of gambling problems. This measure was selected on the basis of its sound psychometrics, brief administration time and readily interpretable cut-off score that allows comparisons of problem gambling rates in young people across other national and international samples. Further, the inclusion of a variety of items arguably enables the SOGS-RA to capture a broader range of problems than the DSM-IV-MR-J.

An alternate measure of problem gambling, particularly relevant for research conducted in Queensland is the CPGI. This measure has been utilised by the Queensland Government for the Queensland Household Gambling Survey. In the current study the use of the SOGS-RA was deemed appropriate as it is designed specifically for young people. The utility of adult gambling measures in a younger cohort has been questioned. Studies have revealed that young people misunderstand questions contained in gambling measures (Derevensky & Gupta, 2000). The SOGS-RA aims to minimise this effect through wording revisions and less emphasis on items related to borrowing money. Further, the SOGS-RA has been widely validated in studies involving young people.

3.4 Ethics approval and other ethical considerations

 Ethics approval was sought and obtained from the Behavioural and Social Sciences Ethical Review Committee of the University of Queensland;

- The Strategic Policy and Performance Division of the Queensland Department of Education Training and Arts granted approval for students in Queensland schools to participate in the study;
- All respondents aged 18 years or over were required to complete a consent form. Those aged less than 18 years required parental consent;
- All personnel entering schools for the purpose of data collection were required to have current Blue Cards (Working with Children) issued by the Queensland Government.

The process of participant recruitment complied with relevant privacy legislation by providing all participants with information about the purpose of data collection, the funding source, ethical approval processes and access to information.

3.5 Recruitment

Principals of schools in the designated areas were contacted and following confirmation regarding the involvement of their school, an information sheet, consent form, ethics approval and questionnaire were forwarded. Schools were responsible for seeking written consent from parents and only those students with a signed consent form were included in the survey. Surveys were administered by staff from Community Solutions at a time convenient to the school and questionnaires were completed on site.

Universities and TAFE colleges were contacted for permission to approach students and those students who consented to participate were provided with a questionnaire, information sheet, consent form and reply-paid envelope for use on completion of the survey. Employed young people were sourced through large retail and hospitality outlets and unemployed people were sourced through Job Network Providers and Personal Support Program Providers. Questionnaires, information sheets, consent forms and reply-paid envelopes were supplied for intending participants.

3.6 Data Analysis

Data was entered and analysed using the Statistical Package for the Social Sciences (SPSS) Version 15. Data cleaning was performed by selecting and checking a random sample of completed questionnaires for accuracy of data entry. Initial frequencies were performed for all variables and outliers checked for legitimacy. Data were analysed using frequencies, cross tabulations and factor analysis. Scores for SOGS-RA were computed after recoding and summing the scored items. Other additional variables were created using the same process.

4.0 RESULTS

Demographic Information

Three hundred and ninety-five participants completed the survey. Of these, 216 were residents of Brisbane and the Sunshine Coast, 101 were from Bundaberg and 78 were residing in Hervey Bay. Respondents from Bundaberg and Hervey Bay were combined in analyses.

<u>Gender</u>

Forty-eight percent of the sample (191) was male and 52.0% (204) was female.

<u>Age</u>

The age range was 15 to 25 years with a mean age of 19.6 and a median age of 19 years. The description of the sample by location, gender and age group is shown at Table 1.

LOCATION	15-19 yrs	20-25 yrs	TOTAL
Brisbane/Sunshine Coast			
male	60	48	108
female	63	42	105
TOTAL	123	90	213
Bundaberg/Hervey Bay			
male	51	31	82
female	63	34	97
TOTAL	114	65	179

Table 1: Respondents by location, gender and age group

Note: Table total reflects number of respondents to this question rather than total sample

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Education level

Respondents were asked about their highest completed educational qualification. Eight (2.0%) respondents indicated that they had no schooling, 148 (37.9%) had completed year 10, 148 (37.9%) had completed year 12, 54 (13.8%) had a Trade/Technical Certificate or Diploma and 33 (8.5%) had a University or Postgraduate qualification.

Hobbies or other interests

A large number of participants (82.0%, n=324) reported that they had a hobby or interest that they enjoyed and in which they participated on a regular basis.

Daily activities and source of income

When asked what they attended most days of the week, the most common daily activity for 108 (27.3%) was work, 79 (20.0%) attended school, for 77 (19.5%) it was attendance at TAFE or an apprenticeship, 61 (15.4%) attended University, 66 (16.7%) did not attend any other location or institution, and 4 (1.0%) went to other locations not listed.

Working part time was the most common form of employment with 150 (38.0%) respondents in this category identifying themselves as "employed." Of the 69 (17.5%) who were not in the labour force, 97.0% were students. Figure 1 shows the level of employment for all respondents.

Figure 1: Level of employment (n=394)



Note: Graph reflects number of respondents to this question rather than total sample

Managing finances

Nearly 60.0% (234) of respondents considered that a large part of their income went toward their living expenses and a similar number (59.5%) believed that they were "good at developing and adhering to a budget."

Gambling for money or possessions

Overall, 79.2% of respondents reported some type of gambling activity in the past year. The proportion of respondents who had gambled in the past year was slightly lower in respondents aged less than 18 years (75.6%) compared to those aged 18-25 years (83.0%) but this was not statistically significant.

There was no identifiable relationship between gender, age at first gambling episode, current age group, where people lived, and participation in gambling in the year prior to the survey.

Scratch lotto, raffles and poker machines were the most common forms of gambling in which respondents had engaged during the year prior to the survey. Forty-eight percent of respondents reported that they had participated in three or more types of gambling prior to the survey. The level of participation across types of gambling in the past year is shown in Figure 2.





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Examination of the relationship between participation in particular gambling activities and age revealed that the proportion of those under the age of 18 years who engaged in scratch lotto, lotto, casino games and poker machine play was significantly different from the proportion of those aged over 18 years. Chi-square tests for independence (with Yates Continuity Correction) indicated:

- Fifty-three percent of those under the age of 18 years participated in scratch lotto, while 46.5% had not played scratch lotto in the previous year. For those over the age of 18 years, 65.2% played scratch lotto, 34.8% did not (X² (1, n = 387) = 4.2, p = .04, phi = .11).
- Eight percent of those under the age of 18 years participated in lotto, while 92.0% had not. For those over the age of 18 years, 35.6% had played lotto, 64.4% had not (X² (1, n = 382) = 28.7, p = .00, phi = .28).
- Two percent of those under the age of 18 years participated in casino games, while 98.0% had not. For those over the age of 18 years, 17.2% had gambled in a casino, 87.3% had not (X² (1, n = 379) = 15.6, p = .00, phi = .21).
- Four and a half percent of those under the age of 18 years used poker machines, while 95.5% had not. For those over the age of 18 years, 38.9% had participated in poker machine play, 47.1% had not (X² (1, n = 386) = 78.6, p = .00, phi = .45).

The proportion of those under the legal gambling age was not significantly different from the proportion of those over the legal age, for any other type of gambling examined in this study.

Scratch lotto and poker machines were nominated by most respondents as the types of gambling in which they engaged fortnightly or more frequently. The full range of gambling types used with this frequency is shown in Figure 3.



Figure 3: Types of gambling engaged in every fortnight or more frequently during the past year (n=395)

Gender differences in type of gambling

Significant differences between males and females were observed in two types of gambling. Males were more likely to use money or possessions to have gambled on private card games in the year prior to the survey (p-0.000) and females were more likely to have gambled at Bingo in the year prior to the survey (p<0.05).

Geographical differences in type of gambling

The respondents' residential location was significant for only one type of gambling. Young people from Brisbane and the Sunshine Coast were more likely to have gambled at table games in a Casino than those from Bundaberg and Hervey Bay (p<0.05).

Young people's gambling patterns

Of those who gambled, a number of young people (86.5%, n=218) indicated that they usually used their own money, 1.6% (n=4) were most likely to use their own possessions when gambling, 5.4% (n=45) admitted to regularly using other people's money or possessions and 8.3% (n=21) indicated that when gambling they were most likely to use chips or mock money.

Sixty-four percent (n=252) of the sample stated that they had never gambled using tokens, chips or other items that were not real money and 36.0% (n=141) had engaged in this form of gambling in the past 12 months.

Of those who gambled, 71.8% (n=196) stated that, on average, they spent between \$1 and \$10 each time they gambled, 17.9% (n=49) spent \$11 - \$20 and 10.0% (n=28) of the sample spent more than \$20.

Young people were asked to indicate with whom they most often gambled. Friends (59.0%, n=170) were most frequently cited as regular gambling companions, followed by partners (13.9%, n=40), parents (9.4%, n=27), and finally relatives including siblings (7.3%, n=22). A number of young people (10.4%, n=30) stated that they were most likely to gamble alone. There were statistically significant differences (p<.05) in responses between males and females. That is, females were more likely to gamble with their partner or parents and less likely to gamble with friends.

First experience with gambling

The age at which a first gambling experience was reported to have occurred (with or without money) ranged from 2 to 21 years. Ages less than five years were excluded from the analysis. The median age was 15 years with a lower quartile of 12 years and an upper quartile of 18 years.

The four most common forms of gambling reported for first gambling experiences were Scratch lotto (28.1%, n=94), poker machines (20.1%, n=67), cards (17.7%, n=59) and horse/greyhound racing (8.1%, n=27). This first experience of gambling was most likely to take place with friends (37.5%, n=111), with family (35.8%, n=106) or at school (12.5%, n=37).

SOGS-RA

The twelve scored items of the SOGS-RA was administered to participants. Based on the frequently used narrow cut off scores defined by Winters (1993), non-problem gambling was defined as scores of 0 or 1, at-risk individuals had scores of 2 and 3 and problem gambling was based on scores of 4 or greater. The SOGS–RA score using the calculation of narrow rates (as defined by Schaffer et al 1999) is shown in Table 2.

SOGS-RA Level	Males	Females	Total
(score)	(n=186)	(n=204)	(n=390)
No problem gambling	68.2%	78.9%	73.8%
(0-1)	(n=127)	(n=161)	(n=288)
At-Risk gambling	20.9%	15.6%	18.2%
(2-3)	(n=39)	(n=32)	(n=71)
Problem gambling	10.7%	5.3%	7.9%
(4 or more)	(n=20)	(n=11)	(n=31)

 Table 2: Level of gambling according to the SOGS-RA (n=390)

Note: Table total reflects number of respondents to this question rather than total sample

A Chi-square test for independence indicated a significant association between gender and level of gambling problems, χ^2 (2, n = 390) = .04, p=.05, V=.03. That is, females were more likely to be non problematic gamblers, whereas males were more likely to fall within the "at-risk" category and twice as likely to be problem gamblers.

Problem gamblers were also significantly more likely than non problem gamblers to indicate having known someone with a gambling problem, χ^2 (2, *n* = 383) = 12.84, p=.05, V=.18.

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Examination of age differences, shown in Table 3 below, revealed that the proportion of young people in different age groups was not significantly different. There was no association between age and gambling level, X^2 (4, n = 388) = .14, p = .10, V=.10.

	Age Groups (years)			
SOGS-RA Level	15 - 17	18 - 21	22 – 25	
(score)	(n=113)	(n=190)	(n=85)	
No problem gambling	78.8%	75.3%	63.5%	
(0-1)	(n=89)	(n=143)	(n=54)	
At-Risk gambling	15.9%	15.8%	27.1%	
(2-3)	(n=18)	(n=30)	(n=23)	
Problem gambling	5.3%	8.9%	9.4%	
(4 or more)	(n=6)	(n=17)	(n=8)	

 Table 3: Level of gambling (SOGS-RA) within age groups (n=388)

Note: Table total reflects number of respondents to this question rather than total sample

Those who first gambled when they were under the legal age limit were not more likely to be classified as problem gamblers according to the SOGS-RA, than those who first started gambling over the age of 18 yrs, X^2 (2, n = 388) = 2.5, p = .29, V= .08.

Family gambling

Twenty-eight percent (n=109) of respondents reported that their parents never gambled and 47.0% (n=187) gambled less frequently than monthly. Twenty-five percent of parents were described as gambling weekly or 2-3 times a month. Respondents whose parents gambled were most likely to have gambled in the past year (p=0.00) but there was no correlation between parental gambling and the age at which respondents first gambled.

Over half of the respondents (67.3%, n=266) indicated that, when they were under the age of 18 years, they participated in gambling activities with family members when they were under the age of 18 years. Underage gambling with the family most commonly occurred once or twice per year (42.0%, n=166%) (Refer to Table 4 for details).

Frequency of gambling with Family	Percentage (n)
Never	32.4%
	(n=128)
1 – 2 times per year	42.0%
	(n=166)
3 times per year – monthly	15.9%
	(n=63)
2 – 3 times per month	7.3%
	(n=29)
Weekly or more	2.0%
	(n=7)

Table 4: Participation in underage gambling with family members

Note: Table total reflects number of respondents to this question rather than total sample

A number of questions explored the effect of a family member's gambling on young people. Overall 76.8% (n=301) reported that gambling had no effect on their families and only two respondents reported that they experienced problems all the time for each of the seven listed problems.

Nearly 7.0% (n=26) reported that at some time, money intended for food and other basics had been used for gambling;

- 20.0% (n=44) had been asked to loan family members money for gambling;
- On at least one occasion, household objects and possessions had been sold or pawned to pay gambling debts for 7.0% (n=26) of the sample;
- 14.0% (n=56) believed they had been lied to about a family gambling situation;
- Conflict in the family as a direct result of gambling was reported by 13.0% (n=53);
- A family or household member's gambling had caused concern on one or more occasions for 17.0% (n=66); and
- 13.0% (n=51) reported that on one or more occasions their parents/guardians had been angry or worried because of gambling issues.

Most young people (regardless of SOGS-RA level) had never experienced any problems as a result of gambling by someone in their family or household (p=0.000). Higher SOGS-RA levels were not related to a higher level of reported family gambling problems.

Attitudes towards gambling/ perceptions of peer influences and frequency of their gambling behaviour.

Nearly a quarter (24.5%, n=96) of respondents thought their friends gambled at least fortnightly, 55.0% (n=217) thought their friends gambled one to three times a year and 20.0% (n=79) said their friends never gambled. Thirteen percent (n=51) thought gambling was a popular pastime with their age group with similar numbers describing it as somewhat popular or not very popular/not popular. The results of questions on attitudes are shown in Figures 4 to 9.



Figure 4: I sometimes feel pressured to gamble if all my friends are doing it (n=394)

Note: Graph reflects number of respondents to this question rather than total sample

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Figure 5: Gambling is a good opportunity to socialise with my peers (n=392)

Note: Graph reflects number of respondents to this question rather than total sample

Figure 6: If my friends were all gambling I would most likely gamble (n=391)



Note: Graph reflects number of respondents to this question rather than total sample



Figure 7: Gambling is a good way to compete or have a friendly challenge with my peers (n=386)





Figure 8: I prefer to gamble with a group of friends rather than alone (n=392)

Note: Graph reflects number of respondents to this question rather than total sample

Figure 9: The fact that underage gambling is against the law makes it more fun (n=932)



Note: Graph reflects number of respondents to this question rather than total sample

Relationship between alcohol and gambling

When asked if they would be more likely to gamble if they were drinking alcohol with friends, 72 (18.2%) said they did not gamble and 51 (12.9%) said they did not drink alcohol. Of the 266 remaining respondents, 71 (27.0%) said they would never be more likely to gamble; 151 (57.0%) replied 'not often' or 'occasionally' and 44 (16.0%) replied that they were often or always likely to gamble more when they were drinking alcohol.

Of those who drank alcohol and gambled, 41.0% (n=12) reported that they were likely to spend more money than usual on gambling when they were drinking alcohol.

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Internet gambling and other forms of electronic gambling

Findings were consistent across the seven questions, that explored the appeal of internet gambling. Appeal was examined in relation to 24 hour access, lack of age restrictions, anonymity, easy access, screen design, incentives and rapidity of play. For each of these aspects of internet gambling, less than 4.0% found them very appealing (refer to Table 5 for details).

Accordents of the internet	Level of appeal			
Aspects of the internet	None	Slight	Somewhat	Much
24 hr access	86.8%	7.6%	2.0%	3.3%
	(n=343)	(n=30)	(n=8)	(n=13)
Avoid age limits	87.1%	5.3%	4.1%	3.3%
	(n=344)	(n=21)	(n=16)	(n=13)
Anonymity	85.1%	5.8%	5.8%	3.0%
	(n=336)	(n=23)	(n=23)	(n=12)
Ease of access	83.8%	7.1%	5.3%	3.5%
	(n=331)	(n=28)	(n=21)	(n=14)
Screen design	87.1%	7.1%	2.5%	3.0%
	(n=344)	(n=28)	(n=10)	(n=12)
Incentives/bonus offers	89.6%	5.6%	1.8%	2.8%
	(n=354)	(n=22)	(n=7)	(n=11)
Rapid speed of play	85.4%	6.6%	4.3%	3.5%
	(n=337)	(n=26)	(n=17)	(n=14)

 Table 5: Aspects of internet gambling respondents found appealing

This lack of appeal was reflected in internet gambling prevalence rates. Although 60.0% (n=237) of respondents experienced the appearance of gambling 'popups' when using the internet, only 27.1% (n=107) had actually accessed an

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internet site where gambling was available. An even smaller proportion (3.7%, n=14) had used money to gamble on the internet.

A minority of respondents, 23.5% (n=93), indicated that they had used practice play on the internet. Respondents aged less than 18 years reported less practice play on the internet (24.3%) than those aged 18 years and over (30.0%) but this was not statistically significant.

Unlike practice play, a fair percentage of respondents had played video/computer games that involved gambling activities (45.0%, n=181).

Participation in mobile phone betting was also minimal with only 6.1% (n=24) of respondents indicating they had used an SMS to place a bet.

A one-way between-groups analysis of variance was conducted to explore the impact of SOGS-RA gambling levels (no problem, at-risk and problem) on the overall appeal of the internet, as measured by seven questions. There was a statistically significant difference at the p<.000 level in internet appeal scores for the three gambling levels: F(2, 386) = 66.3, p = .000. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was .02. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for all groups - non problem gamblers (M=7.70, SD=2.35), at-risk gamblers (M=9.56,

SD=4.74) and problem gamblers (M=15.29, SD=7.64) were significantly different from each other.

The relationship between participation in online gambling (with the use of money) and severity of gambling behavior (as measured by the SOGS-RA) was investigated using Pearsons' product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a moderate, positive correlation between the two variables, r=.44, n=376, p<.0005, with higher scores on the SOGS-RA associated with participation internet gambling. Of those who gambled on the internet 7.7% (n=1) of participants could be classified as non problem gamblers, 23.1% (n=3) as at-risk gamblers and 69.2% (n=9) as problem gamblers.

Of the 23.5% (n=93) who had used practice play, 16.1% (n=15) could be classified as problem gamblers and 31.2% (n=29) as at risk gamblers according to the SOGS-RA. Analysis revealed that there was a significant association between level of gambling and practice play participation, X^2 (2, n = 390) = 28.98, p = .000, V=.27.

The emotional context of gambling

Respondents were asked whether they agreed or disagreed with three statements about gambling and the way in which it related to their feelings, i.e.

whether gambling was a "good activity to do when they were bored", whether it "gave them a feeling of excitement", whether they "gambled even though they thought they were unlikely to win". Results are shown at Figures 10 - 12.



Figure 10: Gambling is a good activity to do when you are bored (n=395)



Figure 11: Gambling can involve a feeling of excitement or a buzz (n=395)

Figure 12: Sometimes I gamble even though I know I'm not likely to win



Knowledge about the reality of gambling

More than half the young people in this study (52.6%, n=206) believed that they knew the meaning of the terms 'probability' or 'odds' and understood how these concepts related to gambling. The remainder of the sample reported that they did not know the meaning of 'probability' or 'odds' (14.5%, n=57) or that they only had a partial understanding (31.9%, n=125). Differences between males and females were statistically significant with a higher percentage of females stating they were unsure about the meaning of 'probability' or 'odds'.

- Seventy-eight percent (n=305) of respondents were correct in estimating chance in relation to the roll of a dice. There were no gender differences in this response.
- Respondents were provided with two sequences of numbers (one random and the other in numerical order). They were asked to indicate whether one sequence was more likely to appear in a game of lotto than another. 28.3% (n=110) respondents gave the correct answer, namely, that both sequences were equally likely. A slightly higher number of respondents (34.2%, n=133) answered incorrectly (believing that a random series of numbers is more likely to win than a series of numbers in sequence). Most respondents (37.5%, n=146) indicated that they were unsure. Females were less likely to supply an accurate response to this question and also more likely to be unsure about the concept (p<0.05).
- A question assessing knowledge of factual probabilities revealed that only 30.7% (n=120) of respondents were aware of the odds of success on scratch lotto. There were no gender differences.

- Less than a half of the respondents (43.3%) knew the likelihood of achieving a certain result in tossing a coin. Males were more likely to provide a correct response (p<05).
- Eleven percent (n=41) of all respondents thought their chances of winning were better if they had lost many times in a row and 30.0% (118) were unsure. There were no differences between males and females.
- Thirty-nine percent (n=152) of respondents knew the likelihood of success on poker machines if they used a machine after it had paid out a large sum of money. However, 38.1% (n=149) of participants indicated that poker machine play was not random in nature. That is, they indicated that they had a smaller chance of winning on a poker machine that had previously paid out a large sum of money.

There were no statistical differences between the level of knowledge of respondents aged less than 15 years and those aged 15 years or more.

Possible influences on gambling behavior

Sources of information about gambling

<u>Parental</u>: 40.0% (n=159) of respondents reported that their parents had discussed the risks of gambling with them. There were no statistically significant gender or age differences between respondents.

<u>School</u>: 37.0% (n=136) of all respondents had learned about gambling and its risks at school. While there were no differences between those who were aged less than 15 and those aged 15 years or more, statistically significant differences

were noted between males and females. Males were more likely to have received this information at school than females (p<0.005).

Knowing someone who has experienced gambling related problems

Thirty-eight percent (n=150) of respondents reported that they knew someone who had experienced gambling problems. For 64.7% (n=97) this decreased the subjective appeal towards gambling and 44.0% (n=66) reported that knowing someone with a gambling problem actually influenced their subsequent behaviour, as they reportedly gambled less often.

5.0 DISCUSSION

Phase 2 of *The Virtual Jackpot! Contexts of youth gambling in Queensland* has involved a review of the current literature and the collection of data using selfadministered questionnaires from young people in different circumstances and geographical locations in Queensland. It has added to the qualitative research already completed in the first phase of the project and contributes to the small but increasing body of literature on gambling behaviours in young people and the social-cultural contexts in which they occur.

The proportion of respondents aged less than 18 years who had gambled in the year prior to the survey was slightly lower (75.6%) compared to those aged 18-25 years (83.0%), although this was not statistically significant. Overall, 79.2% of respondents reported some type of gambling activity in the past year. This compares with previous Australian studies that found that 41.0% of year 8 students in 2008 and 85.0% of 18-24 year olds in 2003 had gambled in the past year and 60.4% of year 7-12 students in 2005 (Jackson et al., 2008; Delfabbro & Thrupp, 2003; Delfabbro et al., 2005). Given that the mean age of respondents in the Virtual Jackpot survey was 19 with a range of 15 to 24, it is not unexpected that the prevalence of gambling was found to be higher than was previously reported in a younger sample population and lower than that of a slightly older sample population. However, it is of concern that the level of gambling activity in this young age group is only slightly lower than the adult sample that informed

the findings of the Productivity Commission⁵ that 82.0% of adults had gambled in the past year.

Scratch lotto, raffles and poker machines were the most usual forms of gambling reported in the study and in common with recent Australian research (Jackson et al., 2008), internet gambling was the least commonly used type of gambling. Of these three favoured forms of gambling legally available to people aged 18 years or over, Scratch lotto was used by more than half of those aged less than 18 years. This study found under age gambling to frequently be facilitated by family members, finding that 67.3% of respondents participated in gambling activities with their family when they were under the age of 18 years. Family members may be key access points for underage young people to access scratch lotto tickets. However, further investigations are necessary to accurately identify the ways in which young people are gaining access to scratch lotto tickets. Possible explanations include the purchase of Scratch lotto tickets by older friends, self purchase by individuals who appear to be of legal age and self-purchase at retail outlets where staff do not comply with the requirement for young purchasers to produce identification.

Young people, who identified themselves as gamblers, appear to enjoy variety in gambling types, with 48.0% of all respondents reporting that they had participated in three or more types of gambling in the year prior to the survey.

This would suggest that prevention/intervention programmes should be generic in nature rather than focused on any one type of gambling.

The management of problem gambling can occur in phases featuring primary prevention and early intervention strategies (comprised of secondary interventions and tertiary interventions) (Gray, Oakley, Browne & Radh Prabhu, 2007). Gauntlett, Hugman, Kenyon and Logan (2001) defined prevention as 'programs and practices that intervene with individuals, families or communities to stop the occurrence of a problem or issue that could otherwise be expected.' Early intervention can be thought of as 'programs and practices that intervene with individuals, families or communities at an early stage in the occurrence of a problem or issue in such a way that there is a high probability that the intervention will resolve the problem or issue and stop it from becoming worse' (Gauntlett et al., 2001).

Primary prevention is concerned with strategies to prevent involvement in a practice that can have detrimental effects on health or life generally. While Gray et al. (2007) have defined primary prevention as those measures that are implemented at the community, family or individual level to prevent health problems such as problem gambling it could also be argued that primary prevention is best defined as the prevention of participation in gambling in the first instance.

Secondary interventions include strategies aimed at the identification of problem gamblers and the prevention of the further development of the problematic behaviours. These include methods such as imaginal desensitisation, cognitive and behavioural techniques and self-help strategies. Tertiary interventions aim to manage the long term effects of active problem gambling and may include pharmacological support (Gray et al., 2001).

While these phases of problem gambling management have most commonly been related to habits or activities that are harmful to health, they may also be readily applied to youth gambling. With the aim of reducing the risk factors of problem gambling through early intervention, the Office of Liguor, Gaming and Racing, in partnership with the former Queensland School Curriculum Council (now Queensland Studies Authority) developed the Queensland Responsible Gambling Teaching Resource Kit. This kit contains modules, idea sheets and resources based on responsible gambling education that teachers can implement in the classroom. This resource is accessible to schools, being free of cost and available in both print and electronic form (via the internet). Despite ease of access an evaluation conducted in 2005 revealed that use of the kit was hindered by a number of factors including inadequate curriculum space, "restrictive" school policy and learning activities not being perceived by teachers as appropriate for the year level or subject area (Reid, 2006). As a result only 12.5% of respondent teachers indicated that they had utilised a kit (Reid, 2006). The current study reveals that only 37.0% of young people had received information about gambling through their school. This may indicate that despite the availability of educational resources in Queensland and research that points to the importance of early education, the kit is still not being utilised to its full potential, if at all. Certainly, problem gambling and at-risk gambling rates, in this study, point to the importance of targeting education and prevention campaigns towards school age young people.

The SOGS-RA was the instrument of choice in this study. This measure resulted in 7.9% of the respondents being classified as problem gamblers. Although comparisons are problematic because of differing methodologies, this finding is almost double that of previous Australian studies that have classified 3.0% to 4.0% of young people as problem gamblers (Jackson et al., 2008; South Australian Centre for Economic Studies, 2003). Prevalence rates identified through this research are more consistent with international estimates of adolescent compulsive or serious gambling problems, between 4.4% and 7.4% (Shaffer & Hall, 1996). In interpreting the current results it is important to note that a non-clinical sample of participants was used, thus high scores on the SOGS-RA may not necessarily represent actual problem gamblers, but may reflect high concerns or worries about potential problem gambling (Moore & Ohtsuka, 2000).

Consistent with previous research (Hayatbakhsh, 2006) problematic gambling rates were found to vary for males and females, with males more likely to be

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classified as problematic gamblers (10.7% compared to 5.3%) than females. National research consistently points to males being less likely to utilise mental health services than females (Australian Bureau of Statistics, 2007; House of Representatives Standing Committee on Family and Community Affairs, 1997). These patterns of male access, coupled with the increased risk of problematic gambling behavior for males indicates the importance of ensuring that programmes aimed at preventing problem gambling are designed to reach a male as well as female audience.

Respondents in this study indicated that they had frequently come into contact with both peers and family members with whom they could participate in or observe the gambling activities being undertaken. Given this contact, coupled with the fact that gambling within the community occurs on a continuum of severity ranging from non-problematic to pathological, it is not surprising that 38.0% of respondents indicated that they had known someone who had experienced gambling related problems. Research has indicated that young people's exposure to gambling problems may pose a risk for the future uptake of problem gambling behaviors (Wood & Griffiths, 1998). Consistent with this theory, this study found that problematic gambler's were more likely to have indicated having known someone with a gambling problem.

Approaches to minimise the harmful effects of problem gambling reflect the complexity of the issue and require multiple solutions. Priorities identified for

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Queensland include developing gambling policies based on research, increasing knowledge and awareness of the impacts of gambling, primary prevention, creating safe environments, state wide coordination and the promotion of partnerships (Queensland Government Treasury, 2002).

The National Framework on Problem Gambling 2004-2008 developed by the Ministerial Council on Gambling adds to the recommendations for preventing problem gambling and identifies four key focus areas: improving public awareness, education and training opportunities; creating responsible gambling environments; implementing effective, accessible and culturally appropriate interventions, counseling and support services; and implementing and further developing the national research agenda and data collection (Ministerial Council on Gambling, 2008).

Messerlian, Derevensky and Gupta (2005), in defining gambling as a public health problem, have placed gambling in the public health paradigm of prevention. Consequently they have developed strategies for the three levels of prevention in dealing with gambling problems. They suggest that to prevent the involvement of young people in gambling, public education measures such as social marketing and media may be useful given that adolescents' attitudes may be formed through mass media and modeling of parents and peers. In relation to potential problem gamblers, they propose that effective professional education and training programmes for primary health workers should be developed and implemented and programmes should be based on a harm-minimisation approach to inform youth of the risk and dangers associated with gambling. Prevention targeting problem gamblers should be aimed at increasing access and availability to treatment, services and support. Messerlian, Derevensky and Gupta (2005) argue that it is essential for treatment programmes to be tailored to the needs and developmental age of each individual.

The need for increased problem gambling prevention campaigns targeting young people has been highlighted by Messerlian and Derevensky (2006). Their gualitative research using 30 focus groups with participants aged between 12 and 18 years, revealed that participants had a preference for advertisements that depicted real life stories using emotional appeal and portraying the negative consequences of problem gambling. Participants also provided positive feedback about campaigns that raise the basic facts of gambling, using simple messages in a non-judgmental manner. Conversely, young people were not receptive to campaigns using a 'don't do it' approach because it was not perceived to reflect the current youth gambling culture. Such approaches have potential to trigger defiant or rebellious behaviour. Media suggested for campaigns included television, radio, magazines and websites/internet. It was recommended that caution should be taken in regards to young people's level of exposure to such media, as over-saturation can lead to desensitisation and habituation (Messerlian & Derevensky, 2006).

The current research provides quantitative support for Messerlian and Derevensky's (2006) recommendation that advertisements depict real life stories. Of those in this study who had known someone with a gambling related problem, 64.7% indicated that as a result, gambling seemed less appealing and 44.0% reported that it had effects on their subsequent behavior, with a reported decreased participation in gambling activities. While the risk that vicarious exposure to gambling have been supported in this study, the results also indicate the importance of also recognising the protective function that such exposure can provide. That is, some young people altered not only their attitudes towards gambling but also their behavior as a result of knowing someone with a gambling This finding can be utilised to inform the development of future problem. educational initiatives that may benefit from the inclusion of a component that involves young people engaging with others who have had a gambling problem or viewing media material involving problem gamblers. Further research is required to investigate the pathway by which being acquainted with a problem gambler acts to influence young people. Specifically, research must focus on the identification of particular factors that determine which young people are at risk by such circumstances and which are protected from risk.

Predicted increases in the uptake of internet gambling have not been confirmed by this or other recent studies. While a noteworthy proportion of respondents (60.0%) had been exposed to gambling marketing, via pop-ups, it seemed that the young people were not highly responsive to such prompts as only 27.1% of respondents had accessed a gambling site. There is much concern in gambling literature about the impact and appeal such advertising may have for young people. Certainly, the current findings suggest that a large proportion of young people are internet savvy and internet gambling marketing campaigns do not capture their attention.

Although a number of young people in this study had visited internet gambling sites and engaged in practice play, less than 4.0% found internet gambling very appealing. This may be because young people enjoy the social and entertainment opportunities that gambling provides. Most young people in this study were most likely to gamble with friends and least likely to gamble alone. It is also possible that the lack of access to financial resources and credit cards may be a limiting factor in access to internet gambling. Therefore, participation should be watched closely to determine if the prevalence of internet gambling increases with age and access to capital.

Experts in the field have expressed concern about the risks online gaming causes for the development of problem gambling behavior and particularly the impact that opportunities to gamble online have upon young people (Derevensky & Gupta, 2007; Griffiths & Wood, 2000; Korn, Murray, Morrison, Reynolds & Skinner, 2006). Certainly, this study confirmed these concerns, finding that not only were problem gamblers (as classified by the SOGS-RA) more likely to find the characteristics of internet gambling more appealing, but they were also more

likely to engage in practice play and online wagering with money. Research investigating the nature of the internet has yet to determine whether participation in internet gambling results in more problem gamblers or alternatively, individuals with gambling problems are attracted to gambling on the internet (Derevensky & Gupta, 2007). The current results may act as preliminary data demonstrating the need for further national research to investigate the impact of online technologies on gambling behaviour in young people.

In this age of web-based communication and information, it is expected that the online medium will be increasingly used as a vehicle for information about many issues affecting youth. Comprehensive websites, such as YouthBet.net the Queensland Government School Stuff Web Site have been developed for youth gambling. The YouthBet.net was produced by TeenNet, Department of Public Health Science, University of Toronto (Korn et al., 2006). The site features games, information and help resources that utilise public health strategies such as health promotion, harm reduction and problem prevention (Korn et al., 2006). The School Stuff website is an interactive medium through which young people can explore several issues such as, the nature of gambling, perspectives on gambling and consequences of participation (Queensland Government Treasury, 2002). Although there is a lack of empirical research to support the efficacy of web based prevention strategies, preliminary studies conducted on YouthBet.net indicate that young people were comfortable using the internet as a learning medium and found the site useful, particularly as a resource to refer to if they

encountered peers with gambling problems (Korn et al., 2006). While it is clear that further research is required to determine the outcomes of online education and prevention strategies, it is an approach that holds great potential to improve young people's gambling knowledge, attitudes and behaviours.

The higher prevalence of gambling reported by Carlson et al (1998) in young people whose parents gambled was confirmed in this study. This finding demonstrates that parents can serve as role models for gambling behaviour and provides support for social learning theory. This theory asserts that young people can learn vicariously from their care givers by observing and imitating behaviours (Bandura, 1977). Parental influence in this study was not largely, extended to communication about the risks of gambling. Public health research has highlighted the importance of parent-offspring communication in regards to the prevention of risk behaviour (Cremeens, Usdan, Brock Martin, Martin & Watkins, 2008). Prevention efforts must focus on informing parents of their pivotal role in the prevention of problem gambling and encourage parents to initiate communication about gambling and the associated risks.

Findings from recent qualitative research in Queensland by Allen et al. (2008) have endorsed the positive aspects of gambling in a social setting and support results from this research with 60.0% of young people gambling with friends and only 10.0% gambling alone. These findings highlight the social nature and the

context of the gambling experience for young people. That is, when gambling does occur it is largely for social motives or in a social context.

Contrasting with these finding the current study found that, a large number of young people (55.9%) indicated that they did not perceive gambling to be a good opportunity to socialise with their peers and a considerable number of participants (38.1%) indicated that they would not prefer to gamble with a group of friends in preference to gambling alone. These results, appear to conflict with the high rates of peer group gambling as opposed to gambling alone, may be interpreted to suggest that while gambling was not considered a top means of socialising, when participants did gamble it was for social reasons or in a social context.

Peer pressure does not appear to be a significant influence on gambling behaviour, with the majority of respondents indicating that they did not feel pressured to gamble, even if their peers were doing so. These findings that explored attitudes towards gambling should be viewed with caution and further testing of these questions is necessary to confirm their validity.

Less than 40.0% of respondents in this study received gambling related education at school. It was therefore not unexpected that knowledge of the concept of probability, as it related to all types of gambling, was poor. This was particularly so in the case of females. Whilst this could be related to the finding that males were more likely to receive information about gambling at school, the question concerned did not explore whether information gained at school was curriculum based or obtained from peers. The question of whether males are more likely to have specific school subjects that include information on gambling and probability or are receiving this information from peers, remains unanswered. The need for the provision of accurate, accessible and appropriate information on gambling is apparent.

In view of the high rates of gambling problems in adolescents and young adults, Petry (2005) has recommended the integration of education about gambling into schools' health-related curriculum. Given that 12.5% of participants in this study reported that their initial gambling encounter occurred at school, it is important that these experiences are balanced by information that highlight the risks of engaging in such activities.

Petry (2005) further recommends that screening for gambling behaviours should be carried out for all young people and that the adults seeking treatment for substance misuse and children of parents with substance misuse should be targeted for enhanced screening and early intervention and prevention efforts. These recommendations may also be applicable within the Australian context.

Australian and International research emphasises the need to implement effective strategies to prevent problem gambling at an early age. Consistent with

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this recommendation, a systematic review of problem gamblers from the general community has been conducted by Gray et al. (2007) and provides an insight into the best approaches to primary prevention and early intervention. The review examined nine randomised cluster controlled trials (including one from Australia) using school aged participants and four randomised controlled trials, one of which used University students. Although changes in gambling behaviour were not included because of variability in measurement tools, the majority of studies showed positives responses in attitudes, reduction of misperceptions and increased knowledge of gambling as a result of interventions. Findings confirmed the need to implement interventions before the age of 12 years since this was the age at which gambling behaviour begins. School based interventions were recommended because of the opportunity to incorporate them into a health and/or science curriculum. A combination of interventions using a range of strategies was shown to have the potential to achieve positive results. Most studies had appropriately trained professional personnel to conduct the interventions. Results suggest that such interventions have a positive impact on coping and problem resolution skills and are therefore may have potential for use in Queensland settings.

Gambling is only one of the risk taking behaviours that youth engage in and is associated with further risk-taking behaviours such as alcohol consumption, other drug use and smoking (Carlson & Moore, 1998). Strategies to address the reduction in these commonly-cited risk-taking behaviours should therefore also address the issues of gambling. Although it is has been shown that involvement in multiple risk-taking behaviours increases the chance of negative health outcomes, risk-taking is a part of normal adolescence. DiClemente, Story & Murray (2000) argues that prevention programmes should address coping skills and self esteem because adolescents who move into a regular pattern of gambling are highly vulnerable to developing problem gambling habits.

Governments and health practitioners therefore face a particular challenge in the search to reduce problem gambling and other behaviours that are detrimental to health and wellbeing. In order to reduce the incidence of youth gambling and its associated problems, some workers in the field point to the need for:

- more effective legislation to control underage gambling activities such as lottery tickets, scratch cards, poker machines;
- stronger policing and sanctions against young people gambling at commercial gambling venues;
- targeting of parents in educational programmes because of the correlation between the gambling behaviour of young people and that of their parents; and
- more emphasis on teaching young people about the objective odds of winning (Delfabbro et al., 2005; Delfabbro et al., 2006).

One of the obvious limitations on deciding the best way to approach the problem of youth gambling is the lack of empirical evidence available to guide prevention strategies. Some models for gambling prevention have been based on prevention strategies for other adolescent risky behaviour but little data on long term outcomes are available (Dickson, Derevensky & Gupta, 2002). One of the few programmes that has been evaluated was developed by Gaboury & Ladouceur (1993) and was based on substance abuse prevention programmes. It focused on six domains including gambling information, the legal issues relating to it, education about the odds of winning, myths and beliefs about gambling, a description of pathological gambling and its consequences and strategies for reducing and controlling gambling. The evaluation, conducted six months after the completion of the programme, revealed that while students had learned about gambling risks and coping skills, the intervention did not reduce gambling behaviour or change attitudes about gambling (Graboury & Ladouceur, 1993). While the programme outcomes were mixed, this study provides a useful starting point for future prevention efforts. Evidence on youth gambling underscores the need to continue to develop prevention strategies but also highlights the importance of integrating long term evaluation measures and appropriate resources into any proposal and implementation of prevention strategies for adolescent gamblers (Graboury & Ladouceur, 1993).

In summary, this study identified a number of factors that influenced the development and maintenance of gambling behaviours in young people. These findings have implications for the development of effective public health strategies that address the specific risk factors for problem gambling. Specifically, this research identified the following:

- Due to the relationship between young people's gambling behaviour and the gambling behaviour of their parents, prevention programs should encourage parents to reflect on their gambling values and behaviours and discuss gambling related risks with their offspring.
- Schools must be encouraged to utilise the Queensland Responsible Gambling Teaching Resource Kit.
- As males are less likely than females to access health related programs, when designing education, prevention and intervention initiatives special consideration must be afforded to ensuring that material will reach a male as well as female audience.
- Young people may be particularly responsive to education and prevention initiatives that include 'real life' stories or involve interaction with people who have had past problem gambling experiences.
- Internet based harm reduction and prevention strategies may be particularly suitable for young people.
- Considering that gambling behaviour largely occurs in a social context, marketing strategies also need to be contextual in order to target that behaviour.

By identifying some of the predictors of youth gambling in Queensland, this descriptive study identifies possibilities for intervention and contributes to the growing body of knowledge on the issue of youth gambling. Outcome measures should be considered as essential elements of any ensuing interventions that aim to reduce the prevalence and consequences of youth gambling in Queensland.

The limited Australian research conducted with young people suggests that whilst there are many consistencies, the gambling beliefs and behaviours of young people do vary across geographic settings. Whilst these results, exploring the experiences of young people living in South East Queensland are to a degree consistent with findings in many other studies, further research is required to explore gambling patterns, cohorts and specific settings in which gambling is occurring across Australia.

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18 June 2008

Mrs Jenny Madden PO Box 631 BUDDINA QLD 4575

Department of Education, Training and the Arts

Dear Mrs Madden

Thank you for your application seeking approval to conduct research titled "The Virtual Jackpot! Contexts of youth gambling in Queensland: Phase 2" in Queensland State schools. I wish to advise that your application has been conditionally approved provided that you approach both State and non-State schools to participate.

This approval means that you can approach principals of the schools nominated in your application and invite them to participate in your research project. As detailed in the department's research guidelines:

• You need to obtain consent from the relevant principals before your research project can commence.

• Principals have the right to decline participation if they consider that the research will cause undue disruption to educational programs in their schools.

• Principals have the right to monitor any research activities conducted in their facilities and can withdraw their support at any time.

This approval is granted conditionally on your compliance with the department's standard "Terms and Conditions of Approval to Conduct Research" in departmental sites available at http://education.qid.gov.au/corporate/research/terms_conditions.doc. As part of these terms and conditions, you are required to provide this Office (and any participating schools, principals or managers of other departmental sites) with a summary of your research results and any associated published papers or materials at the conclusion of your study. Failure to provide a report on your research will preclude you from undertaking any future research in Queensland State schools.

Please note that this letter constitutes approval to invite principals to participate in the research project as outlined in your research application. This approval does not constitute support for the general and commercial use of an intervention or curriculum program, software program or other enterprise that you may be evaluating as part of your research.

Should you require further information on the research application process, please feel free to contact Mrs Rebecca Libke, Senior Research Officer, Strategic Policy and Performance on (07) 3238 3176. Please quote the file number 550/27/712 in future correspondence.

I wish your study every success.

Yours sincerely

John F. Dungan

Dr John Dungan Director Strategic Research Strategic Policy and Performance Trim ref: 08/84881 Strategic Policy and Performance Level 21 Education House 30 Mary Street Brisbane 4000 PO Box 15033 City East Queensland 4002 Australia **Telephone +61** 7 **3237** 17**5 Website** www.deta.qld.gov.au ABN 76 337 613 647

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Chief Investigator:	Professor Jake Najman
Project Title:	The Virtual Jackpot! Contexts Of Youth Gambling In Queensland: Phase 2
Supervisor:	None
Co-Investigator(s)	Jenny Madden, Dr Karen Books
Department(s):	School of Population Health
Project Number:	2007000764
Granting Agency/Deg	r ee: Queensland Office of Gaming Regulation (QOGR) – Queensland Treasury
Duration:	31st March 2009
Name of responsible C Behavioural & Social S This project complies with Ethical Conduct in Resear governing experimentatio Name of Ethics Commi Dr Jack Broerse Chairperson Behavioural & Social S	ommittee:- cciences Ethical Review Committee n the provisions contained in the <i>National Statement on</i> <i>cch Involving Humans</i> and complies with the regulations n on humans. ttee representative:- ciences Ethical Review Committee



BRIEFING PAPER

The Virtual Jackpot Research Project

RESEARCH PURPOSE

The Virtual Jackpot Research Project is a two year project funded by Queensland Treasury through the Queensland Government Office for Gaming Regulation and conducted in partnership with the University of Queensland. The purpose of the research is to provide information on young people's gambling patterns that can assist Treasury to address the issue of gambling addiction. By considering the behaviours of young people, Treasury hopes to implement effective prevention programs at an age when problematic gambling first begins.

WHO IS CONDUCTING THE RESEARCH?

Community Solutions Inc. is a non-profit organisation, which recognises the significant and sustainable outcomes that can be achieved when the resources of communities, business, government and individuals are brought together to target issues of concern and opportunity.

7.3

As with all Community Solutions' research projects, the Virtual Jackpot has relevant ethical approval. Because the Virtual Jackpot is being conducted in partnership with the University of Queensland, approval is through the Behavioural and Social Sciences Ethical Review Committee. Community Solutions has quality assurance processes that ensure all research projects comply with relevant ethical standards and strict standards are maintained to ensure full compliance with privacy legislation and research protocols.

REQUEST

Assistance with distribution of surveys to young people aged 15 - 25.

HOW IT WORKS

The questionnaire will be centred on the factors that influence gambling amongst young people in Queensland. Participation in the research will be on a voluntary basis and participants need not have any special knowledge or personal experience of gambling. The questionnaire takes about 15 minutes to complete and can be done in the participant's own time.

Please note, all material collected is anonymous and no references to individual's names or organisations will be made in the final report, submitted to the Queensland Treasury.

The questionnaire can be distributed to clients aged 15 - 25 years. After a twoweek period the researcher will collect any completed questionnaires.

BENEFITS OF PARTICIPATION

We hope that you will consider assisting Community Solutions with this important research, which although it may not benefit your organisation directly, has the potential to affect the lives of young people in Queensland by informing future government policy.

WANT TO KNOW MORE?

For further information contact Bonita Hafey at Community Solutions on 5493 7249 or e-mail <u>bhafey@community-solutions.com.au</u>

Gambling Survey

- Please do not write your name on this paper.
- The information you give is private and will only be seen by the people putting all the answers together.
- Answer every question you can.
- If you can't answer a question or if you do not want to answer a question, leave it out and go on to the next one.
- For most questions, there is a choice of answers. There are no right or wrong answers pick the one that's true for you and tick the box next to it.
- If you make a mistake or wish to change your answer, cross out the mistake and tick the new response.

7.4

PART A: THE NEXT QUESTIONS ARE ABOUT YOU.

(Please tick the box that corresponds with your answer)

1.	Are you male or female?	М 🗌	F 🗌	
2.	How old are you now?	уеа	ars	
3.	What is your highest complete	ed educational	qualification?	
	No schooling Did not complete Primary School Completed Year 10 Completed Year 12 A Trade, Technical Certificate or Di A University or College Degree A Post Graduate qualification	iploma		Tick <u>one</u> box
4.	On <u>most</u> days of the week, wh School	ich of these do	o you attend:	
	TAFE			Tick <u>one</u> box
	A job involving an apprenticeshi A job None Other	p/traineeship		
5.	This question is about whether	you earn mone	ey or not. Are ye	ou:
	Not working because I am at schoo	ol or studying		
	Employed full-time			Tielderschart
	Employed part-time/Casual			TICK <u>one</u> DOX

Unemployed	
Other	

6. Each week, do you have living expenses such as rent, a mortgage, or bills, that a large sum of your own money goes towards?

Yes		No 🗌	
-----	--	------	--

7. Do you feel you are good at budgeting your money and sticking to it?

Yes No

PART B: THE FOLLOWING QUESTIONS ARE ABOUT THE WAY YOU GAMBLE.

(TICK)

8. In the last year, how often have you <u>used money or possessions</u> to bet or gamble on any of the following activities? (Answer each one)

	Never	1-2	3 times	2-3	vveekiy
		times	per year,	times	or
		per year	up to	per	more
			monthly	month	
Private card games (e.g. poker)					
Scratchies					
Raffles					
Lotto (e.g. Powerball)					
Keno					
Bingo					
Table games at Casino (e.g. Blackjack or					
Roulette)					
Pokies					
Horse or Greyhound races					
Sporting events (e.g. Football or Cricket)					
Internet gambling					
Other					

9. Do you mostly gamble with: (*tick one*)

Do not gamble	
Your own money	
Your own possessions	Tick one hox
Other people's possessions	Tick <u>one</u> box
Other people's money	
Chips or pretend money	

On average, how much do you bet or gamble in one go?

Never gambled	
Between \$1 - \$10	
Between \$11 - \$20	
Between \$21 - \$50	Tick <u>one</u> box
Between \$51 - \$100	
Between \$101 - \$500	
Between \$501 - \$1000	
Over \$1000	

10. In the past 12 months, how often have you bet or gambled on anything *without the use of money* (e.g. with fake money, chips or tokens)?

Never	1-2 times per year	3 times per year,	2-3 times per	Weekly or more
		up to monthly	month	

11. Who do you most often gamble with? *(tick one)*

Haven't ever gambled	
Partner	
Friends	
Other Relatives	lick <u>one</u> box
Brother or Sister	
Alone	
Parents	

12. At what age do you first remember gambling (with your own money, with your parents'/friends' money, without real money or otherwise)? *If you can't remember, please guess the age you think you were.*

13. What kind of gambling was that? (pick one)

Private card games (e.g. poker)	
Scratchies	
Raffles	
Lotto (e.g. Powerball)	
Keno	
Bingo	
Table games at Casino (e.g. Blackjack or Roulette)	
Pokies	
Horse or Greyhound Races	
Sporting events (e.g. Football or Cricket)	
Internet gambling	
Other	

Tick <u>one</u> box

14. Did you first start betting or gambling:

Haven't ever gambled	
At school	
With your friends	
With your family	Tick one box
At work	TICK <u>OTTE</u> DOX
By yourself	
Internet	
Don't know/can't remember	

15. Have you ever visited an Internet site where gambling was available?

Yes	No	
-----	----	--

16. Have you ever had gambling 'pop-ups' appear when using the Internet?

Yes		No	
-----	--	----	--

17. Have you used practice play on the Internet where you can gamble without real money?

	Yes No
18.	Have you ever played video/computer games that involve gamblin activities (e.g. blackjack or pokies)?
	Yes No
19.	Have you ever used your mobile phone to place SMS bets?
	Yes No
20.	The next questions are about how gambling/betting affects your life Please answer them as honestly as possible. (<i>TICK</i>)
	a) How often have you gone back another day to try and win back mone you lost gambling?
	Every time Most of the time Some of the time Never
	b) When betting, have you ever told others you were winning mone when you weren't?
	Yes No
	c) Has your betting money ever caused any problems for you such a arguments with family and friends, or problems at school or work?
	Yes No

Have you ever gambled more than you had planned to? d)

	Yes No
e)	Has anyone criticised your betting, or told you that you had a gambling problem, whether you thought it true or not?

Yes	No		

The Virtual Jackpot! Contexts of youth gambling in Queensland: Phase 2 Page 105

f) Have you ever felt bad about the amount of money you bet, or about what happens when you bet money?

	Yes	No
g)	Have you ever you could?	felt like you would like to stop betting, but didn't think
	Yes	No
h)	Have you ever Lottery Tickets	hidden from family or friends any betting slips, IOU's, , money that you won, or any signs of gambling?
	Yes	No
i)	Have you had gambling?	money arguments with family or friends that centred on
	Yes	No
j)	Have you borro	owed money to bet and not paid it back?
	Yes	No
k)	Have you even betting activition	r skipped or been absent from school or work due to es?
	Yes	No
I)	Have you borr cover gambling	rowed money or stolen something in order to bet or to g activities?
	Yes	No

PART C: THE NEXT QUESTIONS ARE ABOUT HOW YOUR FAMILY GAMBLES.

(TICK)

21.	How often do your parents/guardians gamble?						
	Never	1-2 times per year	3 times per year,	2-3 times per month	Weekly or more		

22. Did you ever participate in gambling activities with your family when you were <u>17</u> years old or younger?

	<u>Examples</u> :					
	Receiving a scratchie ticket from a relative as a present.					
	Helping a re	Helping a relative with the selection of Lotto numbers.				
Never	1-2 times per year	3 times per year, up to monthly	2-3 times per month	Weekly or more		

23. Sometimes gambling affects families. Have YOU ever experienced ANY of the following problems as a result of SOMEONE in your FAMILY or HOUSEHOLD gambling?

(Members of your family or household include your parents/guardians, brothers/sisters, relatives or friends who live or have previously lived with you.)

		Never	Not	Occasionally	Often	All the
a)	Money meant for food, clothing, bills or holidays being spent on gambling					
b)	Family or household members asking you, or others, to lend them money due to gambling					
c)	Household objects, possessions or toys being sold or pawned to gamble or pay gambling debts					
d)	Being lied to or not being told the whole truth by the gambler or other family members					
e)	Fights or arguments between parents or other family members about, or because of, gambling					
f)	Being worried or concerned about a family or a household member's gambling					
g)	Parents/guardians being irritable, angry or worried because of gambling related issues					

PART D: THE NEXT QUESTIONS ARE ABOUT YOU AND YOUR FRIENDS'S EXPERIENCES AND ATTITUDES TO DO WITH GAMBLING.

(TICK)

24.	On average, how often do your friends gamble?					
	Never	1-2 times per year	3 times per year,	2-3 times per	Weekly or more	
			up to monthly	month		

25. How popular would you say that gambling or betting on things is among people your age?

Popular	Somewhat popular	Not very popular	Not popular at all

26. Please tick the box that is closest to how you think:

		Strongly	Somewhat	Somewhat	Strongly
		Disagree	Disagree	Agree	Agree
a)	I sometimes feel pressured to gamble if all my friends are doing it, even if I don't particularly feel like gambling				
b)	Gambling is a good opportunity to socialise with my peers				
c)	If my friends were all gambling I would most likely gamble too				
d)	Gambling is a good way to compete or have a friendly challenge with my peers				
e)	I prefer to gamble with a group of friends rather than alone				
f)	The fact that gambling under the age of 18 is against the law makes it more fun				
27. If you were drinking alcohol with your friends, would you be more likely to gamble?

Don't Drink	Don't Gamble	Never	Not Often	Occasionally	Often	All the
						Time
<u>Go to Q30</u>	<u>Go to Q30</u>					

28. When drinking alcohol, are you likely to spend more money than usual on gambling?

Yes No

PART E: THE NEXT QUESTIONS ARE ABOUT INTERNET GAMBLING.

(TICK)

29. Do any of the following things about Internet gambling appeal to you?

		Not appealing	Slightly	Somewhat	Very
		at all	appealing	appealing	appealing
a)	24-hour access				
b)	Able to avoid age restrictions				
c)	Anonymity (can do it without others				
	knowing)				
d)	Easy to access anywhere				
e)	Flashy colours and blinking screens				
f)	Incentives for membership or bonus				
	offers				
g)	Rapid speed of play				

PART F: THE NEXT QUESTIONS ARE ABOUT THE WAY GAMBLING CAN FEEL.

(TICK)

30. How much do you agree with the following:

time!'

		Strongly	Somewhat	Somewhat	Strongly
		Disagree	Disagree	Agree	Agree
a)	Gambling can be a good activity to do when you are bored (e.g. play the pokies while waiting for friends in a Club or scratching a crossword scratchie for 'something to do' or going to the pub to gamble because you are bored)				
b)	Gambling can involve a feeling of excitement or a buzz				
c)	Sometimes, even though I know that I'm not likely to win, I gamble anyway because I think, 'But what if?', 'You never know' or 'It may be different this				

PART G: THE NEXT QUESTIONS ARE ABOUT HOW GAMBLING WORKS.

(TICK)

31.	Do you feel you u affects gambling?	nderstand what	<i>'probability'</i> or	<i>'odds'</i> mean and how it
	Yes	No	A little, but not con	npletely
32.	If you roll a dice, w	hat are the chan	ces it will land o	on a '6'?
	6 in 6 🗌	1 in 6 🗌	3 in 6 🗌	Unsure
33.	In Lotto, a random win than a series o	series of numb f numbers in a s	ers such as <i>12</i> equence such a	- <i>5-23-17</i> is more likely to is <i>1-2-3-4</i> ?
	Yes	No 🗌	Unsure	
34.	The chance of winr	ning on an instar	nt scratchie is:	
	1 in 5 🔲	1 in 10 🔲	1 in 3 🔲	Unsure
35.	If you flip a coin an <u>tails</u> if you flip the o	id get <u>heads</u> five coin again?	times in a row,	are you most likely to get
	Yes	No 🗌	Unsure	
36.	Do you agree that win?	after losing mar	ny times in a ro	ow, you are more likely to
	Yes	No 🗌	Unsure	

- 37. Please indicate the degree to which you agree with the following statements
 - a) You have a better chance of winning at Lotto or Keno after watching many games and noticing the numbers that come up often.

Strongly Disagree	Somewhat	Somewhat Agree	Strongly Agree	Unsure
	Disagree			

b) If someone playing the pokies has just won a very large sum of money on a machine, the next person who uses that machine has a smaller chance of winning money.

Strongly Disagree	Somewhat	Somewhat Agree	Strongly Agree	Unsure
	Disagree			

PART H: THE NEXT QUESTIONS ARE ABOUT THINGS THAT COULD AFFECT GAMBLING.

(TICK)

38.	Have you ever known someone who has experienced gambling related problems?
	Yes No
	<u>Go to Q40</u> <u>Go to Q41</u>
39.	Did the experience of knowing this person:
	a) Make gambling seem less appealing?
	Yes No No Neither
	b) Make you gamble less?
	Yes No No Neither
40.	Do you have hobbies or interests that you enjoy and are involved in regularly?
	Yes No
41.	Did your parents/guardians ever discuss the risks of gambling with you?
	Yes No
42.	Did you ever learn about gambling and its risks at school?
	Yes No

Thank you for participating in the survey.

30 March 2010

Dear Principal,

Re: Participation in Approved Research

I am writing to ask you to allow us to survey a total of 20 students from Year 11 or 12 at Chancellor State College as part of a study that will examine the prevalence of gambling in young Queenslanders, and the risk factors associated with the development of gambling behaviours. Students will complete the survey anonymously, and it can be conducted during the school term at a time convenient to the school.

Who is doing the survey and why?

Community Solutions Inc. is conducting the study in partnership with the University of Queensland with funding from Queensland Treasury. The Queensland Government will use findings to provide information regarding the characteristics of a young person's environment - social, cultural and family contexts that may affect the development and maintenance of gambling behaviours. It is envisaged that the findings of this project will inform prevention and early intervention initiatives being developed by the government.

What is the survey about?

The survey has three sections with components as follows:

- (a) Demographic information such as age, gender and living circumstances,
- (b) Types of gambling students have had experienced, and the frequency with which they gamble. Students will complete the "South Oaks Gambling Screen: Revised For Adolescents (SOGS-RA)". This is a reliable and valid instrument that can determine whether an individual exhibits any problem gambling behaviours,
- (c) Factors that influence the uptake and maintenance of gambling behaviours,

A copy of the survey is enclosed.

How much work is involved in doing the survey?

Community Solutions will keep the work involved in running the survey in schools to a minimum. Participating schools are required to appoint a contact teacher for arrangements and delivery of the survey within the school. Trained research staff from Community Solutions will come to the school to administer the survey to students in two groups of 10.

Who has approved the study?

Ethical approval for the survey has been granted by the Behavioural and Social Sciences Ethical Review Committee (BSSERC), University of Queensland. A copy of the BSSERC approval is enclosed. The Department of Education Training and Arts Queensland approval has been granted through the Central Office of Strategic Policy and Performance. If a student, parent or staff member has any concerns or complaints about the study, these should be directed to the University of Queensland's Ethics Office who can be contacted by phone at 3365 3924.

What do I do now?

Please complete the attached form to indicate whether or not the school is willing to participate in the study. If the school agrees to participate in the survey, please complete the attached form and return it by the 1st of July via mail (PO Box 631 Buddina, QLD 4575) or fax (07 5437 9399). The nominated contact person for the survey within the school will be the point of contact for all correspondence and other communication.

If you wish to receive clarification on any matters relating to this research project, contact Jenny Madden, Manager Community Solutions Inc. at 54379499 or via jmadden@community-solutions.com.au.

Thank you for considering this request. Schools participating in the study will receive a summarised version of the results from the study when they are released, however participating students and their schools will not be identified in any reporting.

I hope you are able to support this important research, and I look forward to receiving your response.

Yours sincerely

JENNY MADDEN Manager Community Solutions Inc. Tel: 61 (7) 5437 9499 Fax: 61 (7) 5437 9399 Email: jmadden@community-solutions.com.au

30 March 2010

Dear Parent/Guardian,

RE: Students' Participation in Research

The Queensland Government, through the Office of Gaming Regulation is currently conducting The Virtual Jackpot: Phase 2 research project. Community Solutions has been contracted to undertake this research. The aim of the research is to reveal youth gambling patterns in Queensland and explore the characteristics in young people's lives that affect the development and maintenance of gambling behaviours. The project requires participants to fill out an **anonymous** questionnaire.

Participation is voluntary and will not affect students' studies in any manner. Please read the attached information sheet for further information about what is required of participants. This research is considered to be very important for young people in Queensland, and has the potential to inform future government policy.

We encourage you to allow your child to participate by filling out and returning the consent form attached to the allocated teacher at your child's school.

If you have any enquires please feel free to contact Bonita Hafey, Project Officer on 5493 7249 or Ms Jenny Madden, Manager at our Sunshine Coast office on 5437 9499.

Yours Sincerely

JENNY MADDEN

Manager Community Solutions Inc. Tel: 61 (7) 5437 9499 Fax: 61 (7) 5437 9399 Email: jmadden@community-solutions.com.au 7.7

PARTICIPANT CONSENT FORM

Virtual Jackpot! Contexts of Youth Gambling in Queensland: Phase 2

The Virtual Jackpot! research project aims to collect information about the factors that contribute to and prevent gambling amongst young people in Queensland. The project has been funded by the Queensland Government's Office for Gaming Regulation. Participation in this study will provide information that will assist the development of public health programs that aim to prevent the development of problem gambling in young people.

Principal Investigator	Phone Contact	E-mail Address
Professor Jake Najman, University of Queensland	07 3365 5180	J.Najman@sph.uq.edu.au
Co-Investigators		
Jenny Madden, Community Solutions	07 5437 9499	jmadden@community-solutions.com.au
Dr Karen Brooks, University of Queensland	04 1613 9033	karen.brooks@scu.edu.au
Karina Allen, Community Solutions	07 5437 9499	kallen@community-solutions.com.au
Bonita Hafey, Community Solutions	07 5437 9499	bhafey@community-solutions.com.au

I have read the Participant Information sheet and I understand that:

- > Participation in this study is voluntary.
- I am not obliged to participate and am free to withdraw consent to further involvement in the research at any time.
- I do not need to explain my reasons for withdrawal and no consequences will arise from such withdrawal.
- If I do choose to withdraw from the research, information received from me that was obtained prior to my withdrawal <u>will be</u> used as follows: information will not be directly identifiable to me and no additional information that may personally identify me will be reported.
- All information provided will be used for the purposes of the Virtual Jackpot! research project.
- All information provided by me will be stored in a manner that maintains confidentiality and can be accessed by the research team only.
- On completion of the study, and after approval from the Queensland Office for Gaming Regulation for release of the study results, a summary of the research findings will be made available to me.
- Both participants and members of the research team agree to maintain confidentiality of the information obtained during group discussions and interviews by not discussing details with others.

I have read and understand the contents of the Participant Information Sheet for the Virtual Jackpot! research project and this Participant Consent Form. I agree to participate in the Virtual Jackpot! research project and give my consent freely. I understand that the study will be carried out as described on the Research Project Information Sheet, a copy of which I have kept. I realise that whether or not I decide to participate is my decision. Any questions I had about this research project and my participation in it have been answered to my satisfaction.

FULL NAME	SIGNATURE	DATE
Participant		
Parent / Guardian (if participant under 18 years of age)		
Researcher		

Participant Information Sheet

Virtual Jackpot! Contexts of Youth Gambling in Queensland: Phase 2

RESEARCH TEAM			
PRINCIPAL INVESTIGATOR	Phone Contact	E-mail address	
Professor Jake Najman University of Queensland	07 3365 5180	J.Najman@sph.uq.edu.au	
Co-Investigators			
Jenny Madden Community Solutions	07 5437 9499	jmadden@community-solutions.com.au	
Dr Karen Brooks University of Queensland	04 1613 9033	karen.brooks@scu.edu.au	
Karina Allen Community Solutions	07 5437 9499	kallen@community-solutions.com.au	
Bonita Hafey Community Solutions	07 54379499	bhafey@community-solutions.com.au	

<u>Please note</u>: Participation in this study is voluntary. You are not obliged to participate and you are free to withdraw consent to further involvement in the research at any time. You are not required to explain your reasons for withdrawal and no consequences will arise from such withdrawal.

INFORMATION ABOUT THE STUDY

What is the study about?

The Virtual Jackpot! research project aims to collect information about the prevalence of gambling and the factors that contribute to and prevent gambling amongst young people in Queensland. The project has been funded by the Queensland Government's Office for Gaming Regulation.

What will you do?

- Complete and return the Consent Form and Prize Draw Form in the envelope provided.
- Complete the anonymous questionnaire package. It is expected that the questionnaire will take you approximately 15 minutes to complete.

Will the information provided be confidential?

The project team will maintain confidentiality of the information obtained. You will not be required to provide your name on any of the measures and all responses will be kept anonymous. Information that is collected from you will not be analysed and recorded on an individual basis; results will be compiled as a group and analysed together for the purposes of our test development process.

All recorded and hardcopy information will be stored in a locked cabinet and all electronic data will be stored in a file with password access only. Only members of the research team identified above will have access to this data. All information provided by participants will be used for the purposes of the Virtual Jackpot! research project. If you give consent, the information may also be used in related future research projects.

Will the study results be published?

A summary of the findings of the research will be made available to participants upon conclusion of the study and following approval for release of these findings from the funding body, Queensland Treasury. Please be aware that the research team will be pursuing publication of the research in the academic press as a journal article/s. The research may also be reported in popular media.

What are the benefits of participation?

There is a chance to win one of five double movie passes if you choose to enter the draw. If you would like to enter please fill out your contact details on the draw form and enclose it in the envelope for return. Winners will be notified by the 31st of July 2008.

Further, your participation in this study is likely to provide a sense of satisfaction in the knowledge that the information you contribute will assist the development of public health programs that aim to prevent the development of problem gambling in young people. For participants who may be experiencing problems due to gambling, participation in this research may prompt help seeking.

Are there any risks?

Minimal risks have been identified through participation in the research. It is thought that a small number of participants (less than 1 in 10) may feel uncomfortable or upset about disclosing information about theirs or others gambling behaviours. If at any stage you feel uncomfortable about disclosing information you can abstain from completing the questionnaire package.

Furthermore, if you experience any form of psychological discomfort as a result of discussing your own or others gambling behaviors during participation in the research, you can contact one of the following services:

Service	Phone Contact
Gambling Help Sunshine Coast, Relationships Australia	(07) 5492 7255
Gambling Help Line (free call in Queensland, 24 Hours), Turning Point	1800 222 050
Gamblers Anonymous (24 Hours)	1800 002 210
Life Line (24 hours)	13 11 14
Kids Helpline	1800 55 1800

Ethical clearance, further information & complaints

This study has been cleared by one of the human ethics committees of the University of Queensland in accordance with the National Health and Medical Research Council's guidelines. You are of course, free to discuss your participation in this study with the project staff (contactable on 5437 9499).

If you would like to speak to an officer of the University not involved in the study, you may contact the Ethics Office on 3365 3924.

The University of Queensland, Community Solutions Inc. and the research team appreciate your participation in the Virtual Jackpot! Research Project.