

**Youth Gambling and Problem Gambling: Another High Risk Behavior**

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Once viewed as an activity primarily relegated to adults, gambling has become a popular form of recreation for adolescents. While in many cases explicit legislative statutes in most countries prohibit children and adolescents from gambling on regulated games, their resourcefulness enables many youth to engage in both regulated and non-regulated (e.g., card games, peer sports wagering, etc.) forms of gambling. Gambling behavior for adolescents, similar to adults, can be best viewed along a continuum ranging from non-gambling to social/occasional/recreational gambling to at-risk gambling to problem/pathological gambling.

Survey findings and reviews of prevalence studies examining youth gambling behaviour have consistently revealed that adolescents (12-18 years of age) have managed to participate, to some degree, in practically all forms of social, government sanctioned, and non-regulated gambling available in their homes and communities. Such games vary from country to country but frequently include cards, dice, lottery, bingo, betting with peers on games of personal skill, purchasing lottery tickets, sports betting amongst friends, wagering on electronic gambling machines, casinos games and wagering on the Internet (Derevensky & Gupta, 2004; Derevensky, Gupta, Messerlian & Gillespie, 2004; Jacobs, 2004).

Wagering behaviors of adolescents are often dependent upon the local availability of games, the geographical proximity of gaming locations, the child's gender and type of game (gambling is more popular amongst males than females; males prefer sports wagering whereas girls report engaging in bingo more often), age, and cultural/ethnic background (see Chevalier, Deguire, Gupta, & Derevensky, 2003; Gupta & Derevensky, 2004; NRC, 1999).

### ***Adolescent Problem Gambling***

While there is a lack of consensus as to the actual prevalence rate of severe gambling (e.g., problem, compulsive, probable/pathological, disordered, pathological, or Level III gambling) involvement by adolescents, a number of large-scale meta-analyses and reviews have concluded that adolescents as a group constitute a high-risk population for gambling problems (Jacobs, 2000; Shaffer & Hall, 1996; NRC, 1999). Recent research in Canada, the U.S., New Zealand and Australia has revealed that between 60% - 80% of adolescents report having engaged in some form of gambling during the past year (Derevensky & Gupta, 2004; Jacobs, 2004; Shaffer & Hall, 1996), with most best described as social, recreational and occasional gamblers. Nevertheless, there remains ample evidence that between 3-8% of adolescents have a very serious gambling problem with another 10-15% at-risk for the development of a gambling problem (Derevensky & Gupta, 2000; Jacobs, 2004; NRC, 1999; Shaffer & Hall, 1996).

Acknowledging difficulties in comparisons of the data sets, the National Research Council report

concluded “the proportion of pathological gamblers among adolescents in the United States could be more than three times that of adults (5.0% versus 1.5%)” (National Research Council, 1999, p.89), with comparable findings being found in other countries. While nomenclature, instrumentation and methodological issues exist and need to be addressed, there remains considerable consensus that gambling and wagering among youth is a relatively common and popular activity and that a small, identifiable, population experiences serious gambling-related problems.

To further identify the types of gambling-related problems experienced by adolescent pathological gamblers Derevensky and Gupta (2000) performed an item analysis on the endorsement rates using the DSM-IV-J gambling screen. Their results revealed that 91% of adolescent and young adult pathological gamblers reported a preoccupation with gambling; 85% indicated chasing their losses; 70% lied to family members, peers and friends about their gambling behavior; 61% used their lunch money and/or allowance for gambling; 61% became tense and restless when trying to reduce their gambling; 57% reported spending increasing amounts of money gambling; 52% indicated gambling as a way of escaping problems; 27% reported missing school (more than 5 times) to gamble; 24% stole money from a family member to gamble without their knowledge; 24% sought help for serious financial concerns resulting from their gambling; 21% developed familial problems resulting from their gambling behavior; and 12% reported having stolen money from outside the family to gamble.

#### ***Correlates and Risk Factors Associated with Problem Gambling***

Considerable research efforts have focused upon basic issues of assessment of gambling severity; the identification of physiological, psychological, and socio-emotional mechanisms underlying excessive gambling behavior among youth; understanding why some individuals continue to gamble in spite of repeated losses; and behavioral correlates associated with problem gambling along with how to best educate, prevent, and provide treatment for individuals with a gambling problem.

While our knowledge concerning the risk factors associated with adolescent problem gambling appears to be growing, we still have yet to acquire sufficient information concerning protective factors (Dickson, Derevensky & Gupta, in press). It is important to remember that most mental health disorders and social problems have multiple risk factors. Similar to other mental health disorders, problem gambling has multiple risk factors and no single constellation of these risk factors can alone predict with a great deal of certainty that a particular problem will exist (see the work of Jessor, 1998 for risk factors associated with a number of adolescent risky behaviors and the work of Dickson, Derevensky and Gupta, 2002 in its application for problem

gambling). It is equally important to note that some risk factors are common to multiple disorders, including gambling, while others are unique to the specific disorder. While assuming that there are multiple constellations of risk factors that in conjunction with a lack of specific protective factors place certain individuals at high-risk for a specific problem, adolescent problem gamblers do not likely represent a homogeneous group (see Nower & Blaszczynski's, 2004, pathways models where they hypothesize at least three different types of adolescent problem gamblers). As well, an important consideration is the interaction effect of risk factors, protective factors and availability of specific forms of gambling. For example, should the availability of specific gambling opportunities be limited or non-existent, it is plausible that an individual may seek some alternative addictive behavior other than gambling as a stress/anxiety reduction outlet.

Among adolescents there appears to be a more rapid progression from social, recreational gambling to more problematic gambling compared to adults and they report initiating gambling at an early age (approximately 10 years of age). Youth problem gamblers report consistently chasing their losses (e.g., returning to win back money lost), have been found to exhibit erroneous cognitions when gambling, and frequently report having had very early gambling experiences or an early big win (Derevensky, in press).

The consequences of adolescent pathological gambling have been well documented. They have been shown to experience increased delinquent and criminal behavior, disruption of familial relationships, poor academic and work performance, and disrupted familial and peer relationships. (Derevensky & Gupta, 2004). As well, youth pathological gamblers have been reported to have high rates of suicide ideation and suicide attempts (Nower, Gupta, Blaszczynski & Derevensky, 2004) and a wide variety of mental health and behavioral problems (Derevensky & Gupta, 2004).

#### *Socio-Demographic and Cultural Factors*

While somewhat dependent upon availability of gambling activities, cultural factors (there is a paucity of research in this area) and geographic distribution, a number of consistent findings have been shown to be associated with gambling problems amongst adolescents. Prevalence studies have revealed that more male than female adolescents exhibit pathological gambling behaviors, males exhibit greater risk-taking behavior, gamble earlier, gamble on more games, gamble more often, spend more time and money, and experience more gambling-related problems. There is also some indication that adolescents from low income homes and cultural minorities may be over-represented amongst pathological gamblers (Derevensky, in press).

### *Familial Factors*

Familial factors are thought to contribute to the initiation of gambling and the development of problem gambling by increasing an individual's exposure to gambling activities, social learning, and genetic influences (Abbott et al., 2004). Research has shown that adolescent pathological gamblers' initial gambling experiences take place with family members in their own homes (Gupta & Derevensky, 1997), with older siblings being an early predominant influence. As children get older, their patterns of gambling change such that youth gamble less with family members and more with friends. Adolescents with gambling are also more likely to report having parents who they perceive gamble excessively, are involved in other addictive behaviors, and/or whose parents who have been involved in illegal activities (Derevensky, in press). Research conducted with children of problem gamblers revealed they exhibit a number of mental health, substance abuse and psychosomatic problems and are at heightened risk for long-term problems (Lesieur & Rothschild, 1989) and there is further evidence suggesting that adolescent pathological gambling is correlated with parental attitudes toward gambling (Derevensky, in press).

### *Physiological Factors*

Adolescent pathological gamblers have been found to have increased physiological resting states, to have a greater need for sensation seeking, and to be more likely aroused and excited when gambling (Derevensky & Gupta, 2004).

### *Personality Factors*

Research findings suggest that adolescent probable pathological gamblers are greater risk-takers, score higher on measures of impulsivity, excitability, extroversion, and state and trait anxiety and lower on measures of conformity and self-discipline (Gupta & Derevensky, 1997). Problem and pathological gamblers have also been found to be more self-blaming, guilt prone, anxious, and less emotionally stable (Gupta & Derevensky, 2000). While there is some literature suggesting that obsessive compulsive disorders (Black, Moyer, & Schlosser, 2003) and psychoticism, neuroticism, borderline disorders, histrionic, and narcissistic personality disorders have found to be elevated among adult pathological gamblers (Raylu & Oei, 2002), there is no evidence supporting these findings amongst adolescent problem gamblers.

### *Emotional Factors and Mood States*

In general, problem gamblers report having a lower self-esteem, higher rates of depression, and report greater suicide ideation and suicide attempts compared with other adolescents (Derevensky & Gupta, 2004).

### *Learning and Behavior Problems*

In addition to adolescents with severe gambling problems having a history of delinquency (Magoon et al., in press), they are also more likely to experience a multiplicity of school-related problems including increased truancy and poor academic performance, and report a greater frequency of attention deficit hyperactive disorder and conduct-related problems (Derevensky et al., 2005; Haroon et al., 2004). There is empirical support that adolescent problem gamblers also experience a number of antisocial problematic behaviors including the development of multiple addictions, in particular alcohol and substance abuse disorders (Derevensky & Gupta, 2004b; Haroon et al., 2004; Lynch, Maciejewski & Potenza, 2004; Winters & Anderson, 2000).

### *Cognitions*

There exists a substantial body of literature examining differences in cognitive processing between individuals with and without gambling disorders. In a recent review, Toneatto (1999) has provided a comprehensive compendium of the gambling-related cognitive distortions endorsed by adult pathological gamblers. Such findings relate to the erroneous beliefs, cognitive thinking displaying a lack of utilization of independence of events when making judgments, and an exaggeration of perceived skill involved in gambling, with similar distortions being reported for adolescent problem gamblers (Gupta & Derevensky, 2004).

### *Coping Behaviour*

Adolescents with gambling problems, compared to their peers, have been found to have poor or maladaptive general coping skills (Bergevin et al., 2005; Gupta, Derevensky & Marget, 2004; Nower et al., 2004). More specifically, problem and pathological gamblers have been found to use more emotion and distraction oriented coping styles than non-gamblers. It has been suggested that maladaptive coping may be a mediating factor for addictive behaviors. Given that adolescents with gambling problems report more daily hassles and major traumatic life events (Bergevin et al., 2005; Kaufman, Derevensky & Gupta, 2002), their lack of implementation of effective coping and adaptive mechanisms remains of concern.

### *Attitudes*

Similar to adults, adolescents view gambling as a socially acceptable, enjoyable form of entertainment. Gambling is generally viewed as a relatively benign activity, significantly less harmful than alcohol, drugs, or cigarettes (Dickson, Derevensky & Gupta, 2002). Gambling activities are viewed as highly acceptable activities, a belief which is reflected in the finding that very few children are afraid of getting caught while gambling, with even fewer being afraid as they get older (Derevensky & Gupta, 2000). Research has also indicated that adolescent attitudes

and behavior have been shown to predict gambling behavior in later adulthood (Griffiths & Wood, 2000).

### **Situational/Environmental Risk Factors**

In addition to individual risk factors there exists a number of situational and/or environmental factors which strongly interact with individual risk factors creating an increasing probability that an individual may become a problematic gambler.

#### *Availability and Accessibility*

Fisher (1999) in examining adolescent gambling behavior reported that the availability and easy accessibility of fruit machine gambling (low-stake slot machines which are legal for children of all ages) in the U.K. was directly related to higher rates of gambling and problem gambling. Similar findings were found with adolescents who engage in scratch lottery playing, sports lottery playing, and VLT playing (Felsher et al., 2003, 2004; Gupta & Derevensky, 1998a). Jacobs (2004) concluded after reviewing a large number of prevalence studies that there is a direct link between availability, accessibility and gambling in general, and gambling problems in particular amongst youth.

#### *Game Features and Technological Advances*

It has been previously suggested that specific forms and types of gambling have been associated with problem gambling. It is likely that the structural characteristics of specific games, in particular electronic gambling machines which incorporate rapid play, high event frequencies, and are predicated upon intermittent reinforcement schedules may be highly addictive. Such machines lend themselves to being played continuously. Their 'short payout intervals' results in immediate and rapid feedback, creating ideal opportunities for repeated and continuous play while simultaneously minimizing the individual's opportunity to cognitively recognize the losses (Abbott et al., 2004). Such features have been associated with the distinction between *hard* and *soft* forms of gambling (see Griffiths & Wood, 2004 for a more thorough discussion). In addition to the variable ratio payout schedules of these machines it has been argued that the 'near miss' provides the player with a form of secondary reinforcement by creating an illusion that the player is not constantly losing but rather is nearly winning. Such types of structures are frequently found in gambling machines and scratch lottery tickets, both of which are particularly attractive to youth (Felsher, Derevensky & Gupta, 2004). As well, Griffiths and Wood (2004) have argued that electronic forms of gambling generally possess other structural characteristics including vivid colors, sounds, music, and lights making them highly attractive and creating an aura promoting continued gambling.

Technological advances continue to provide new gambling opportunities in the form of Internet gambling and more technologically advanced slot machines, interactive lottery games, interactive television games of chance, and telephone wagering (Griffiths & Wood, 2000). It is predicted that active participation in Internet gambling will increase tenfold in coming years as (a) accessibility from one's home or school is becoming easier, (b) Internet gambling has the potential to offer visually exciting effects similar to video games and slot machines, and (c) the event frequency can be very rapid, particularly if the gambler is subscribed to multiple sites. Given the increasing popularity, accessibility and familiarity of the Internet, this represents another venue for potential problems for adolescents. There is recent research suggesting that a large number of underage youth have gambled on the Internet without money (a number of Internet gambling sites offer players the opportunity to engage in identical activities without money with the potential for acquiring points and/or a prize), with a smaller number gambling with money (Byrne, Gupta & Derevensky, 2004). Still further there is evidence that youth who gamble both with and without money are more likely to exhibit gambling problems (Byrne et al., 2004). Currently, in order to engage in these activities an individual must have a credit card. While many adolescents do not have easy access to a credit card there remains a concern that these Internet gambling sites which permit individuals to play *free games* without money are in fact training a generation of youth to gamble *with* money once they have acquired their own credit card. Other forms of technological advances including mobile gambling (through cell phones) are on the horizon and represent cause for concern.

### ***Protective Factors***

Jessor's (1998) general theory of adolescent risk behaviors conceptualizes the interactive nature of risk and protective factors as a way of predicting the likelihood of an adolescent acquiring or maintaining a particular risky behavior(s). While Jessor (1998) did not articulate youth gambling as a particularly risky behavior, Dickson, Derevensky and Gupta (2002) incorporated and expanded his model to include excessive adolescent gambling. Of importance is the study of protective factors and their interaction with risk factors in predicting high risk behaviors. While there are certainly some specific unique risk factors associated with problem gambling, many of the risk factors found in adolescents cut across a number of risky behaviors (e.g., drug and alcohol use and abuse, cigarette smoking, unprotected sex, including gambling). In a large scale study with adolescent problem gamblers Dickson et al. (in press) attempted to test whether specific protective factors common to other adolescent risky behaviors was applicable to youth with gambling problems. Based upon their review of the literature a number of variables were thought to serve as protective factors. In their study of 2,179 youth, using self-report measures, they sought to establish

whether family cohesion, mentorship, school connectedness, achievement motivation, involvement in prosocial activities and coping strategies served to act as a protective factor for excessive gambling. Their results suggested that poor family and school connectedness was symptomatic of adolescent problem gambling, with family cohesion playing a significant role as a protective factor. In another study, Lussier, Derevensky and Gupta (2004) examined resilience in the presence of identified risk factors as a possible protective factor for youth gambling problems. Adolescents, perceived to be *Vulnerable* (high risk/low protective factors) had a mean gambling severity score nine times larger than the *Resilient* group (high risk/high protective factors), eight times larger than the *Fortunate* group (low risk/low protective factor), and 13 times larger than the *Ideal* group (low risk/high protective factors). Those youth identified as *Vulnerable* were at greatest risk for experiencing gambling problems. They further reported that 100% of the youth classified as probable pathological gamblers and 86.7% classified as at-risk for problem gambling were within the *Vulnerable* group. Strikingly, only 4.3% of youth identified as *Resilient* were identified as at-risk gamblers and none were probable pathological gamblers despite their reporting high levels of risk exposure.

It is important to note that resilience is a dynamic process encompassing positive adaptation within the context of significant adversity (Luthar, Cicchetti, & Becker, 2000). Resilience is not a fixed attribute and varies depending upon situational factors, the individual's age and developmental period, and the general surrounding environment. Those youth who have not developed a gambling problem despite unfavorable circumstances, have adapted, at that particular time, to the various stressors (risk factors) they face. Resilient youth seem to be able to more effectively cope with stressful situations and emotional distress in ways that enable them to develop appropriate adaptive behaviours and go on to become competent individuals (Garmezy, Masten & Tellegen, 1984).

## **Conclusions**

While a number of individual, situation and environmental risk and protective factors have been found to be related to youth problem gambling behaviors the causal links have not yet emerged. The availability, accessibility and structural features of specific games most likely combine with an individual's psychosocial characteristics and cultural beliefs in various ways to create rather complex patterns of risk. To date our knowledge still remains limited as to the combinations of risk and protective factors which interact to decrease the likelihood of specific individuals engaging in gambling excessively. Similarly, our understanding of those protective factors which may minimize and reduce the risk of excessive gambling remains limited. While we can continue to examine the commonality of risk and protective factors between gambling and

other addictive behaviors, only longitudinal and prospective studies will be able to help resolve this issue.

Adolescence is a developmental period marked by significant physiological, cognitive and emotional changes, with cultural, economic and social factors playing an important role . There remains little doubt that adolescents constitute a particularly high-risk group for engaging in a wide variety of potentially risky behaviors and for acquiring gambling problems given their high rates of risk-taking, their perceived invulnerability, their lack of recognition that gambling can lead to serious problems, the ease of accessibility of gambling venues, its widespread social acceptability and availability, and the glamorization of gambling.

Much needed research, using a wide variety of adolescents representing different cultural groups will be needed to help identify common and unique risk and protective factors for gambling problems. Longitudinal research to examine the natural history of pathological gambling from childhood to adolescence through later adulthood is required. Molecular, genetic and neuropsychological research is also necessary to help account for changes in gambling progression. There is little doubt that more basic, applied and longitudinal research is needed to investigate psychosocial, biological, and environmental/situational risk factors associated with youth experiencing gambling problems.

Many other more highly visible adolescent mental health and social problems have prompted social policy interventions. Issues surrounding youth gambling problems have been largely ignored. While the incidence of severe gambling problems amongst youth remains relatively small, the large numbers of children gambling is of concern. The long-term consequences and impact upon youth with gambling problems, their families, and friends can be significant. The proliferation of gambling venues and its social acceptability in light of the lack of widespread prevention initiatives represents a serious social experiment. Unless we exercise caution, the long-term consequences may be severe.

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