



Youth Gambling in the 21st Century: Prevalence, Impact, and Interventions

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INTRODUCTION

Today's American youth are part of the first generation to experience a society where gambling is legalized and propagated in nearly all states in the U.S. While much effort is dedicated to restricting gambling activities to adults, the majority of adolescents report having gambled or wagered on chance-based games by the time they reach high school age. For a relatively small but substantial number of young people, excessive gambling leads to serious negative consequences in their personal lives. Studies have shown significant correlations between problem gambling and substance abuse, delinquent behaviors, depression, suicide and other mental health disorders. The growing body of knowledge on this topic has prompted investigation to uncover the variables that influence youth problem gambling behaviors. Better understanding of the unique risk factors for the development of youth problem gambling has helped to inform current intervention efforts in this field.

This paper will summarize the current trend in youth gambling by highlighting the prevalence of gambling participation among young people, the reasons why youth gamble, and the types of gambling games youth engage in. The paper will continue with a discussion of the signs of problem and pathological gambling, the unique risk factors for youth problem gambling, and the protective factors that strengthen youth's resiliency from risky and problematic behaviors. The paper will conclude with a review of existing

prevention and treatment programs currently employed to address youth problem gambling.

GAMBLING PARTICIPATION

Multiple studies conducted in different regions of the U.S and other countries with varying methods of measurement all reveal similar results—a rising trend in the prevalence of underage youth gambling. Gambling participation among middle and high schools students from 1984-88 was 45% and increased to 65% during 1989-02 (Jacobs, 2000). It appears that the prevalence of teenage gambling remains high today. In a national survey of U.S. residents between the ages of 14-21, nearly 7 out of 10 people had gambled in the past year (Welte et al., 2008).

Age

Studies have also shown that older adolescents tend to gamble more than their younger counterparts (Welte et al., 2008, Volberg et al., 2008). A study by Turner and colleagues (2008a) revealed that gambling involvement increased with age from 39% in 5th grade to 65% in 7th grade, 80% in 9th grade, and 83% in 11th grade.

Gender

A common finding in many youth gambling studies is the higher percentage of male involvement compared to females. For every measure of gambling involvement in a U.S. national survey, males ranked significantly higher than females. The same study

however found that the gender gap narrowed among an adult (18+) which suggests that females may initiate gambling later in life (Welte et al., 2008). In comparison to females, male youth tend to begin gambling at an earlier age, gambled more often, spent more time and money on gambling and experienced more gambling related problems (Jacobs, 2000; Winters et al., 2002).

Socioeconomic status (SES)

A U.S. national survey conducted among adolescents discovered that those in the lowest SES group were the least likely to have gambled within the past year. Among those who gambled, however, those of the lowest SES gambled most frequently with the highest rates of at-risk/problem gambling while those in the highest SES gambled least frequently with the lowest rates of at-risk/problem gambling. A possible explanation for lower SES adolescents gambling more excessively may be due to their perception of gambling as a practical mean of improving their financial status (Welte et al., 2008).

WHY YOUTH GAMBLE

The reasons for gambling among youth are not unlike those for adult gambling. Young people who gamble report that fun, opportunity to win money, and excitement of gambling games are the top reasons they participate. In addition to these motivations, some adolescents feel that gambling is a way to socialize, make friends, relax, relieve boredom, feel older, escape daily problems, alleviate depression, and deal with loneliness (Gupta & Derevensky, 1998a; Jacobs, 2000). Studies have found adolescents identified as problem gamblers were more likely than non-problem gamblers to gamble as a way to escape daily problems, alleviate depression and anxiety, relax, and deal with loneliness (Gupta & Derevensky, 1998a; Turner et al., 2008b). It appears that for young problem and pathological gamblers, gambling is less perceived as a means to make money and functions more to provide stimulation, enjoyment, and a way of coping with difficulties. In a sense, gambling transports problem and pathological gamblers to a fantasy world without life's daily problems, anxiety, depression, or loneliness (Gupta & Derevensky, 1998a).

POPULAR GAMES AMONG YOUTH

Youth gambling involvement is rather different from adult gambling. Adults typically engage in legalized

commercial forms of gambling. The most common adult gambling activities include scratch tickets, lotteries, casino games, poker, and sports betting (Emshoff, 2007). While some underage youth do participate in such games, the most popular forms of gambling among young people are private bets with dice, cards, sports, and skill-based games such as bowling and pool (Turner et al., 2008b; Jacobs, 2000; Barnes et al., 1999).

Current Trends in Youth Gambling

Casino gambling: Although casinos impose age restrictions, underage gambling at commercial gambling venues does exist. Interviews with under-age casino gamblers revealed easy-access to casinos and a low risk of exposure (Giacopassi et al., 2006).

Gender: Male and female adolescents not only differ in gambling rates but in preferred games as well. While boys tend to play more skill/knowledge games such as card games and sports betting, girls are more drawn toward games of chance like raffles and lotteries (Jacobs, 2000).

Age: Younger adolescents tend to prefer games like cards, sports betting, and those involving personal skills. As they mature, they build more preference for commercial games like lotteries, gambling machines, and scratch tabs (Winters et al., 2002).

Internet gambling: With increasing technological advances allowing for the widespread use of personal computers, and easy access to low cost/high speed internet, internet gambling has become a more popular gambling activity among youth (Derevensky & Gupta 2007). Despite legal attempts to restrict internet gambling, the number of young people gambling online is growing. A study of high school and college students in Canada and U.S., and other online respondents found that that 9% of high school students, 6% of college students, and 42% of online respondents have ever gambled on the internet for money (McBride, Derevensky, & Gupta, 2007). Of those who have ever gambled on the internet for money, 70% reported they gambled on a weekly basis. Among the weekly gamblers, 85% were male, 23% were 18-24 years old, and 28% were problem gamblers. According to the National Annenberg Risk Survey of Youth in 2010, the rate of monthly internet gambling activity among American males 18-22 years old rose significantly from 4.4% in 2008 to 16% in 2010.

The same study also found an increase in internet gambling among high school age respondents, although the change was not statistically significant (Romer, 2010). These findings suggest that internet gambling may be becoming more popular with youth, especially among college-age males, and may be linked to the development of problem gambling.

PROBLEM GAMBLING

While most adolescents can safely enjoy gambling as a form of entertainment, a small but meaningful number of adolescents experience problems as a result of their gambling. For some young gamblers, excessive gambling leads to major disruption in their personal lives. Some of the warning signs for problem gambling include (adapted from the Diagnostic and Statistical Manual of Mental Disorders 4th Edition, American Psychiatric Association, 1994):

- Thinking about gambling all the time, scheming of ways to get money and to gamble, spending unusual amount of unsupervised time on computer, bragging about winnings, showing off money or other possession.
- Increasing the amount of bets, taking larger risks to maintain excitement (tolerance).
- Becoming emotional or irritable when trying to cut down (withdrawal).
- Missing important activities at school and in social and family life, resulting in dropping grades, unexplained absences from school, family conflicts, exhaustion from lack of sleep.
- Gambling to feel better, to cope with stress and problems
- Engaging in illegal activities in order to get money to gamble like stealing, misusing credit cards, and pawning other people's belongings
- Trying to stop gambling but fail, losing self-control, breaking promises
- Relying on other people for bail-out, excessively asking or borrowing money.
- Going back to try to get even (chase losses)
- Lying to important people about gambling activities

Gambling behavior can be assessed along a spectrum ranging from abstinence from gambling to pathological gambling – the most severe form of gambling where the impact on an individual is similar to substance addiction. Since the majority of young

people do engage in gambling on some level and do not develop an addiction to it, their gambling behavior would fall somewhere in between. Most adolescents who gamble are considered casual or social gamblers, however, studies have shown that teen rates for problem gambling are typically higher than for adults. In a review of 119 problem gambling prevalence studies that were conducted in the U.S. or Canada on or before June 15, 1997, Shaffer et al. (1999) found that rates of problem and pathological gambling for adolescents were approximately 9% and 4%, respectively. These figures are more than twice the rates for adults. More recent research shows the rates of problem gambling remain high among adolescents, with 10% of young people identified as at-risk for developing gambling problems (Winters et al., 2002), and about 4% meeting the criteria for pathological gambling (Cook et al., 2009; Welte et al., 2008).

RISK FACTORS

Risk for problem gambling, it appears, is not evenly distributed among youth. Research has consistently demonstrated certain social and psychological characteristics to be risk factors for the development and maintenance of problem gambling. The following section will illustrate some of the identified risk factors.

Brain Development

The brain develops most rapidly in the first couple of years after birth. In fact, between the ages of two to three, our brains reach approximately 80% of the adult size. It was first thought that by adolescence, the brain is fully developed. However, recent findings demonstrate that the maturation process for the brain may continue well until approximately age 25 (Winters, 2007; Parris, 2008). The fact that the brains of adolescents and young adults are still developing and maturing is at least in part responsible for the constellation of problematic behaviors (i.e. delinquency, substance abuse, problem gambling, etc.) associated with this age group.

Need for Greater Stimulation

According to Dr. Ken Winters (2007), renowned neuroscience researcher, the dopaminergic system during adolescence is more robust compared to other times of human development. In fact, it has been noted that the density of dopamine cells peak during adolescence (Geier & Luna, 2009). Dopamine is a neurotransmitter (brain chemical responsible for

transmitting signals) that is a key component of the brain's reward mechanism, and is associated with pleasure. A robust dopaminergic system may contribute to an overactive reward drive and a heightened reward experience. Based on this neurological finding, Winters (2007) suggest that the preference of adolescents for novel experiences and activities which are high intensity and cause high levels of arousal is directly related to the heightened dopaminergic system.

Judgment & Impulse Control Deficiencies

The human brain does not mature and develop in a linear fashion. Different regions of the brain have their own rate of growth and maturation. The prefrontal cortex for example, has been found to be the last region of the brain to develop, becoming fully developed around age 25 (Winters, 2007). Prefrontal cortex is in charge of executive functions – among them include making judgment and regulating impulses. An underdeveloped prefrontal cortex may contribute to choices that are not optimal to one's wellbeing, minimal consideration for consequences, and greater likelihood to take risks (Winters, 2007). Related to this, it has also been found that in contrast to the heightened dopaminergic system (GO); there are lower activities in the inhibitory serotonergic system (BRAKES) during adolescence (Geier & Luna, 2009).

Current research clearly depicts a neurological imbalance in the brains of adolescents, making them more susceptible to addictions. On one hand adolescents have a powerful reward system which demands constant stimulation and encourages risk-taking; on the other hand they have an underdeveloped judgment center which impairs optimal decision making and impulse control. In light of this neurological finding, it is of no surprise that so many adolescents exhibit problems with risky behaviors such as substance abuse and gambling. While risk taking can certainly have harmful consequences, it is also important to note that a certain amount of risk-taking is often necessary for survival and success. Likewise, not all adolescents who gamble will develop a gambling addiction. Despite problem and pathological gambling rates more than 2 times higher than adults, the percentage of adolescents and young adults who develop gambling-related problems still constitute a minority. Further, research has shown that the young people who develop addictive problems generally "age out" of it as

they get older – a phenomenon known as natural recovery (Gupta & Derevensky, 1998a). In conclusion, while having an immature brain does increase one's risks of addictive disorders, it is only part of the picture.

Age of Onset

While having a teenage brain doesn't guarantee the development of addictive problems, research generally cautions against early exposure to substances like alcohol, drugs or even activities such as gambling. For example, in 2003, the National Survey on Drug Use and Health found that later onset of alcohol use (after age 21) resulted in 2.6% alcohol-related problems, whereas those who start drinking early, before age 12, had more than 5 times the rates of alcohol-related problems, at 16% (Substance Abuse and Mental Health Services Administration, 2008). Early age of onset appears to be a common risk factor for gambling-related problems as well, as research has shown that youth identified as problem gamblers are more likely to report gambling before age 10 (Wynne, Smith, & Jacobs, 1996). Supporting this finding, Kessler et al. (2008) analyzed the National Comorbidity Survey and found that those with no symptoms of problem gambling tend to report first gambling at a later age (median age = 21), compared to those who go on to become problem gamblers, who tend to report a younger age of onset with gambling (median age = 18).

Family History of Problem Gambling

In a study to uncover the risk factors for problem gambling, Winters et al. (2002) found parental gambling to be the single most significant predictor of youth problem gambling. In fact, the study found that youth who reported one or both of their parents to be a problem gambler were more than 11 times more likely to be a problem gambler themselves. Similarly, other studies have found that youth who were problem gamblers were more likely to have one or both parents who gambled excessively (Volberg, 1993; Stinchfield, 2000). There is some evidence that family history of problem gambling has implications for genetic and biological predisposition. Eisen et al. (1998) for example, found among twins that up to 54% of pathological gambling can be attributed to inherited factors. However, may be just as important as genetics is social learning. For example, Gupta and Derevensky (1997) surveyed students between the ages of 9 – 14, and found that among the students who gambled

regularly, 86% reported gambling with their family members and 75% also reported gambling with their friends. The authors theorized that, similar to drinking behaviors, the social learning model also applies to gambling, whereby family members can inadvertently model and promote gambling behaviors.

Mental Health Comorbidity

Depressive Symptoms

Gupta and Devereensky (1998a) found that among adolescents, alleviating depression was cited as the reason to gamble by 2.4% and 13.2% of problem and pathological gamblers, respectively. In a study of adolescent problem gambling in New York state it was found that students in grades 7-12 who exhibit depressive symptoms reported the same rate of gambling frequency, but were more likely to be problem gamblers (12% vs. 9%) compared to their peers (Welte et al., 2001). Likewise, Marget, Gupta and Derevensky (1999) found that adolescent problem gamblers have higher rates of depression compared to their social and non-gambler counterparts.

Attention Deficit Hyperactivity Disorder (ADHD)

ADHD, according to the DSM-IV, is a constellation of symptoms related to inattention and hyperactivity (American Psychiatric Association, 1994). ADHD has been found to be associated with problem gambling. Derevensky et al. (2007) in their study of adolescents found that among non-gamblers, the rate of ADHD was 6%, whereas pathological gamblers reported a 34% rate of ADHD. According to Geier and Luna (2009), ADHD is associated with the increase in the density of dopamine transporter cells, which can translate behaviorally to the preference for short-term rewards over long-term rewards/consequences. Winters (2007) additionally note that ADHD is associated with deficits in the prefrontal cortex, which as previously described is responsible for impulse control. Research has found that pathological gamblers are more likely to report childhood behaviors consistent with ADHD, thus demonstrating that ADHD may be a predictor for future problems with gambling (Rugle and Melamed, 1993).

Conduct Disorder

According to the DSM-IV, a conduct disorder is a diagnostic category which includes symptoms such as aggression and harm to others, destruction of property, deceitfulness or theft, and serious violation of rules (American Psychiatric Association, 1994).

Welte et al. (2009) in analyzing the data from a national survey of adolescents and young adults age 14 – 21, found a strong association between problem gambling and current conduct disorder. Those classified as having conduct disorder were roughly 6 times more likely to be a problem gambler, and 4 times more likely to be a pathological gambler, compared to those who did not have a conduct disorder. Interestingly, this comorbidity was strongest among younger adolescents compared to older adolescents, leading the researchers to conclude that early onset of problem gambling may be a part of a larger constellation of problem behaviors, whereas later onset of problem gambling may be a phenomenon more unique to gambling.

Substance Abuse Disorders

Gambling and substance use appear to go hand in hand for youth. In a study of college athletes, Huang et al. (2007) found that problem and pathological gamblers were much more likely to report heavy episodic drinking (85% and 82%, respectively) compared to non-gamblers and social gamblers (52% and 77%, respectively). Similarly, problem and pathological gamblers were more likely to report other drug use (11% and 19%, respectively), compared to non-gamblers and social gamblers (4% and 7%, respectively). In regards to which came first, there is some evidence that initiation in gambling may start at a younger age compared to substance use behaviors. Gupta and Derevensky (1998a) found that while rates of alcohol, drug and cigarette use remained fairly low in Grades 7 and 9, and peak in Grade 11, rates of gambling participation is already at 79% in Grade 7 and remains fairly unchanged through Grade 11. The data demonstrates that most young people engage in gambling at a younger age, and gambling may serve as an initiation to other risky behaviors such as drug and alcohol use.

Gender

Similar to findings for adults, there appear to be gender differences in risks of problem gambling. Winters et al. (2002) for example, found male gender to be the second most significant predictor of youth gambling, right behind parental gambling. Male youth for example, were found to be more than 6 times more likely to be a problem gambler. Some characteristics however, appear to mediate the gender effect. For example, high frequency of video game playing among girls was found to close the

gender gap in terms of gambling participation, in that girls who played video games gambled just as much as boys (Gupta & Derevensky, 1996). In a follow-up study, Wood et al. (2004) found that all youth (including girls) who reported high frequency of video game playing were much more likely to be a problem or pathological gambler. In addition, the same study found that girls classified as high-frequency video gamers reported higher Risk Taking Questionnaire (RTQ) scores compared to their male counterparts.

Ethnicity & Culture

African Americans

A study of Louisiana adolescents found that several ethnic groups were overrepresented in the population of pathological gamblers. African Americans for example, were overrepresented among 6th – 12th graders who met the criteria for pathological gambling. Among the sample of non-pathological gamblers, about 35% were African Americans, whereas among pathological gamblers, almost 58% were African Americans (Johnson & Westphal, 2001).

Asian Americans

A study found that among high school students, Asians had a 10.9% rate of problem gambling (Chiu, 2006). In another study comparing the gambling habits of college students of different ethnic groups, Asian Americans were shown to have the highest pathological gambling rate at 12.5% – this compared to the overall pathological gambling rates in the five-state sample (New York, New Jersey, Oklahoma, Texas and Nevada) which was between 4% to 8% (Lesieur et al., 1991).

Latino/Hispanic Americans

A study of Texas high school students found that Latino youth were more likely to be a problem gambler as compared to Caucasian youth (Wallisch, 1996). In the afore-mentioned study of college students, it was found that the rates of pathological gambling was higher among Latinos (11%) than the overall pathological gambling rates in the five-state sample (New York, New Jersey, Oklahoma, Texas and Nevada), which ranged between 4% to 8% (Lesieur et al., 1991).

Native Americans

Similarly, in the afore-mentioned Louisiana study, it was also found that Native American youth were overrepresented among 6th – 12th graders who met

the criteria for pathological gambling. Among the sample of non-pathological gamblers, about 2.6% were Native Americans, whereas among pathological gamblers, almost twice that rate, or 4.5% were Native Americans (Johnson & Westphal, 2001). Wardman et al. (2001) reviewed several studies concerning rates of problem gambling among aboriginal people in the U.S. and Canada. They found that aboriginal youth had rates of problem and pathological gambling ranging from 10.1% to 21%. In one of the studies that offered a comparison between aboriginal and non-aboriginal youth, it was found that aboriginal youth were 5 times more likely to be problem gamblers.

Ethnic youth may report higher rates of problem and pathological gambling for various reasons. For one, the factor of race and ethnicity often intersects other risk factors such as lower socioeconomic status. It has also been proposed that cultural differences in attitudes toward gambling may predispose gambling to become a socially acceptable activity among groups, such as Chinese and African Americans, while promoting the prohibition of gambling in other groups, such as traditional Muslim communities (Raylu & Oei, 2004). More positive attitudes toward gambling are related to age of onset and social learning, and have been linked to greater risk-taking (Kassinove, Tsytarev, & Davidson, 1998). However, it is not just one's own cultural values that create a positive environment for gambling. Many immigrants may also find the allure of gambling hard to resist due to the targeted marketing of the gambling industry – including the practice of shuttling patrons in ethnic communities to and from casinos, the hiring of bilingual and bicultural staff, and the offering of culturally-appropriate food and entertainment, to name a few (Magagnini, October 19, 2008). Perhaps due to a combination of cultural acceptance and targeted marketing, immigrant populations in countries such as the United States, Canada and Australia tend to have higher rates of problem and pathological gambling compared to the general population (Chinese Family Service of Greater Montreal, 1997; Lo, 1996; Blaszczyński et al., 1998).

PROTECTIVE FACTORS

Despite facing the myriad of risk factors that were just described, many youth may never develop gambling-related problems. It would appear that there are factors that serve to protect youth and to make them more resilient. To date, very few studies have

examined the role of protective factors related to youth problem gambling. One study however, was undertaken by Lussier et al. in 2007 to examine the factors which may contribute to youth who are resilient to problem gambling:

Social Bonding

The greatest association with problem gambling identified in the Lussier et al. study was in the domain of social bonding. Social bonding refers to pro-social ties to one's family, school, and community. Adolescents who reported greater social bonding were found to be significantly less likely to be a problem gambler. Likewise, other research has supported the relationship between social bonding and gambling. Dickson, Derevensky, and Gupta (2003) for example, in a report to the Ontario Problem Gambling Research Centre, identified family cohesion and school connectedness to be significant protective factors which differentiated between problem gambling youth and non-problem gambling youth.

Personal Competence

Lussier et al. (2007) also found personal competence to be a significant protective factor among youth. The personal competence domain refers to one's individual identity and the sense of personal development, and involves factors such as self-concept, self-control, positive outlook, and self-efficacy. While not as robust as social bonding, this domain of protective factors was also found to be associated with youth resiliency against problem gambling.

More research is needed to uncover the spectrum of protective factors that can shield young people from developing gambling-related problems. However, many in the youth development field agree that lessons learned from substance abuse prevention can be applied and adapted to design effective problem gambling prevention programs. Dickson, Derevensky, and Gupta (2002) outlined some of the most common protective factors identified in adolescence research, including:

- **Self-Confidence/ Self-Esteem:** Research has demonstrated that by increasing self-esteem, youth exhibit greater wellbeing, reaction to situations involving drugs, and decreased actual substance abuse behaviors.

- **Social Competence:** Teaching young people life-skills such as assertiveness has been found to be effective in reducing alcohol, tobacco and marijuana use.
- **Ethnic Identity:** By strengthening ethnic identity, it has been found that young people improve their personal, social, ethical attitudes, values and motives; and they decrease drug use and delay the onset of initial use.
- **Anti-Drug Attitudes:** Young people with greater anti-drug attitudes report lower prevalence of substance abuse. One may extrapolate that the same could be true gambling
- **Delayed Onset of Initial Use:** Research has demonstrated significantly lower rates of problems and disorders related to later onsets of alcohol and drug use, as well as gambling.

Despite the lack of research on effective protective factors for youth regarding problem gambling, those who work with youth should pay attention to both risk and protective factors in order to promote youth development and resiliency.

PREVENTION & TREATMENT

Prevention

As problem gambling becomes more understood as a public health issue, prevention programs for youth have become more prominent. Research has provided substantial insight into the risk and protective factors of youth problem gambling. Increasingly, it is believed that problem gambling shares common etiology with other adolescent risky behaviors such as drug and alcohol use. Therefore, the approach to developing problem gambling prevention programs should take into consideration the existing prevention practices common for other high-risk behaviors as well as focus on unique features of problem gambling. Dickson et al. (2003) outlined a general framework for youth problem gambling prevention based on lessons learned from other addiction prevention programs. The next section will illustrate some key features in their proposed youth problem gambling prevention framework:

Age-Appropriateness and Timing

Dickson et al. (2003) stresses the importance of ensuring that training curriculum and prevention messages are appropriate for the developmental stage

of the audience. Training materials should be adapted while keeping in mind the age of the youth and the coping mechanism associated with the age group. Research has additionally highlighted that early exposure to gambling creates an increased risk for youth to develop gambling-related problems. For this reason, the timing of prevention efforts can be especially critical. Considering the fact that most people have gambled by high school age, a harm-reduction strategy to educate middle or early high-school youth on the signs of problem gambling and to promote responsible gambling may be an effective prevention approach.

Interaction of Risk & Protective Factors

Due to commonalities in risk factors between problem gambling and behaviors such as alcohol consumption, smoking, reckless driving, and risky sexual behaviors, it is believed that strategies which strengthen protective factors can help promote more resilient youth. For example, it is noted that factors such as perceived family and school connectedness has been found to protect youth against multiple risky behaviors. At the same time, the authors note that there are specific and unique factors related to risks for problem gambling such as parental problem gambling, access to gambling opportunities, and early onset of gambling are unique to the development of problem gambling, and may need to be separately addressed.

Multifaceted Approach

As with other prevention efforts, there is no single prevention strategy which is uniformly successful for all youth. More likely, prevention efforts need to utilize multiple approaches and points of intervention in order to maximize impact. Programs that utilize various methods such as media broadcasting, outreach and information dissemination, health education, offering alternative activities, and policy advocacy may stand a better chance of making longer-lasting, sustainable change in not only the individuals, but the environment in which the youth live.

Prevention Resources

Prevention Education Curriculum

Prevention education focuses on increasing the knowledge and awareness of youth, while imparting practical skills in order to resist the onset of gambling and/or problem gambling. Many existing curriculum aim to address the previously mentioned illusions of control that is found to be prevalence among young

people. In the youth curriculum developed by California's Problem Gambling Prevention Technical Assistance and Training (PGTAT) program^{*}, high school students learn to differentiate the concepts of skill, which can be controlled and practiced, and luck, which cannot be controlled. By using youth-salient examples such as poker and through facilitated games, students can obtain a more realistic perception of the division of skills and luck in common gambling games. In "Stacked Deck," an evidence-based high school curriculum designed by Canadian researchers to prevent problem gambling, students can learn to understand common gambling myths and fallacies which are errors in reasoning that often lead to excessive gambling (Williams & Wood, 2010).

Life and Coping Skills Development

Turner et al. (2008b) found that poor coping skills were correlated with higher rates of problem gambling among adolescents. In "Stacked Deck," students learn about good decision-making and problem-solving skills. Through brainstorming ideas, role playing, and group discussions, students share and demonstrate ways to cope with peer pressure and other barriers to good decision-making. Additionally, the students learn smart ways to gamble. In the California PGTAT curriculum, students are taught how to set limits while gambling, cultivate a healthy attitude towards gambling, and healthy and non-codependent ways to help loved ones who may have gambling problems.

Peer to Peer Education

Great strides have also been made to empower young people to educate their own peers about gambling addiction. Some states have already teamed up with youth-driven leadership organizations to build prevention messages around gambling. These efforts are believed to be more effective precisely because they are created by youth for youth. The California Friday Night Live Program is a great example of the partnership between a state-wide youth development program and the California's Office of Problem Gambling. The Friday Night Live Program (FNL) built upon its decades of experience on teen drinking and driving prevention and other substance abuse prevention programs, and created the "Betting on our Future" project, a youth-driven production of creative and interactive plays and media projects that promote

^{*} Funded by the California Department of Alcohol and Drugs, Office of Problem Gambling

awareness about youth problem gambling to their peers and community. The multi-media products created by the young participants have been used as learning tools and public service announcements throughout the State of California.

While prevention is aimed at the majority of youth who either do not gamble, gamble only socially and casually, or are at risk of developing some problems with gambling. Those who are severely addicted to gambling may need more intensive interventions such as clinical treatment. In the following sections, a framework for youth problem gambling clinical interventions will be outlined.

Clinical Screening & Assessment

Since clinical research on adolescent problem gambling is scanty, service providers need to take caution in applying what we know about adult gamblers to youth. However, several assessment and screening tools have either been modified or created specifically to capture youth problem gambling:

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

The South Oaks Gambling Screen (SOGS) is one of the oldest and most well-established problem gambling screens (Lesieur & Blume, 1989). The SOGS-RA was developed in order to ensure more accurate assessment of adolescent gambling problems (Winters et al., 1993). The tool contains 16 items, of which only 12 are scored. The adolescent version of SOGS differs from the original version in that it emphasizes the frequency of gambling along with the symptoms typically associated with pathological gambling. The tool has been tested for reliability and validity for mainstream populations (Winters et al., 1993).

Research also found close agreement between the SOGS-RA and other established tools such as the DSM-IV (Deverensky & Gupta, 2000). However, in comparison to other tools, the SOGS-RA may be more inclined to produce false-positives (for adolescents) (Deverensky & Gupta, 2000). Winters (2007) cautions that the SOGS-RA scores should be viewed as approximations.

DSM-IV-J (Diagnostic Statistical Manual-IV Adapted for Juveniles)

The DSM-IV-J was developed for use on children and adolescents (Fisher, 1992). It was modeled very closely to the adult version of the DSM-IV diagnostic criteria.

However, several items were adapted to make them more relevant and appropriate for younger populations. For example, the original DSM-IV criteria for criminal activities refer to fraud, embezzlement, and forgery. The DSM-IV-J instead refers to activities such as stealing from the home or shoplifting. Out of a maximum score of 12, Fisher (1992) found that a score of 4 would be indicative of “probable pathological gambling”. In a comparison between several adolescent problem gambling screens, it was found that the DSM-IV-J was the most conservative and reliable, given its alignment with the DSM-IV criteria for pathological gambling.

Lie-Bet Brief Screen

The Lie-Bet tool is a brief screen that contains only 2 items. The tool is so named for its two questions, which refer to the extent that the individual has lied about his/her gambling, and to the degree which the individual has had to increase his/her amount of bets over time. A “Yes” response to one or both of the questions would indicate that the clinician should perform more assessments. The tool has been found to be reliable in both clinical as well as general populations (Johnson et al., 1997; Götestam et al., 2004). Götestam et al. (2004) in addition found that even among adolescents, the Lie-Bet comes very close to the DSM-IV criteria in assessing pathological gambling. In contrast however, Rossow and Molde (2006) in comparing the Lie-Bet with the SOGS-RA, found that the two screens only had moderate congruence to one another, and that the Lie-Bet may be more appropriate for assessing less severe levels of gambling involvement – such as at-risk gambling, as opposed to problem or pathological gambling among adolescents.

While there may not be a perfect assessment tool or screen for youth problem gambling, each tool has its strengths and challenges. Clinicians working with youth should exercise clinical judgment in choosing the right tool for the right audience and circumstance in order to maximize clinical benefits.

Clinical Treatment

While research on the clinical treatment of problem and pathological gambling is growing, there is a paucity of empirical research on the treatment of adolescents and young adults. To date, most of the youth treatment data has been limited to small case studies. Given that young people tend to have rates of

problem gambling multiple times higher than that of adults, there needs to be more emphasis on identifying what treatment approaches work for youth. In the next section, information from the McGill University Research and Treatment Clinic, a foremost adolescent problem gambling research center and treatment facility, will be presented as promising practices in adolescent problem gambling treatment:

Profile of Adolescent Problem Gamblers

Gupta and Deverensky in 2000 outlined the profile of adolescents seeking problem gambling treatment at the McGill University Research and Treatment Clinic:

- Reflective of research, adolescents seeking treatment exhibit signs of anxiety, attention-deficit hyperactivity disorder, depressive symptoms, and other risk-taking behaviors.
- Adolescents seeking treatment also report highly stressed relationships with their families and peers – related to the gambling behaviors and accompanying lies, theft, and broken trust.
- Most of the adolescents seeking treatment also report a high level of debt, ranging from \$3,000 to \$25,000. Most also report having had their debt paid off at least once by parents during their career as gamblers. Most also report having sold personal possession or committed illegal activities in order to sustain their gambling.
- Most also report failures in their academic and vocational pursuits, often related to the preoccupation with gambling. As a result, many adolescent problem gamblers end up with a lot of free time on their hands, which they devote to finding money to gamble.
- Adolescents seeking treatment also report gambling to escape, or to enter a “different world”, suggesting significant levels of gambling to dissociate.

Treatment Goals

Based on their adolescent gambling research and clinical experience, Gupta and Deverensky (2000) propose setting the following treatment goals in working with adolescent problem gamblers:

Addressing Underlying Issues

Gupta and Deverensky (1998b) found that adolescent problem gamblers report a high level of dissociation while gambling. The treatment-seeking adolescents at the McGill Centre refer to gambling as “the ultimate

escape”. The researchers therefore propose that as the important initial step of treatment with adolescent problem gamblers, the clinician should identify the underlying/comorbid issues – such as ADHD, depression, anxiety, familial troubles and legal and financial problems that may be prompting the youth to gamble. The researchers suggest that problem gambling recovery may be greatly impeded if these underlying issues are not adequately addressed.

Exploring New Coping Skills

Gupta and Deverensky (2000) also note that using gambling as an escape typically indicate a lack of alternatives, more socially appropriate and healthy coping skills. Part of treatment should consist of helping the young person develop new and sustainable ways to cope with stress and negative emotions.

Deconstructing Cognitive Distortions

Similar to adult problem gamblers, adolescents often report a multitude of cognitive distortions that may contribute to illusions of control. For example, Gupta and Deverensky (1998a) found that although youth understand gambling is largely a luck-driven activity, they nevertheless believe that they can exert meaningful amounts of skill while gambling. Males, and video-game playing youth in particular, have been found to endorse a greater sense of control in gambling (Gupta & Deverensky, 1996; Wood et al., 2004). Therefore, treatment for adolescents, especially those who are high-risk, should also include plans to reduce gambling-related cognitive fallacies.

Repairing Damaged Relationships

Given that adolescent problem gamblers frequently report damaged relationships with family members and friends due to their gambling behaviors, it is important for treatment plans to address ways to mend some of these relationships. Research in general finds that family involvement and support in the gambler’s treatment has a positive effect on treatment outcomes (Petry & Armentano, 1999).

Building Financial Management Skills

Gupta and Deverensky (2000) observed that most of the treatment-seeking adolescents hold views of money that promote gambling (seeing money only in terms of gambling activities – e.g. the cost of bus fare is X number of plays on the slot machine) and typically lack financial management skills. Therefore, treatment ought to include elements of financial management

and plans for debt repayment.

Abstinence from Gambling

The experience from the McGill Treatment Centre appears to show that abstinence from gambling is necessary for the adolescents to prevent relapsing into out-of-control gambling. The criteria established for success in the program is abstinence from gambling for a period of 6 months. Given that adolescents are often problem gamblers as a result of the myriad of biological and social risk factors, controlled gambling may not be a feasible option for adolescents. However, it is important to note that among the clients served by McGill, about 60% were initially reluctant about abstaining from gambling.

CONCLUSION

Evidence has shown that young people, despite restrictions on gambling activities, continue to report a high level of access to various forms of legal and unlicensed forms of gambling. Despite such findings, to date there has not been a comprehensive research study to determine the extent of youth problem gambling in California. California's Attorney General in 2006, applied Oregon's rate of adolescent problem gambling and estimated that approximately 600,000 Californian youth can be considered problem or pathological gamblers. Given the strong evidence regarding the high prevalence of youth gambling and rates of problem gambling multiple times higher relative to adults, there is a serious need for more gambling research, prevention, treatment and recovery services.

More specifically, research is needed regarding youth gambling and problem gambling in California, in order to inform the design of intervention programs. In the policy area, more focus should be applied to designing policies to curb underage gambling. Finally, there is a need for more resources aimed at the prevention and treatment of youth problem and pathological gambling. According to existing research, prevention, treatment and recovery programs may be more effective by addressing underlying issues common to a host of youth-related risky behaviors and problems. Therefore, youth problem gambling should be incorporated into existing substance abuse, teen pregnancy, safe sex, and other public health prevention and treatment programs. Finally, research and evaluation are also needed to demonstrate the efficacy of prevention, treatment and recovery

strategies, and to offer ways for program improvements.

For more information about youth problem gambling, please refer to the following links:

State Resources

California Office of Problem Gambling
<http://problemgambling.securesites.com/>

Problem Gambling Prevention Technical Assistance and Training Project
<http://www.napafasa.org/pgp/>

Screening Tools

SOGS-RA & LIE-BET:
National Problem Gambling Awareness Week
<http://www.npgaw.org>

DSM-IV-MR-J:
<http://www.srs.ks.gov/agency/as/problemgambling/Documents/Youth%20Gambling%20Assessment%20Instruments.pdf>

Prevention Resources

California Friday Night Live
<http://www.fridaynightlive.org/Gambling/gamblingindex.html>

Synopsis of "Stacked Deck" curriculum
http://www.hazelden.org/web/public/document/7931_stackeddeck.pdf

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The project aims to educate the public and train a broad range of service providers, government agency personnel, and community leaders to help prevent problem gambling throughout the State and to provide information on treatment resources for those in need.

All project services are free of charge and CEUs are offered for selected trainings.

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