Adolescents

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Abstract
Despite the fact that minors in Canada are prohibited from legalized gambling, adolescents commonly engage in both legalized (lottery products, casino, video lottery terminals) and self-organized (cards, sports betting, dice) gambling activities both at home and in school. Lifetime prevalence rates of pathological gambling for adults range from 1% to 2%, and existing data suggest that the prevalence among adolescents may be two to four times higher. Very little is known about risk factors in the development and perpetuation of problematic and pathological gambling. This statement is intended to educate paediatricians, family physicians and other health care providers about the emerging knowledge around gambling in childhood and adolescence and the potential serious consequences of this activity. It also urges federal, provincial and territorial governments to include this specific issue in their agendas and to address the socio-political factors associated with gambling.

Key Words: Adolescent gambling; Pathological gambling

Introduction
Adolescent gambling is a common behaviour that some view as an innocuous activity. Pathological gambling is currently conceptualized as an impulse control disorder, characterized by persistent and recurrent maladaptive gambling behaviour that leads to significant deleterious legal, financial, physical and psychosocial consequences, although the diagnosis is not made if the gambling behaviour is better accounted for by a manic episode. Lifetime prevalence rates in adults range from 1% to 2% worldwide, with higher rates reported among youth. Acknowledging difficulties in comparing data sets, the National Research Council (NRC) concluded that “the proportion of pathological gamers among adolescents in the United States could be more than three times that of adults (5.0% versus 1.5%)”. Children often start gambling with family members—purchasing lottery tickets, playing cards and bingo for money, or receiving lottery/scratch tickets as presents. As they get older, youth tend to play more with peers. There is considerable consensus that gambling and wagering among youth is a relatively common and popular activity, with males twice as likely to develop problems. Despite higher prevalence rates, there is ample evidence that neither adult nor adolescent problem gamblers are a homogenous group. Several divergent theoretical approaches have attempted to explain problem and pathological gambling including addiction, psychodynamic, biological/genetic, neurobiological, learning, cognitive-behavioral, and sociological theories. For the purposes of this statement, gambling is defined as “an activity that implies an element of risk, and that money, or something of sentimental or monetary value, could be won or lost by the participants.”

Gambling in Canadian youth
Rates of gambling participation and problem gambling among youth vary among provinces/territories and among countries, likely as a result of factors such as access and availability, measurement methodologies and loose definitions. Nonetheless, rates in Canada are very similar to those reported in the U.S. and elsewhere, suggesting that the majority of adolescents have gambled, with similar prevalence of problem gambling. For example, research in Quebec shows that approximately 80% of adolescents gambled for money,
with 10% to 15% being at risk of developing gambling problems, and about 4% of the adolescent population experiencing serious gambling problems [10]. Of the students (grades 7 through 12) taking part in a survey by the Centre for Addictions and Mental Health in Ontario, 42% reported involvement in at least one gambling activity in the previous year. Gambling participation increased with age and was more common among males; 2.8% met criteria for pathological gambling [11].

Gambling in most Canadian provinces is organized as a leisure activity, with almost every community offering options ranging from lottery tickets and electronic gambling machines to bingo halls and casinos. Local religious, charitable and service organizations, including health care facilities, organize lotteries, raffles or casino-style entertainment to raise funds. Regardless of the activity, gambling is very appealing to youth, especially poker and online gambling in recent years [12].

All legalized gambling—which is managed and regulated by provincial/territorial governments—is prohibited to minors in Canada, with legal ages ranging from 18 to 19 depending on the activity and region [13][14]. Despite age restrictions, youth can readily access legalized gambling opportunities such as casinos, electronic gambling machines placed in bars and restaurants, and lottery products (especially instant scratch and sports-themed lotteries) [9][10][15]. Self-organized gambling activities such as card games, dice games, and sports pools are common among youth, with online gambling representing the biggest growing segment of non-legalized participation [16][17]. Internet gambling is easily accessible, convenient and anonymous, and also provides an alternative reality with immediate gratification, which appeals to adolescents. How technology affects the development of pathological gambling is still not completely understood [18]. However, the easy access and availability of online gambling is a significant concern.

Natural history of gambling and risk factors

Most pathological gamblers report that they started to gamble before or during adolescence. Based on retrospective data from 35 adult pathological gamblers, Dell et al (1981) reported mean age of onset as 13 years, with 37% initiating before 10 years, and 49% between age 11 and 19 [19]. Early research has demonstrated that gambling patterns of play establish themselves in the elementary years [20], and simply evolve over time with access to funds and availability via new technologies. Gambling behaviour is best seen on a continuum, with social, non-problematic play on one end, pathological gambling on the other, and varying degrees of involvement in between. The great majority of people who gamble do so without problems [21][22]. Research and clinical presentation point to the likelihood that certain factors make someone more at risk for developing a gambling problem, such as depression, loss, abuse, impulsivity, antisocial traits and learning disabilities [23][24]. The progression from non-problem to problem gambling can be quick for some, and there is a general consensus that youth are vulnerable due to their proneness to risk-taking, and their developing cognitive decision-making processes [24][25]. Since the majority of youth report gambling at least once per week—tend to increase their risk of developing gambling-related problems [11]. Those at greatest risk are youth who gamble to escape from problems and/or to satisfy physical needs [26][27]. Youth with gambling problems report being very preoccupied with thoughts of gambling, to the point of interfering with sleep and vocational pursuits. Adolescent gambling has surfaced as the most prevalent health risk behaviour reported in Quebec high schools (with 28.2% gambling on a weekly basis), followed by regular cigarette smoking (17.4%), illicit drug use (13.8%) and alcohol use (13.5%) [11]. Most adolescents were found to gamble in their homes (65.3%), with pathological gamblers more likely to engage in illegal activities to support their habit and to have parents who gamble [11].

Gambling and comorbidity

People with gambling-related problems are more likely to have other comorbid issues. Researchers have found the odds of pathologic gambling to be 8.3 times higher for individuals with personality disorders, followed by 6.0 for alcohol abuse, 4.4 for life-time drug use and 4.4 for mood disorders [24]. A nationwide study with a representative sample of 36,948 Canadians aged 15 years and older concluded that gambling problems were robustly associated with past-year substance use disorders [28]. A study of 3,426 Quebec students (grades 7 through 11) found pathological gambling to be associated with alcohol use, poor grades and delinquent behaviours [30]. Other research indicates...
that pathological gambling is common among marijuana-abusing youths, and that these adolescents present with significant psychosocial problems [31]. A 2009 U.S. study of the association between problem gambling and conduct disorders in a sample of 14- to 21-year-olds reported a strong comorbidity between the two, with early-onset problem gamblers at higher risk (32). Pathological gambling has also been associated with ADHD, depression and anxiety [33-35].

**Prevention and treatment strategies**

There is limited information in the literature about prevention and treatment strategies for adolescent gambling. In 2001, McGill University opened the International Centre for Youth Gambling Problems and High-Risk Behaviors, which has developed a range of prevention materials designed to increase knowledge, adjust attitudes, and correct erroneous cognitions concerning gambling participation. These products are currently being used extensively in Canada, the United States and several European countries. More recently Taylor et al developed a gambling awareness prevention program called “Don’t Gamble Away Our Future” [36]. The program was designed for youth aged 8 to 18, and was evaluated with a sample of 8,455 students. Pre-test evaluation was followed by a 45-minute prevention program with lecture, activities and discussion, facilitated by teachers who were given a training manual and an interactive CD-ROM. The results showed that there was increased knowledge of the negative effects of gambling over the short term [36]. There are no long-term evaluations of prevention programs at this time.

Prevention of a different sort can take place informally as a result of parenting style. Adolescent gambling frequency has been found to be related to parent gambling frequency and problems, low levels of parental monitoring and higher levels of inadequate disciplinary practices [37]. Fortunately, positive parenting practices can serve as a protective mechanism, with higher levels of parental attachment, supervision and monitoring resulting in lower levels of adolescent gambling problems [38]. While this data is correlational in nature, the implication from statistical modelling is that there is a causal association between parenting style and responsible gambling.

There is minimal literature about treatment of gambling problems in youth. A study (1994) based on a cognitive-behavioural model has a sample size too small to comment on [39]. Clinicians at the International Centre for Youth Gambling Problems and High-Risk Behaviors have been providing treatment to young problem gamblers for over a decade, and good outcomes have been reported with the limitation of no control groups [40][41]. Although no gold standard in treatment has been established, it is generally believed that pathological gambling can and should be addressed under the same paradigm as other behavioural addictions [42] despite the
fact that it remains classified as an impulse control disorder.

### Conclusions and recommendations

Gambling participation among youth occurs with both legalized and self-organized activities, both in the home and in school or occupational settings. Data suggest that the prevalence of problem gambling is highest among adolescents and young adults. Very little is known about risk factors in the development and perpetuation of problematic and pathological gambling. In this increasingly web-based and networked era, a new frontier has evolved and to date, the impact of new technology on this significantly “risky business” has not been elucidated. Research into online gambling is needed to better support our youth, particularly males, who engage in this type of practice. Federal, provincial and territorial governments need to work together with clinicians and researchers to better understand this complex societal problem and the interventions needed.

### Recommendations

**Physicians and other health care providers should:**

- Ask older children—especially adolescents—about gambling behaviours, especially when other known associated behaviours are present.
- Use known guidelines to screen for a gambling problem: frequency, tendency to gamble more than planned, and behaviours suggesting they are hiding their gambling behaviour.
- Screen for depression and suicide risk in adolescents who are aware of their gambling problem, since they have likely incurred significant financial debt.
- Become familiar with local treatment providers and treatment services for problem gambling. Providers who treat substance abuse may be willing to work with youth who gamble excessively.
- Advocate for schools to become proactive regarding gambling among students by:
  - Making teachers and school counsellors aware that gambling behaviour among youth entails risks, including school failure and absenteeism.
  - Having school-based counsellors talk to teens about the risks of gambling when they are aware of substance use, because of the strong association between those two behaviours.
  - Helping school boards to adopt and enforce a no-gambling policy within their schools.

**Federal/provincial/territorial governments that run gambling programs should:**

- Address the sociological and environmental impact of gambling on young Canadians (ie, exposure, accessibility and public attitudes), as well as the cost/benefit ratio of the current situation.
- Develop effective strategies to support youth and families afflicted by this public health phenomenon.
- Government and legislative bodies should assess, evaluate and control the potential impact of advertising on gambling initiation and maintenance on vulnerable populations, including children and youth.
- Provincial/territorial governments should assess the potential impact of new gambling offerings (for example, online gambling via lottery corporations) on youth before implementation, to ensure that the harm from such initiatives is minimized.

**More research is needed to better understand this public health problem:**

- Despite a growing body of cross-sectional research identifying risk factors associated with the development and perpetuation of problem gambling, large-scale longitudinal research projects are needed.
- A study on the overall economic, individual and social impact of legalized gambling on Canadian society is needed. Similar initiatives in other countries have proven beneficial [42,43].
- Federal, provincial and territorial governments should actively support such research endeavours with funds specifically allocated to the study of problem gambling in youth.
Additional resources

- International Centre for Youth Gambling Problems and High-Risk Behaviors: [http://www.youthgambling.com](http://www.youthgambling.com)
- Canadian Centre on Substance Abuse: [http://www.ccsa.ca](http://www.ccsa.ca)

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References


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