

Beyond drugs and alcohol: Including gambling in a high-risk behavioural framework

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Studies throughout North America have suggested that more adolescents are gambling today than in the past. Over the past decade, gambling has become a popular form of entertainment and part of mainstream society. With the increase in gambling availability has come a rise in not only the number of youth who participate in gambling, but also the number who exhibit serious gambling problems. There is growing concern that adolescents and young adults are the highest risk group for problem gambling. The National Research Council, in its critical review of pathological gambling, indicated that the prevalence of problem gambling among adolescents is consistently higher than among adults, despite differences in measurement. Yet, efforts to prevent and treat problems among this population have only recently emerged as an important adolescent health issue. The present article reviews the risk factors, mental health correlates and warning signs of adolescent gambling problems, with the aim of raising awareness among health professionals working with youth of the need to address this issue within their practices.

Key Words: *Gambling; High-risk behaviour; Prevention*

Today's youth are the first generation for whom gambling opportunities are as close as the neighborhood corner store and as easily accessible as the Internet. The proliferation of gambling offerings, both government- and privately sponsored, has resulted in an increased number of children and adolescents gambling for recreation and entertainment. With the growing proliferation of gambling venues and opportunities, the ease of accessibility and the normalization of gambling in our society, increasing numbers of underaged youth are participating in these activities. Like many other addictive behaviours, what begins as a relatively infrequent and benign behaviour can quickly escalate, resulting in serious behavioural, academic, social, judicial and mental health problems. As such, youth gambling problems have recently surfaced as a concern for public health and medical professionals alike.

Some studies (1,2) have suggested that there are more adolescents participating in high school gambling than engaging in alcohol, drug and cigarette use. Gambling

Pas seulement les drogues et l'alcool : Inclure le jeu dans la structure comportementale à haut risque

Selon des études menées en Amérique du Nord, plus d'adolescents s'adonnent aux jeux de hasard que par le passé. Depuis dix ans, les jeux de hasard sont devenus une forme populaire de divertissement et partie intégrante de la société dominante. La plus grande accessibilité aux jeux de hasard s'associe à une augmentation non seulement des jeunes qui y participent, mais également du nombre qui présentent de graves problèmes de jeu. On se demande de plus en plus si les adolescents et les jeunes adultes ne constitueraient pas le groupe le plus vulnérable aux problèmes de jeu. Le *National Research Council* des États-Unis, dans son analyse critique du jeu pathologique, a souligné que la prévalence de problèmes de jeu chez les adolescents est toujours plus élevée que chez les adultes, malgré les mesures différentes utilisées. Pourtant, il a fallu attendre tout récemment pour que les efforts en vue de prévenir et de traiter les problèmes au sein de cette population soient considérés comme une question importante en santé des adolescents. Le présent article traite des facteurs de risque, des corrélats sur la santé mentale et des signes annonciateurs de problèmes de jeu chez les adolescents, et il vise à sensibiliser les professionnels de la santé qui travaillent avec les jeunes à la nécessité d'aborder la question dans leur pratique.

can be defined as wagering money or something of value (eg, compact discs, video games, clothing) on an event having an uncertain outcome, with the primary intent of winning additional money or material goods. The most common forms of gambling participation among adolescents are lottery products, card games, games of skill and sports betting. However, game preference, in general, is dependent on availability and accessibility factors, school and youth culture, and sex (3).

Presently, between 39% and 92% of adolescents have reported gambling at least once in their lifetime (1). This wide range can be explained by a number of factors: study methodologies (eg, data collection methods), dates of the study (earlier studies reported lower rates than more recent studies), sex distribution of the samples (samples with a higher number of male participants likely had a higher prevalence rate) and cultural factors. While the majority of these children and adolescents do not suffer any significant adverse consequences of their gambling behaviours (1,4), a

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minority of youth (approximately 4% to 8%) do become overinvolved in gambling activities and report significant gambling-related problems (5). Another 10% to 15% of adolescents are considered to be at risk for developing a gambling problem (3). These numbers are particularly alarming considering that the prevalence rates for probable pathological gambling in youth are considerably higher than those in the general adult population (1% to 3%) (1,6). When considering the proliferation of gambling venues worldwide, the high prevalence rates of youth gambling and the lack of public information about gambling problems in youth, the need for knowledgeable health care professionals becomes extremely salient.

According to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (7), pathological gambling is defined as a continuous or periodic loss of control over gambling behaviour. It is marked by irrational thinking and erroneous cognitions, a preoccupation with gambling and with obtaining money to gamble, a continuation with gambling despite adverse consequences and an inability to stop gambling despite a desire to do so (7). Research (6,8) suggests that problematic gambling among adolescents is associated with an assortment of mental health outcomes. Youth with gambling problems tend to report higher rates of depression and anxiety, and suicide ideation and attempt; they are also at greater risk for the development of additional addictions, including alcohol and substance abuse disorders. Similarly, these youth often report associated behavioural, psychological, interpersonal and academic problems, including difficult relationships with friends and family, increased delinquency and criminal behaviour, poor academic performance and school truancy, and negative financial consequences (8,9). Moreover, researchers suggest that problem gambling in early adolescence likely serves as a gateway to other problematic mental health behaviours during youth and adulthood (10).

Youth gambling is a high-risk behaviour, not unlike alcohol use, substance use, tobacco use and unprotected sexual activity. It has been well established that in the developmental course, adolescents are susceptible to the engagement of high-risk behaviours, yet in doing so, they often underestimate the potential for negative consequences (11). Although most school-aged children and adolescents are educated about the dangers of smoking, drinking, substance use and unprotected sex, they are only beginning to be informed about the potential risks inherent in gambling participation.

As health care professionals, our responsibility to provide youth with accurate information about gambling, as well as to inform them about the risks of their participation in these activities, is essential. As a result, it is important for professionals working with children and adolescents be able to identify those factors that place youth at heightened risk for such problems. Although adolescents' referral issues may be quite eclectic, the symptoms they present, as well as the behaviours they discuss, may be either indicative of or associated with gambling problems. Piecing together risk factors and presenting symptoms is not always clear cut, because

gambling problems are often considered an 'invisible addiction', given that those individuals involved often make significant attempts to conceal the reality of what they are experiencing (12).

The present article aims to raise awareness among health care professionals of the prevention and identification of gambling problems in youth. Through a review of risk factors (demographic, behavioural, psychosocial), mental health correlates (depression, suicide, alcohol and substance use) and warning signs, a better framework for understanding youth gambling problems follows. Ultimately, when working with adolescents, it is essential that health professionals consider youth gambling to be part of the constellation of high-risk behaviours.

RISK FACTORS

Demographics

Boys have a higher rate of gambling involvement than girls; as a result, they are at greater risk for gambling-related problems (13,14). Recent studies suggest that boys outnumber girls in problem gambling groups at ratios from 3:1 to as much as 5:1 (13). The age of onset has also been found to consistently differentiate between youth with serious gambling problems and those without gambling problems. Youth who gamble in an at-risk manner have reported starting gambling in late childhood, at approximately 10 years of age (15). Early exposure to gambling through parental gambling involvement is also a risk factor for problems. Growing up in a home in which parents gamble, especially when parental gambling is excessive, places youth at greater risk for gambling problems (14,16). Similarly, a high proportion of youth with gambling problems report poor family connectedness and low perceived social support (9). According to Langhinrichsen-Rohling (10), adolescents who are at risk for gambling problems are likely to be part of a family in which gambling is generally accepted and in which the level of parental monitoring of adolescent social activities is low. As well, they are also more likely to have parents who abuse alcohol.

Behavioural features

For boys, frequent gambling is often part of a larger constellation of antisocial behaviours, characterized by impulsivity and peer deviance (16,17). Research has shown an association between boys who are impulsive and associate with other deviant peers and their likelihood of experimenting with gambling (10). Studies have also shown that such adolescents may be more likely to engage in physical violence, vandalism, shoplifting, and frequent and heavy use of alcohol and drugs. In addition, a study by Stinchfield (17) found that girls who frequently engaged in gambling often similarly reported alcohol use and engagement in antisocial behaviour (17). As one may expect, those youth who gamble excessively are also more likely to report problems with the law (often as a result of stealing and borrowing money to finance their gambling involvement), truancy and poor academic performance (13).

Psychosocial features

Research has shown that youth with gambling problems are more likely to report using gambling as a form of escape or to relieve daily hassles or stress (3). These youth have positive attitudes toward gambling and subsequently seek out gambling for its perceived benefits: excitement, relief of boredom, power or control, and socialization (2,3). Youth who are at risk for gambling problems are also more likely to have experienced an early 'big win'. This early win not only promotes beliefs of future prosperity, but also secures discretionary money with which to continue playing (10). Studies have identified common personality traits as well: adolescent pathological gamblers are reported to be more excitable, more extroverted and anxious (9). Moreover, they are more likely to have difficulty conforming to societal norms and maintaining self-discipline (9).

MENTAL HEALTH CORRELATES

Depression

Of the multiple factors underlying adolescent problem gambling, one of these – depression – plays a significant role. Generally, adolescents with pathological gambling problems report increased depressive symptomology compared with other adolescents (15,18). In a study by Gupta and Derevensky (2), the authors found that the rate of clinical depression was 23% for problem gamblers, compared with 10% for those in other gambling groups (at-risk gamblers, social gamblers, nongamblers). However, there exists some controversy over the directionality of depression's relationship with pathological gambling. While this study was cross-sectional in its design, and therefore, the directionality of the relationship was unable to be determined, it still points to an elevated risk for young problem gamblers. Some research has suggested that depression exists before the onset of gambling involvement and subsequently is undertaken as a means to alleviate symptoms (19). In keeping with this hypothesis, pathological gamblers have been cited as being more likely to report trying to alleviate depression or escape problems by engaging in gambling activities (20). On the other hand, depression and suicidality have also been conceptualized as outcomes of pathological gambling (8,21). For example, in the aforementioned Gupta and Derevensky study (2), only a small percentage of problem gamblers with depressed mood disorders reported initiating gambling activity as a means to cope with their depressive symptoms. Pathological gambling and its related stressors (relational disruptions, financial debt, preoccupation) most likely increase the probability of the onset of depression and/or dysphoric affect (10).

Suicidality

Much of the empirical research linking suicide and gambling has focused primarily on adults. However, emerging research on adolescents has reported that suicide attempts (18,22), suicide ideation (15) and suicide proneness (18,23) are more common among adolescent pathological gamblers than among other lower risk groups of adolescents.

However, only a small subset of adolescent gamblers engage in suicidal behaviour. According to Langhinrichsen-Rohling (10), suicide is most likely to occur in adolescents who experience dysphoric affect, have a clinical diagnosis of depression and are highly impulsive. Repeated exposure to gambling loss is also cited as a predictor of suicide, because it may heighten the impact of concurrent stressors affecting the adolescent, such as shame or guilt, relational disruptions, debt and school failure.

Alcohol and substance use

The behavioural and social consequences of alcohol or substance misuse and gambling are quite similar. Various factors linked with adolescent drug behaviours have emerged as risk factors (ie, male sex, early onset, parental history of respective problem, and a history of delinquency, impulsivity or deviant peers) and correlates of gambling behaviour (ie, depressive mood, suicide, delinquency, poor school performance) (24,25). Research indicates that problem gamblers tend to show higher rates of substance use than nonproblem gamblers (14).

A few longitudinal research studies have delineated the relationship between gambling and substance use behaviours over the developmental course. Results from the Minnesota Student Survey (17,26,27), which looked at high-risk behaviours in the sixth, ninth and 12th grades, suggested considerable overlap between gambling and drug use. For boys, gambling appeared at an early age (grade 6), and was more prevalent at this young age than frequent tobacco, alcohol or marijuana use. Over time, more boys took up these other habits, to the extent that in grade 12, smoking and drinking occurred as frequently as gambling. These trends were quite different for girls: although gambling started at an early age, it was surpassed by tobacco and alcohol use by the ninth grade, and its popularity remained steady into grade 12. In a study by Stinchfield et al (27), students were found to be three times more likely to have never gambled if they had never used drugs versus those who did use drugs. Similarly, this study revealed that students were almost four times more likely to be a weekly or daily gambler if they were also a weekly or daily drug user versus students who used drugs less frequently. Thus, participation in one of these behaviours (alcohol or drug use or gambling) may predispose participation in another. Again, the directionality of the relationship among alcohol use, substance use and gambling behaviour remains in question. It is important to note that adolescent problem gamblers who engage in comorbid alcohol and/or drug use are more likely to seek help for drug and alcohol problems than for gambling problems.

THE HEALTH PRACTITIONER'S ROLE

Physicians and health professionals working with youth play a critical role in the early identification of developing gambling problems among adolescents and young adults. This harm reduction approach necessitates targeting at-risk youth, despite referral issues that are seemingly unrelated to gambling participation. Gambling problems

in adolescents have a tendency to go unnoticed by parents, peers and educators because they are difficult to detect and monitor; unfortunately, unlike substance use and abuse, there are no obvious visible signs of intoxication or consumption associated with gambling (16). However, there are a number of behavioural warning signs that an adolescent or young adult may exhibit. A constellation of the following behaviours may constitute a potential problem:

- spends large amounts of time gambling;
- has growing debts;
- returns to gambling activities to win back money that was previously lost;
- pins hopes on the 'big win';
- promises to cut back on gambling;
- refuses to explain behaviour or lies about it;
 - has frequent emotional highs and lows (mood swings);
- boasts about winning;
- prefers gambling to other activities;
 - talks excessively about gambling;
- repeatedly seeks activities that produce a 'high' (physiological arousal);
- carries excessive amounts of cash;
- has failing grades and increased absenteeism at school; and,
- has been involved in borrowing or stealing money and cannot remember what the money was spent on, or appears desperate when requesting to borrow money.

Adolescent pathological gamblers experience a discrete set of gambling-related problems that are identifiable using gambling screening tools. Several screening measures currently exist, including the South Oaks Gambling Screen, the Massachusetts Adolescent Gambling Screen and the DSM-IV-MRJ. Of these, the DSM-IV-MRJ is the most conservative measure and is widely used in research (see Derevensky et al [6] for a complete discussion). In an endorsement rate analysis of the items on the DSM-IV-Juvenile (28) by Derevensky and Gupta 2000 (5), approximately 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 behaviour; 61% used their lunch money and/or allowance to gamble; 61% became tense or restless when trying to reduce their gambling; 57% reported spending increasing amounts of money to sustain their gambling behaviour; 52% indicated gambling

to escape problems they were having; 27% reported missing school (more than five times) to gamble in the previous year; 24% stole money from a family member to gamble without their knowledge; 24% sought help for serious financial concerns as a result of their gambling; 21% developed familial problems because of their gambling behaviour; and 12% indicated that they had stolen money from outside of the family to gamble.

Once identified, physicians and health professionals working with youth should aim to provide young patients with information about the risks associated with excessive gambling behaviour. Physicians are also encouraged to inform youth of the risks associated with gambling, help them to monitor their playing, and possibly set up modest goals for reducing the amount of time and money spent on gambling. This brief intervention, however, may not be sufficient, depending on the severity of the gambling problem and/or comorbid mental health issues. For adolescents who are already experiencing serious gambling-related problems as a result of excessive gambling participation, intervention strategies must aim to facilitate access and availability of treatment services, resources and support (29). Table 1 contains a list of Canadian resources.

CONCLUSIONS

Concern over the growing burden of gambling to individuals, families and society has stimulated discussion about gambling as a social and public health policy issue. In a review article entitled "Expansion of gambling in Canada: Implications for health and social policy", Korn (30) concluded, "There is a need for enhanced awareness on the part of health care professionals about the potential impact of gambling on vulnerable, at-risk individuals and special populations."

Physicians and other primary care providers continue to play an important role in screening for the prevention of a number of adolescent risk behaviours. The expansion of their role to include early identification of and referrals for services to youth exhibiting signs of problematic gambling behaviour should be considered in light of new and emerging trends in gambling. A growing demand for such services, coupled with an increase in awareness among health professionals, may, in fact, pressure decision-makers to shift programmatic policy in this area. The provision of in-service training and resources for youth with gambling problems could serve to support such demand.

Adolescents today are unequivocally vulnerable and at risk, given their widespread exposure to diverse forms of gambling and lack of education regarding its associated risks. Gambling-related problems have tremendous short- and long-term implications for the individual involved, as well as for those around them (29). Health care providers have a unique opportunity to help with the response to this emerging form of high-risk behaviour.

TABLE 1
List of Canadian resources for youth gambling

Resource	Description	Contact information
Friends4Friends	This Web site is run by the Responsible Gaming Councils of Ontario and Nova Scotia. It is specifically tailored for teenagers and young adults, and provides information on problem gambling among youth, how and where to get help, tips for safer gambling, financial advice, resources, myths and frequently asked questions	Web site <www.friends4friends.ca>
British Columbia (BC) Partnership for Responsible Gambling	In partnership with the BC government, BC Lottery Corporation, gaming service providers and local governments, this Web site provides resources for information on responsible gambling and provides assistance to those seeking help for an addiction.	Web site <www.bcreponsiblegambling.ca> E-mail info@bcreponsiblegambling.ca Telephone 888-795-6111
Canadian Partnership for Responsible Gambling (CPRG)	The CPRG consists of nonprofit organizations, gaming providers, research centres and regulators. The site offers information on where problem gamblers can find help, and an e-library, including reports that the CPRG produces.	Web site <www.cprg.ca> E-mail mail@cprg.ca Telephone 416-484-1280 ext 426
Alberta Alcohol and Drug Abuse Commission (AADAC)	This governmental agency operates and funds information, prevention and treatment services to help with alcohol, drug and gambling problems. The section on gambling offers fact sheets on gambling-related issues, as well as links to research and statistics on problem and responsible gambling strategies. The section for youth includes resources for teens who have gambling-related problems or who are affected by the addiction of a parent.	Web site <http://corp.aadac.com> Telephone 866-33AADAC
Ontario Problem Gambling Research Centre	This centre, created in 2000 by the Ontario Ministry of Health and Long-Term Care, provides a number of services for professionals as well as for those seeking help for or information about a gambling problem. The Web site includes an inventory of intervention tools, webcasts of presentations given by experts in the field, a library of assembled gambling literature and published reports from the Centre.	Web site <www.gamblingresearch.org> E-mail info@gamblingresearch.org Telephone 877-822-2204
International Centre for Youth Gambling Problems and High-Risk Behaviors	The Centre is committed to the advancement of knowledge in the area of youth gambling and risk-taking behaviours through the development of both basic and applied research. The Centre is engaged in a multitude of research projects directly addressing youth problems and those of co-occurring disorders. As part of the broader mandate to understand youth gambling, the Centre is engaged in training, treatment, prevention, information dissemination, and policy development. The Centre has also received funding from the Max Bell Foundation to develop an online help service for teens. Talk-It-Out aims to provide information and help to teens with gambling-related issues across the country in an anonymous setting. Adolescents can log on seven days per week between 8:00 pm and 12:00 am (Eastern Standard Time) to chat with a qualified counselor.	Web site <www.youthgambling.com> Telephone 514-398-1391 Talk-It-Out Web site: <www.gamtalk4teens.org>
YouthBet.net	This Web site, created by TeenNet, part of the Department of Public Health Sciences at the University of Toronto, targets youth aged 10 to 19 years. This site is primarily composed of prevention-oriented resources. It provides interactive games and information designed to stimulate gambling awareness and help identify warning signs. The site also has a guide for parents and teachers to help them learn to use the recommended tools with children.	Web site <www.youthbet.net> E-mail community@youthbet.net
YMCA of Greater Toronto	The Toronto YMCA has a youth gambling program that offers free services to youth between the ages of eight and 24 years. They offer prevention programs, seminars for teachers on how to address the issue of gambling to students, presentations for schools and organizations that work with youth, individual risk assessment packages designed to help educators meet the needs of each child in their care, and referrals to gambling treatment centres.	Web site <www.ymcatoronto.org> Telephone 877-525-5515 ext 4039

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