JUVENILE DELINQUENCY AND ADOLESCENT GAMBLING

Implications for the Juvenile Justice System

MAGGIE E. MAGOON
The Ohio State University
RINA GUPTA
JEFFREY DEREVENSKY
McGill University

Despite the increasing body of literature that supports the connection between adolescent gambling and risk-taking behavior, participation in criminal or delinquent acts has not been thoroughly addressed. With the established relationship between substance abuse and juvenile delinquency, past research and prevention, intervention, and treatment programs can be used to help guide issues concerning adolescent gambling for youthful offenders. How problem gambling may create a pattern of behavior that includes illegal acts and delinquent behaviors is examined. The role of the juvenile justice system and educational strategies for intervention, treatment, and follow-up efforts are provided. Suggestions for data collection and research using populations in detention centers to garner further information on problem gambling and deviant behaviors are addressed.

Keywords: adolescent; gambling; juvenile delinquency; juvenile justice system

With increasing availability and access to gaming venues and gaming merchandise, adolescent gambling participation and associated problem behaviors have become a focal point of much of the adolescent risk-taking research. Prevalence rates reveal that 39%

AUTHOR NOTE: *Please address correspondence to Maggie E. Magoon, Ph.D., The Ohio State University, Sandusky County Juvenile Court, 100 N. Park Avenue, Suite 224, Fremont, OH 43420. E-mail: mmagoon@ag.osu.edu*

CRIMINAL JUSTICE AND BEHAVIOR, Vol. 32 No. 6, December 2005 690-713
DOI: 10.1177/0093854805279948
© 2005 American Association for Correctional and Forensic Psychology

to 92% of youth have gambled at least once in their lives, with as many as 52% gambling once a week or more and 4% gambling daily (Adebayo, 1998; Fisher, 1993; Griffiths, 1989; Gupta & Derevensky, 1997; National Research Council, 1999; Wood & Griffiths, 1998). Whereas adult pathological gambling rates typically range from 1% to 3%, 13% to 47% of adolescents report some gambling-related problems, and 4% to 6% report having a serious gambling problem (Derevensky & Gupta, 2000; Ste-Marie, Gupta, & Derevensky, 2002). The National Research Council (1999) reports lifetime adolescent pathological gambling rates from 1.2% to 11.2% and past year pathological gambling rates from 0.3% to 9.5%.

For those who begin gambling at an early age, the likelihood for future pathological gambling and participation in other problem behaviors increases (Fisher, 1993; Gupta & Derevensky, 1997, 1998a; Jacobs, 2000; Winters, Stinchfield, Botzet, & Anderson, 2002; Wynne, Smith, & Jacobs, 1996). In surveying age of onset of problem behaviors, gambling often precedes other risky behaviors, possibly serving as a gateway behavior. Research reveals that problem gamblers report gambling at an earlier age and have increased risk for multiple addictions and risky behaviors (Gupta & Derevensky, 1998a; Jacobs, 2000; Wynne et al., 1996). Furthermore, in one of the few longitudinal adolescent gambling studies, Winters et al. (2002) found that problem gambling remains consistent over time (i.e., little evidence of "maturing out"), and the rate of being at-risk for developing a gambling problem significantly increases over time, confirming a need for primary prevention. This is of paramount importance when excessive participation in gambling results in committing delinquent or illegal acts to support their habit. As such, incarcerated adolescents represent a high-risk population for gambling problems (Westphal, Rush, Stevens, & Johnson, 1998).

Operational definitions and nomenclature issues have been a contentious issue in the gambling literature due to the interchangeable use of such terms as problem, probable pathological, pathological, and compulsive gambler (Derevensky, Gupta, & Winters, 2003). The classification of gambling behavior by severity often depends on the instrument used. For example, individuals diagnosed as pathological gamblers must meet 5 of 10 of the impulse control disorder criteria from the *Diagnostic and Statistical Manual-IV-TR* (*DSM-IV-TR*;

American Psychiatric Association, 2000). The majority of the adolescent-based instruments incorporate questions based on these criteria as well as frequency of gambling, with cut-off scores delineating those who gamble socially from those who gamble frequently (typically once a week or more) and/or their gambling creates significant life difficulties (i.e., loss of job, divorce, criminal activity to support habit or pay off debts). The term pathological gambling is most frequently used to define the latter group of individuals and will be used throughout this article. A related dispute with regard to adolescent pathological gambling prevalence rates may be dependent on the sample from which these rates are garnered. For instance, there has been a dearth of research on atypical populations such as "privileged" or incarcerated youth (Kearney, Roblek, Thurman, & Turnbough, 1996) and females, and these exploratory studies have limitations as well (Yaffee, 1997). Studies are typically conducted on middle-class Caucasian youth (Derevensky & Gupta, 2000) and primarily males (Vitaro, Brendgen, Ladouceur, & Tremblay, 2001). Prevalence rates for the normal adolescent population have been necessary in laying a foundation for the field of study, however, not to the exclusion of groups that may considerably alter average rates or participation and pathology (i.e., inner-city youth).

The purpose of this review is to (a) address the relationship between adolescent gambling and participation in delinquent or criminal acts; (b) provide examples of research and programs in substance abuse to help guide gambling prevention programs; (c) provide suggestions for the juvenile justice system (e.g., social workers, attorneys, and judges) stressing gambling as a possible precursor to criminal acts; and (d) offer suggestions for gambling resources, treatment programs, and policy issues for youth, parents, professionals, and the community.

IS LEGALIZED GAMBLING DETRIMENTAL?

A number of reports detailing the costs and benefits of gambling are available, although few reports are based on methodologically sound studies (Gupta, 1998). Benefits are typically described as those centered on increased employment; income; and revenue generation

for governments, impoverished groups, or geographic areas (Golfman, 1998; Grinois, 1995; Gupta, 1998; Korn & Shaffer, 1999). Social-emotional benefits of healthy gambling may include a sense of connectedness, an opportunity for socialization, and a fun recreational diversion, as well as enhancing memory and concentration, problem-solving skills, mathematical proficiency, and hand-eye coordination (Korn & Shaffer, 1999; Lesieur, 1998). However, as the National Research Council (1999) recognizes, "the possibility of benefits deriving from pathological gambling are only theoretical and are neither described in the literature nor supported empirically" (p. 157).

Effect studies on the social costs of excessive, pathological gambling have been more prevalent, often focusing on the financial, emotional, psychological, and physical costs and increased crime rates on the opening of casinos (National Research Council, 1999). Financial costs resulting from pathological gambling include those incurred by public and personal resources such as increased financial burdens on families, legal costs, treatment costs, and increased crime rates (Grinois, 1995; Gupta, 1998; Korn & Shaffer, 1999; Lesieur, 1992; National Research Council, 1999; Smith, Wynne, & Hartnagel, 2003). Psychological, emotional, and physical costs include increases in mood and personality disorders, suicide ideation and attempts, domestic abuse, juvenile delinquency, substance abuse, and health problems (Derevensky & Gupta, 1998; Fisher, 1992, 1993; Lesieur, 1998; Westphal et al., 1998).

BEHAVIORAL THEORIES

Addictive behaviors, in general, share similarities that promote increasing severity and participation in multiple addictive behaviors (Nower, Gupta, & Derevensky, 2000; Winters & Anderson, 2000). Based on the addiction literature and impulse control criteria outlined in the *DSM-IV-TR* (American Psychiatric Association, 2000), this article conceptualizes gambling within a constellation of problem or addictive behaviors.

The two main theories that will be discussed throughout this article address a multiple problem theoretical framework: Jessor's problem behavior theory (Jessor, 1987, 1992, 1998; Jessor & Jessor, 1977) and

Jacobs's general theory of addiction (Jacobs, 1986, 1998). Jessor's problem behavior theory encompasses five interrelated psychosocial domains within which both risk and protective factors contribute to an adolescent's propensity to engage in problem behaviors. The likelihood of participating in future risky behaviors increases the earlier the individual initiates a problem behavior, the more problem behaviors one participates in, and the level of risk and protective factors available. This conceptual framework has been confirmed in both substance use and gambling literature (Dickson, Derevensky, & Gupta, 2002; Gupta & Derevensky, 1998a; Jessor, 1987, 1998).

Jacobs's general theory of addiction shares similar overarching theoretical concepts. He contends that involvement in all addictive behaviors is based on an underlying physiological and psychological predisposition to relieve tension. This predisposition coupled with stressful life situations triggers "a person's deliberately chosen vehicle" to participate in addictive behaviors to escape one's stressful internal and external reality through involvement in activities that offer the individual an altered, dissociative state (Jacobs, 1986, 2000). Evidence for this theoretical framework has also been found throughout the substance abuse and gambling literature (Gupta & Derevensky, 1998b; Jacobs, 1987; Nower et al., 2000).

CRIMINAL THEORIES

In addition to problem behavior and addiction theories explaining pathological gambling, a number of criminological theories have been postulated to explain gambling-related crimes. Smith et al. (2003) provide an in-depth description of a model containing three ecological levels (individual, interactional, and structural) that can account for gambling-related criminal activity. Personal characteristics such as genetic predisposition, personality disorders, or intelligence are incorporated at the individual level in theories such as the rational choice model or social learning theory. In the rational choice model of behavior, an individual makes a rational decision to commit a crime based on weighing the social, psychological, and financial benefits compared to the perceived costs. Social behavioral and learn-

ing theories suggest that behavior is learned through experiencing positive and negative reinforcements or consequences for a particular behavior. Within social learning theory, behavior is initially learned and exhibited by imitating significant models in one's life (i.e., parents and peers; Akers, 1985; Bandura, 1977). Akers (1997) further espouses that associating with individuals who share deviant lifestyles and beliefs, being differentially reinforced for criminal behavior over conforming behavior, exposure to deviant models, and personal attitudes favoring criminal activity increases the likelihood of criminal behavior.

At the interactional level, Gottfredson and Hirschi (1990) propose a self-control model in which low self-control, particularly in combination with opportunity, increases the likelihood of the commission of an illegal act. The basis for low self-control can be found in poor socialization during an individual's early years, often stemming from ineffective parenting. The interactional level also includes social control theories describing how rules of a society are followed based on an individual's belief and involvement in, as well as attachment and commitment to, that society (Akers, 1997; Hirschi, 1969). When the societal bond is weak or diminishes over time, social controls deteriorate, and deviant behavior is more likely to occur.

At the structural level, a variety of opportunity theories strive to explain how variations in the opportunities to commit crimes are related to the variation in crime levels from place to place or over time, including routine and leisure behaviors (Smith et al., 2003). Cohen and Felson's (1979) routine activities theory posits that during routine activities, "the likelihood of a crime occurring is increased when there is a convergence in space and time of a motivated offender, suitable target, and the absence of formal or informal guardians who would deter the potential offender" (Smith et al., 2003, p. 37). In addition to routine activities, opportunity theories propose that a risky lifestyle may also include leisure activities (Kennedy & Forde, 1990), including gambling. Increased risk may be due to location of gambling venues and video lottery terminals (known as VLTs), higher proportions of criminally motivated individuals, decreased social controls, and increased suitable targets (Smith et al., 2003).

CRIMINAL ACTS ASSOCIATED WITH GAMBLING

The connection between gambling and crime has been well-documented with adult gambling-related criminal offenses typically including fraud, theft, fencing stolen goods, embezzlement, tax fraud and evasion, forgery, selling drugs, and counterfeiting (Ladouceur, Boisvert, Pépin, Loranger, & Sylvain, 1994). Prevalence rates for adults who report committing an illegal act to finance their gambling generally fall between 65% and 89% (Ladouceur et al., 1994; Lesieur, 1992; Meyer, 1997). Meyer (1997) found that 45.5% of the pathological gamblers had committed crimes solely for the purpose of financing their gambling, 35.0% had altercations necessitating police intervention, and 28.3% have been convicted for a crime at least once. For incarcerated adults, 97% of the pathological gamblers reported committing illegal acts to finance gambling or pay gambling-related debts.

Although research has been conducted on adult crime/incarceration and gambling, only a small number of studies have measured gambling behavior among incarcerated adolescents (Derevensky & Gupta, 1998; Maden, Swinton, & Gunn, 1992; Westphal et al., 1998). Reported prevalence rates of problem gambling for incarcerated adolescents are dramatically higher than nonincarcerated adolescents, with 21% categorized as problem gamblers and 18% to 38% reporting pathological gambling symptomology (Derevensky & Gupta, 1998; Westphal et al., 1998). This is up to 9 times the prevalence rate of pathological gamblers in the general adolescent population and, at minimum, 20 times the rate of pathological gamblers in the general adult population (1-3%). Such findings confirm the contention that youth in adolescent residential centers (e.g., juvenile detention centers, jails, prisons) have a significantly higher rate of gambling problems.

Although males and females in the general adolescent population typically differ on the amount of money wagered, self-esteem, mood levels (e.g., happiness and depression), and sensation seeking, Derevensky and Gupta (1998) found that within their incarcerated sample of adolescents, males and females did not differ significantly on these measures. Although these results may be unusual for the general population, it is important to note that gambling, at least in adolescent residential groups, may be following the substance use trend of

normalization, in which gender differences and moral, social, and economic constraints may disappear (Fisher, 1993; Jacobs, 2000; Kearney et al., 1996). It is possible that females who are incarcerated or who are pathological gamblers differ from other females in the general population by exhibiting characteristics more typically seen in males. Male pathological incarcerated adolescents may differ from the general population as well; however, too often females, in general, have been excluded from gambling studies because the majority of identified pathological gamblers have been male. By overlooking females, especially those incarcerated, a large group of women with gambling problems has not been included in studies or received treatment (Mark & Lesieur, 1992). Further research may offer insight into similarities and differences in behavior patterns and trends for male and female juvenile offenders.

In addition to the incarcerated adolescent population, few studies have empirically examined and documented adolescent gambling-related crime in the general adolescent population. In two studies, Huxley and Carroll (1992) and Yeoman and Griffiths (1996), specific questions were asked related to whether criminal acts were committed for the purpose of financing their gambling. Yeoman and Griffiths reported that in 3.9% of the juvenile cases, the offense was gambling-related. Of these, 86% involved theft or burglary, 7% involved missing persons, 6% involved criminal damage, and one case involved domestic dispute. Huxley and Carroll found delinquent and criminal behaviors committed specifically to participate in or to finance gambling through truancy (14%), stealing money from parents (12%), stealing money from outside the home (5%), and selling other people's possessions (6%).

More often, three to five delinquency-related questions are included as a part of a larger study or delinquency prevalence rates are extrapolated from gambling screens. Adolescent delinquent behaviors may include criminal/illegal acts such as truancy, selling drugs, shoplifting, stealing money, or working for bookmakers. Results suggest consistent evidence that adolescent gambling is associated with the commission of delinquent acts. Adolescent gamblers are more likely to participate in or have a history of committing delinquent or illegal acts, particularly those who already gamble at a problem or pathological level (Fisher, 1993; Griffiths, 1990; Gupta & Derevensky, 1998a;

Ladouceur & Mireault, 1988; Lesieur & Klein, 1987; Winters & Anderson, 2000; Wynne et al., 1996; Yeoman & Griffiths, 1996). For instance, Derevensky and Gupta (2000) reported that 42.4% of problem and pathological gamblers indicated borrowing or stealing money to cover gambling debts, 21% reported committing or having considered committing illegal acts to finance their gambling, 24% had taken money from their family, and 12% had stolen from outside the family. In particular, the frequency and amount of money spent in gambling activities seem to be relevant predictors of delinquent activities (Fisher, 1993; Huxley & Carroll, 1992). Although these youth may not have been in contact with the juvenile justice system or been specifically asked why their illegal acts were committed, it is plausible that these acts are connected in some way to help finance their gambling.

Blaszczynski and Silove (1996) have suggested that criminal acts are committed more frequently by adolescents because they have more peer pressure and financial resources are less available to them. As pathology increases, so does the need for money, and criminal acts may be committed for the sole purpose of financing their gambling addiction (Dickerson, 1989). The need to participate at higher levels of behavior (e.g., frequency, severity, etc.) to obtain the desired excitement, often necessitating increased wagers, occurs in other addictive behaviors as well (e.g., alcohol and drugs) and is not unique to gambling. This is especially true for those who are already categorized as problem or pathological gamblers.

IDENTIFYING AT-RISK YOUTH

Incorporating tools for early identification of those individuals who may be especially at risk for developing a gambling problem should be incorporated into health programs, institutional and governmental policies, community action plans, and juvenile treatment plans. Screening for adolescent gambling problems should take place on at least three levels. First, because problem behaviors cluster together, individuals who are suspected of having a substance abuse problem, difficulties at home or school, or participation in delinquent acts (particularly theft-related crimes, as these are often associated with gambling) should be screened. In all likelihood, difficulties at

this level would initially come to the attention of parents or teachers, with administration of screens completed by a school or community mental health counselor.

Second, screening for severity of gambling should take place for those suspected of already gambling. The earlier gambling is initiated, the greater the likelihood of future gambling problems and commission of criminal acts to support a habit (Winters et al., 2002). Therefore, early screening, education, and intervention may prevent future pathology. For instance, potential pathological gambling may be prevented by providing educational programs to those currently identified as social gamblers. Because previous research has discovered that most parents are aware their children gamble, do not discourage gambling, and often condone gambling through purchasing tickets or gambling with them (Buchta, 1995; Fisher, 1993; Gupta & Derevensky, 1997; Ladouceur, Jacques, Ferland, & Giroux, 1998; Ladouceur & Mireault, 1988), parents need to be educated in order to recognize the importance of screening at this stage. Teachers, counselors, or other youth workers may also become aware of an individual's gambling. At this stage, it is most likely that administration of screens would be completed by a school or community mental health counselor upon referral.

Third, screenings should take place during intake processing into the juvenile justice system. As previously noted, gambling and other problem behaviors often co-occur. As the severity of gambling problems increases, so does the likelihood that problem gamblers will commit a crime to finance their gambling. If incarcerated adolescents are identified, it is an opportune time for them to receive treatment. Not only are they a captive audience to receive educational material, but they should also currently be abstaining from the addictive behavior.

Gambling screens. The three main scales used to measure adolescent gambling include questions that are modeled or show similarity to the *DSM-IV-TR* criteria for a disorder of impulse control (American Psychiatric Association, 2000). Questions such as, "Have you borrowed money or stolen something in order to bet or to cover gambling debts in the past 12 months?"; "Have you stolen money from outside the family, or shoplifted, to gamble?"; and "Have you ever committed,

or considered committing, an illegal act to finance gambling?" are those that pinpoint criminal acts on general gambling screens.

The Gamblers Anonymous Twenty Questions (GA20) screen was created by Gamblers Anonymous for adult members. A positive response to 7 of the 20 questions suggests the individual has a serious gambling problem. Although this brief format is designed by/for those seeking help, there are limited reliability data available and frequency data are not included for specific gambling behaviors.

The *Diagnostic and Statistical Manual-IV-Multiple Response-Juvenile* (*DSM-IV-MR-J*; Fisher, 2000) includes nine categories based on the criteria for pathological gambling in the *DSM-IV* and was developed for use with adolescents. A positive response to four of the nine categories suggests the individual is a "problem gambler." Relevant to the commission of gambling-related crimes, the *DSM-IV-MR-J* includes two questions concerning stealing, differentiating between individuals who steal from those they know and from those outside the family. Satisfactory reliability rates ($\alpha = .75$) have been reported for this scale (Fisher, 2000).

The South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA; Winters, Stinchfield, & Fulkerson, 1993a, 1993b) is another widely used screen and includes two sections (frequency measures and questions based on the *DSM-IV* criteria) allowing categorization of the individual into the following groups: not a problem, at-risk, or problem gambler. The SOGS-RA also includes questions identifying possible family influences, the amount bet, and from whom money is obtained. Satisfactory validity measures and reliability rates ($\alpha = .80$) have been reported for this measure (Winters et al., 1993a). Because the purpose of a general screen would be to include those who are not only problem gamblers but also those at risk for developing a gambling problem, a scale that allows this categorization would envelop all those who are in need of preventive services and is recommended for use as a general screening tool. For a detailed comparative review of these three measures, see Derevensky and Gupta (2000).

The judicial system may also elect to use general gambling scales and/or use a preexisting intake form such as Smith et al.'s (2003) gambling-related occurrence report (GOR). The intent of this report was for police to collect information during arrest intake on the numbers and types of crimes in which gambling was associated. Yeoman

and Griffiths (1996) also requested law enforcement officials in Plymouth, England, to include questions pertaining to gambling on their juvenile intake form. Law officials inquired about the intent of the illegal act and found that 3.9% of the cases were identified as gambling-related. This type of format would certainly be beneficial if included in effect studies for data gathering purposes and clinical studies to confirm the connection between criminal acts and problem gambling. Whether using a preexisting screen or designing one such as the GOR or the juvenile intake form used in Plymouth, England, the juvenile justice system needs to develop a data collection method for tracking adolescent gambling problems.

Those who work with youth, including the judicial system, need to be aware and take into consideration that problem gambling may cause many adolescent criminal behaviors necessitating treatment. To screen at each level increases the likelihood that those individuals who have a high-risk profile and are at risk for developing a gambling problem receive prevention, intervention, or treatment (Winters et al., 2002). This benefits not only the juvenile justice system in decreased caseloads, treatment, and incarceration costs, but also society at large through lower potential adult pathological gambling, decreased gambling-related crime, and increased individual well-being.

PREVENTION, INTERVENTION, AND TREATMENT FOR IDENTIFIED YOUTH

Few adolescent gambling prevention programs are currently available that have been systematically or empirically evaluated for effectiveness (see Dickson et al., 2002, for review). Primary prevention efforts for the general public should include wide-ranging educational strategies such as advertisements and public service announcements, videos, school curricula, and social policy restricting youth gambling, and should target children prior to the teenage years (Winters et al., 2002), parents, communities, and industry.

The public health perspective proposed by Korn and Shaffer (1999) and Messerlian, Derevensky, and Gupta (2004) offers a structural framework for primary prevention. The perspective is designed specifically for adolescents and incorporates prevention, intervention,

treatment goals, and policy recommendations for youth, families, communities, and industry. For youth screened at Levels I and II (i.e., are involved in some other problem behavior or who have already participated in gambling), Messerlian, Derevensky, and Gupta (2005) recommend developing personal skills (through school-based prevention, parent education, resource development for schools, industry training/education, and health professional training/education) and strengthening community capacity (through social marketing and awareness campaigns, public education forums, conferences, harm-reduction programs, and programs for retailers/venue operators). Although youth who are involved in the justice system and currently have a gambling problem may be beyond primary prevention, information is still relevant from an intervention standpoint for the individual and those who work with youth (i.e., factual information, modifying erroneous cognitions, skill building). Korn and Shaffer (1999) report success with the public health perspective for tobacco and smoking awareness and education. Great strides have been made in curbing the use of smoking, particularly in public places, by educating youth, parents, industry, and health professionals about the dangers of smoking and secondhand smoke. This has been accomplished through media campaigns and public education to eliminate the use of tobacco, prevent youth from initiating the habit, and developing stronger tobacco control measures.

Encompassing many components of the public health perspective, another example of primary prevention is the harm-reduction/harm-minimization model. This approach has been widely used in substance abuse prevention and treatment programs and campaigns (Korn & Shaffer, 1999) and focuses on minimizing the negative consequences of gambling for the individual gambler, his or her family, and society. Although abstinence may be a goal, the rationale is that programs should be made available to minimize the possible danger of health-compromising activities. The appealing nature of this approach centers on the notion that responsible alternatives to risky participation can be taught so that abstinence is not the only option. Dickson, Derevensky, and Gupta (2004) suggest that harm-reduction strategies can be conceptualized as a public and mental health approach that remains value-neutral with respect to particular activities (e.g., gambling) and supports a viable strategy that aims to reduce negative con-

sequences encountered through participation in risky behaviors. Korn and Shaffer (1999) report success with a harm-minimization approach for alcohol consumption. This includes programs designed to increase awareness and educate people about responsible drinking, alternatives such as using a designated driver, drinking guidelines, moderation approaches for the treatment of problem drinking, server intervention programs, and limiting alcohol availability. Components of both these primary prevention models can be incorporated into educational/prevention programs in a residential setting.

Once a gambling problem has been recognized, the individual can be channeled into intervention, treatment, and follow-up depending on severity. As with prevention programs, empirically evaluated treatment programs specific to gambling are scarce. Treatment has historically been achieved through a number of therapeutic approaches including psychoanalytic/psychodynamic, behavioral, cognitive/cognitive-behavioral, pharmacological, addiction-based, and multimodal (Derevensky, Gupta, & Dickson, 2004; Dickerson, 1989; Lesieur, 1998; National Research Council, 1999). With a sample of four adolescent males, Ladouceur, Boisvert, and Durmont (1994) implemented a cognitive-behavioral therapy program including information about gambling, cognitive interventions, problem-solving training, relapse prevention, and social skill training. After 1-, 3-, and 6-month follow-ups, three adolescents were abstinent, no longer met the criteria for pathological gambling, and had sustained treatment gains.

The McGill Youth Research and Treatment Clinic offers treatment based on 11 therapeutic components: establishing mutual trust, acceptance of the problem, identification of underlying problems, psychotherapy addressing personal issues, development of effective coping skills, restructuring of free time, development of a healthy lifestyle, involvement of family, cognitive restructuring, establishing debt repayment, and relapse prevention (Gupta & Derevensky, 2000). Success was determined by abstinence from gambling for 6 months, not meeting the criteria for pathological gambling, working and/or in school, no lying or engaging in delinquent or antisocial behaviors, and not using alcohol or drugs excessively. Of the 36 youths served over a 5-year period, only 1 youth reportedly failed to positively respond to treatment.

Beyond these specific examples, treatment may be obtained through self-help treatment groups for addictions, which have been available for decades (e.g., Alcoholics Anonymous, Narcotics Anonymous, Gamblers Anonymous). Groups based on the 12-step philosophy can easily be incorporated into adolescent residential counseling programs. As has been the case with self-help programs and conceptual guides for understanding and treating gambling problems, substance abuse programs have provided a viable model. Research investigating juvenile delinquency and substance abuse among adolescents can pave the way for research and programming for incarcerated adolescent gamblers, as the relationship between substance use and juvenile delinquency has many similarities (Dolan, Holloway, Bailey, & Smith, 1999; Loeber, Stouthamer-Loeber, & White, 1999). Given the theoretical models previously outlined (i.e., Jessor's problem behavior theory and Jacob's general theory of addiction), this is not surprising given the high comorbidity among risky behaviors, particularly substance/alcohol abuse and gambling (Griffiths & Sutherland, 1998; Lesieur, 1992; National Research Council, 1999; Potenza et al., 2000). Information, treatment, and long-term follow-up are increasingly available for adolescents who have substance abuse problems, and the same attention needs to be afforded to those who have gambling problems. Programs currently focusing on risky behaviors (e.g., substance abuse) can easily incorporate gambling information at age-appropriate levels.

Modeling programs after those specifically created for substance abuse and delinquency and those using a theoretical foundation to prevent and/or treat a broad range of problem behaviors in multiple domains may have merit (see Gupta & Derevensky, 2000, for an overview). Programs emphasizing components similar to The Strengthening Family Program (Kumpfer, Molgaard, & Spoth, 1996) and Baltimore's community-based intervention program (Hanlon, Bateman, Simon, O'Grady, & Carswell, 2002) emphasize parental involvement and protective/resiliency factors through parent and youth skill-building/training, mentoring, individual and family therapy, and an evaluation component.

Regardless of level of assistance needed (e.g., prevention, intervention, or treatment), research indicates that parental influences play a vital role in adolescent gambling behavior and that parental involve-

ment is imperative at all levels for both general and incarcerated populations. Precursors to pathological gambling such as earlier initiation, increased frequency, and greater levels of severity may be influenced by parental modeling and acceptance of gambling, attachment, and monitoring and supervision (Fisher, 1993; Gupta & Derevensky, 1998a; Ladouceur, Boudreault, Jacques, & Vitaro, 1999; Magoon & Ingersoll, in press; Stinchfield & Winters, 1998; Winters et al., 2002; Wood & Griffiths, 1998). Furthermore, for those who have parents with gambling problems, there is often increased risk of general family discord, violence, mood disorders, and substance abuse in the home (Jacobs, 1989; Lesieur & Rothschild, 1989). This type of environment may encourage escape through a risky behavior such as gambling. As the risks increase for these adolescents, severity of the need for escape may increase and impulsive measures to support their habit may lead to criminal acts and legal consequences.

A CALL FOR DATA GATHERING, SCIENCE-BASED EVALUATIONS, AND RESEARCH

Although beneficial prevention and treatment programs are beginning to be developed, continued information and evaluation is necessary to minimize adolescent pathological gambling and commission of criminal acts. For decades, adolescent substance abuse data (e.g., prevalence rates, correlates, causes, and treatment) have been routinely gathered on an international level. Procedures are in place to gather this information in schools, community mental health centers, and the juvenile justice system. However, the effect of adolescent problem gambling has not yet been addressed in this manner and is only beginning to come on the radar screens of legislators and social policy experts. Routine studies searching for prevalence rates, antecedents, corollaries, and science-based evaluation of prevention and treatment programs must be given importance.

Although there is ample evidence that parental influences play an important role in gambling and juvenile delinquency (Derevensky & Gupta, 1998), the specific parent and youth characteristics and how they interact to influence behavior is unknown. Although we know that gambling behaviors are associated with criminal acts (Huxley &

Carroll, 1992), which type of gambling behavior is more likely to precipitate which criminal act remains unknown. The fact that many young problem gamblers reach the point where they steal from family to support their habit is in contrast to a smaller number who steal from outside the home (Fisher, 1992; Huxley & Carroll, 1992). Thus, stealing from inside/outside the home may be a key distinction between adolescents who are and are not yet involved with the juvenile justice system. Family members are more likely to tolerate their behavior and less likely to report them to law enforcement officials relative to adolescents who might be caught stealing from strangers. How do these two populations differ? Do their types of gambling behavior differ? Do their families differ? Or, has the youth progressed in his or her habit or depleted all resources beyond "safe" stealing from family and friends (often not reported) to stealing from outside the home, which more often results in interaction with the law? Clinical evidence from The McGill Youth Research and Treatment Clinic suggests that this progression does occur; however, empirical evidence is needed to uncover how and why this transition takes place. For those who have not made the transition as adolescents, what happens when they become adults and stealing from home will no longer suffice? Although a number of important issues have been raised, only further well-funded research accompanied by periodic, standardized, and large-scale surveys and program evaluations will address these questions. In addition, funded research in the residential youth population would be highly informative, offering insight into youth crime and gambling. As Westphal et al. (1998) suggest, studying a "captive" population already participating in multiple anti-social behaviors can also serve as an ideal site for pilot intervention programs.

CONCLUSIONS AND RECOMMENDATIONS

Adolescence is a time of egocentrism and boundary testing of societal restrictions, including participation in risky, problem, or even minor delinquent acts. However, once this normal testing is surpassed and youth participate in high-risk behaviors at the problem or pathological level, criminal acts are frequently committed to support a habit resulting in possible interaction with the law. Because adolescent

pathological gambling prevalence rates are greater than adult pathological gambling prevalence rates, there is the assumption that adolescents mature out of this behavior. However, it is unknown at this time what damage has already been done to the adolescent's life, if the adolescent shifts to another addiction that is more socially acceptable and less costly, or if they transition into populations that are not typically counted in the general adult prevalence rates (i.e., incarcerated, homeless, etc.). For juveniles who have been incarcerated, a critical point has been reached where the chance of maturing out of this behavior is questionable and a positive trajectory for their lives becomes even less certain. If effective policies are not instituted and intervention or treatment does not take place, there is an increased likelihood that the adolescent will continue his or her behavior upon release, with possible adult pathological gambling and its associated problems looming in the future.

This review addressed the relationship between adolescent gambling and delinquency and stressed the importance for resources and/or treatment programs for youth identified with a gambling problem, particularly those already involved in the juvenile justice system. Figure 1 depicts the progression of prevention, intervention, and treatment suggested in this article to address the above objectives. Each step includes matters of policy that will not only help each level serve effectively but possibly curtail progression to the next level. Furthermore, a minimum number of essential personnel accompany each step. For instance, general prevention education requires contributions from those who have direct involvement with youth (i.e., primary school personnel, parents and community members, and youth workers). To initiate screening, youth, parents, school counselors, and family resource centers or youth bureaus must make a commitment to evaluate youth and refer those in need of treatment and eventual follow-up. For youth who have become involved with the juvenile justice system, probation officers, residential intake/social workers, lawyers, and judges can ensure that screening, treatment, and follow-up occur. As stated above, policy issues pervade each step and include youth, parents, community advocates, and institutional personnel.

The connection among problem behaviors seems to indicate a constellation of behaviors creating a web of causation (Jessor, 1992), suggesting that the most beneficial treatment may be that which addresses

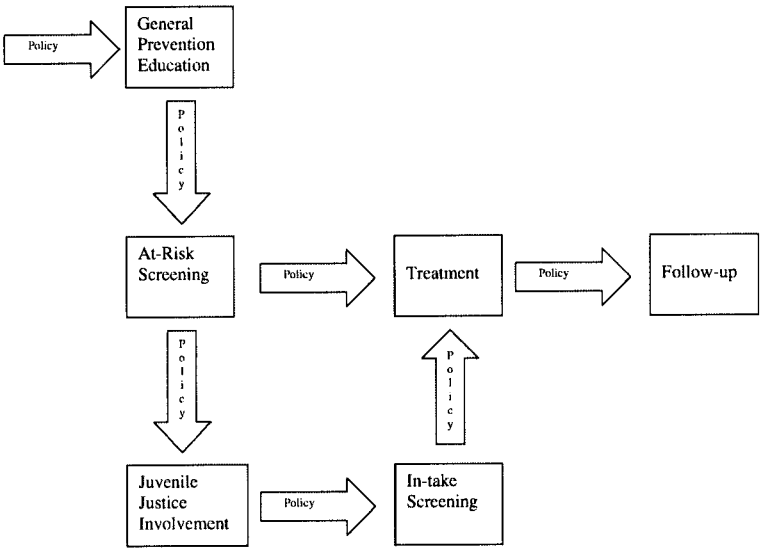

Figure 1: Adolescent Gambling Prevention, Intervention, and Treatment Flow Chart

multiple risky behaviors instead of individual behaviors. Behaviors such as delinquency, substance abuse, and excessive gambling are often highly correlated and even more so at the pathological level. It no longer seems prudent to create prevention, intervention, and treatment programs based on one approach addressing only one specific addiction or behavior. Rather, effective programs will address at-risk or multiple addictive patterns, incorporate various theoretical foundations to elucidate and guide programs, and tap several domains of an adolescent's environment. Collaboration among multiple agencies including schools, community mental health agencies, state juvenile justice systems, and law enforcement is necessary to tap all areas (Dembo & Pacheco, 1999). As Dickson et al. (2002) report, The Center for Substance Abuse Prevention has offered strategies such as information dissemination, prevention education, alternative activities, problem identification and referral, community-based processes, and lobbying for social policy delineating strategies for involvement through school, family, and community programs. It is time to focus

equal attention on preventing and treating other problem behaviors including gambling, which can cause serious long-term negative consequences that can follow a young person into adulthood.

In addition, in criminal cases (especially those involving stealing), legal professionals need to consider that a gambling problem could underlie the delinquent behavior. Involvement in the judicial system may be the red-flag indicator that a severe gambling problem exists. Social policy makers and juvenile justice system professionals can no longer afford to assume that there is one single reason adolescents become pathological gamblers and commit crimes to support their habit. If professionals and the public alike were educated in the common antecedents to gambling, its negative consequences, and the correlations between gambling and criminal acts, potential problems could be minimized. Prevention is always preferred; however, beyond that, screening of at-risk individuals and those already involved with the justice system is paramount for rehabilitation. For adolescents who have been identified as having a gambling problem and have committed a theft that results in minimal punishment (i.e., probation or a short sentence with no treatment), mandatory treatment can be required as part of their probation or release plan.

In attempting to pinpoint specifically how much, if any, causal relationship there is between adolescent gambling and juvenile crime, mitigating variables should not be overlooked. This is precisely why using Jessor's model stresses that the constellation of problem behaviors or addictions must be treated and prevented as a whole. At the root, there seems to be a multitude of possible causes stemming from risk and protective factors in different domains of an adolescent's life. Juvenile delinquency may be but one result of gambling stemming from similar antecedents. Without treatment and follow-up, returning to the same family, peer, and social environment can be dangerous, and the risk for relapse and future criminal acts increases. Returning to an environment in which the adolescent has alienated his or her protective support system and/or an environment that supports gambling and criminal behavior places the adolescent in a dubious position with a small chance of recovery or maturing out of these risky behaviors. Thus, incorporating treatment and follow-up into rehabilitation programs for incarcerated adolescents will minimize the risk of relapse and future criminal acts.

REFERENCES

Adebayo, B. (1998). Gambling behavior of students in grades seven and eight in Alberta, Canada. *Journal of School Health, 68*, 7-12.

Akers, R. (1985). *Deviant behavior: A social learning approach* (3rd ed.). Belmont, CA: Wadsworth.

Akers, R. (1997). *Criminological theories* (2nd ed.). Los Angeles: Roxbury.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Bandura, A. (1977). *Social learning theories*. Englewood Cliffs, NJ: Prentice Hall.

Blaszczynski, A. P., & Silove, D. (1996). Pathological gambling: Forensic issues. *Australian and New Zealand Journal of Psychiatry, 30*, 358-369.

Buchta, R. M. (1995). Gambling among adolescents. *Clinical Pediatrics, 34*, 346-349.

Cohen, D., & Felson, M. (1979). Social change and crime rate trends. *American Sociological Review, 44*, 588-608.

Dembo, R., & Pacheco, K. (1999). Criminal justice responses to adolescent substance abuse. In R. T. Ammerman, P. J. Ott, & R. E. Tarter (Eds.), *Prevention and societal impact of drug and alcohol abuse*. Philadelphia, PA: MCP-Hahnemann U.

Derevensky, J. L., & Gupta, R. (1998, June). *Pathological gambling problems among a population of delinquent adolescents*. Paper presented at the National Conference on Compulsive Gambling, Las Vegas, Nevada.

Derevensky, J. L., & Gupta, R. (2000). Prevalence estimates of adolescent gambling: A comparison of the SOGS-RA, DSM-IV-J, and the GA 20 Questions. *Journal of Gambling Studies, 16*, 227-251.

Derevensky, J., Gupta, R., & Dickson, L. (2004). Adolescent gambling problems: Prevention and treatment implications. In J. E. Grant & M. N. Potenza (Eds.), *Understanding and treating pathological gambling* (pp. 159-168). Washington, DC: APPI Press.

Derevensky, J., Gupta, R., & Winters, K. (2003). Prevalence rates of youth gambling problems: Are the current rates inflated? *Journal of Gambling Studies, 19*, 405-425.

Dickerson, M. (1989). Gambling: A dependence without a drug. *International Review of Psychiatry, 1*, 157-172.

Dickson, L., Derevensky, J., & Gupta, R. (2002). The prevention of youth gambling problems: A conceptual model. *Journal of Gambling Studies, 18*, 97-159.

Dickson, L. M., Derevensky, J. L., & Gupta, R. (2004). Harm-reduction for the prevention of youth gambling problems: Lessons learned from adolescent high-risk behavior prevention programs. *Journal of Adolescent Research, 19*(2), 233-263.

Dolan, M., Holloway, J., Bailey, S., & Smith, C. (1999). Health status of juvenile offenders. A survey of young offenders appearing before the juvenile courts. *Journal of Adolescence, 22*, 137-144.

Fisher, S. (1992). Measuring pathological gambling in children: The case of fruit machines in the UK. *Journal of Gambling Studies, 8*, 263-285.

Fisher, S. (1993). Gambling and pathological gambling in adolescents. *Journal of Gambling Studies, 9*, 257-288.

Fisher, S. (2000). Developing the DSM-IV-MR-J criteria to identify adolescent problem gambling in non-clinical populations. *Journal of Gambling Studies, 16*, 253-274.

Golfman, N. (1998, December). Gambling addicts. *Canadian Forum*, p. 77.

Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Palo Alto, CA: Stanford University Press.

Griffiths, M. D. (1989). Gambling in children and adolescents. *Journal of Gambling Behavior, 5*, 66-83.

Griffiths, M. D. (1990). The acquisition, development, and maintenance of fruit machine gambling in adolescents. *Journal of Gambling Studies, 6*, 193-204.

Griffiths, M., & Sutherland, I. (1998). Adolescent gambling and drug use. *Journal of Community and Applied Social Psychology, 8*, 423-427.

Grinois, E. (1995). Gambling as economic policy: Enumerating why losses exceed gains. *Illinois Business Review, 52*(1), 6-12.

Gupta, R. (1998). *An examination of the social and economic costs of problem and pathological gambling: What do gaming impact studies tell us?* Washington, DC: National Academy of Sciences, National Research Council.

Gupta, R., & Derevensky, J. (1997). Familial and social influences on juvenile gambling behavior. *Journal of Gambling Studies, 13*, 179-192.

Gupta, R., & Derevensky, J. L. (1998a). Adolescent gambling behavior: A prevalence study and examination of the correlates associated with problem gambling. *Journal of Gambling Studies, 14*, 319-345.

Gupta, R., & Derevensky, J. L. (1998b). An empirical examination of Jacobs' general theory of addictions: Do adolescent gamblers fit the theory? *Journal of Gambling Studies, 14*, 17-49.

Gupta, R., & Derevensky, J. L. (2000). Adolescents with gambling problems: From research to treatment. *Journal of Gambling Studies, 16*, 315-342.

Hanlon, T. E., Bateman, R. W., Simon, B. D., O'Grady, K. E., & Carswell, S. B. (2002). An early community-based intervention for the prevention of substance abuse and other delinquent behavior. *Journal of Youth & Adolescence, 31*, 459-471.

Hirschi, T. (1969). *Causes of delinquency.* Berkeley: University of California Press.

Huxley, J., & Carroll, D. (1992). A survey of fruit machine gambling in adolescents. *Journal of Gambling Studies, 8*, 167-179.

Jacobs, D. F. (1986). A general theory of addictions: A new theoretical model. *Journal of Gambling Behavior, 2*, 15-31.

Jacobs, D. F. (1987). A general theory of addictions: Application to treatment and rehabilitation planning for pathological gamblers. In T. Galski (Ed.), *The handbook of pathological gambling.* Springfield, IL: Charles C Thomas.

Jacobs, D. F. (1989). A general theory of the addictions: Rationale for and evidence supporting a new approach for understanding and treating addictive behaviors. In H. J. Shaffer, S. A. Stein, B. Gambino, & T. N. Cummings (Eds.), *Compulsive gambling: Theory, research, and practice* (pp. 35-64). Lexington, MA: Lexington.

Jacobs, D. F. (1998, September). *An overarching theory of addiction: A new paradigm for understanding and treating addictive behaviors.* Paper presented to the National Research Council's study session on pathological gambling: Technology, socio-economic impact, and treatment, Washington, DC.

Jacobs, D. F. (2000). Juvenile gambling in North America: An analysis of long-term trends and future prospects. *Journal of Gambling Studies, 16*, 119-152.

Jessor, R. (1987). Problem-behavior theory, psychosocial development, and adolescent problem drinking. *British Journal of Addiction, 82*, 435-446.

Jessor, R. (1992). Reply: Risk behavior in adolescence: A psychosocial framework for understanding and action. *Developmental Review, 12*, 374-390.

Jessor, R. (1998). New perspectives on adolescent risk behavior. In R. Jessor (Ed.), *New perspectives on adolescent risk behavior.* Cambridge, UK: Cambridge University Press.

Jessor, R., & Jessor, S. L. (1977). *Problem behavior and psychosocial development: A longitudinal study of youth.* New York: Academic Press.

Kearney, C. A., Roblek, T., Thurman, J., & Turnbough, P. D. (1996). Casino gambling in private schools and adjudicated youngsters: A survey of practices and related variables. *Journal of Gambling Studies, 12*, 319-327.

Kennedy, L., & Forde, D. (1990). Routine activities and crime. *Criminology, 28*, 101-115.

Korn, D. A., & Shaffer, H. J. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies, 15*, 289-365.

Kumpfer, K. L., Molgaard, V., & Spoth, R. (1996). The strengthening family program for the prevention of delinquency and drug use. In R. D. Peters & R. J. McMahon (Eds.), *Preventing childhood disorders, substance abuse, and delinquency.* Thousand Oaks, CA: Sage.

Ladouceur, R., Boisvert, J. M., & Durmont, J. (1994). Cognitive-behavioral treatment for adolescent pathological gamblers. *Behavior Modification, 18*, 230-242.

Ladouceur, R., Boisvert, J. M., Pèpin, M., Loranger, M., & Sylvain, C. (1994). Social cost of pathological gambling. *Journal of Gambling Studies, 10*, 399-409.

Ladouceur, R. L., Boudreault, N., Jacques, C., & Vitaro, F. (1999). Pathological gambling and related problems among adolescents. *Journal of Child & Adolescent Substance Abuse, 8*(4), 55-68.

Ladouceur, R., Jacques, C., Ferland, F., & Giroux, I. (1998). Parents' attitudes and knowledge regarding gambling among youths. *Journal of Gambling Studies, 14*, 83-90.

Ladouceur, R., & Mireault, C. (1988). Gambling behaviors among high school students in the Quebec area. *Journal of Gambling Behavior, 4*, 3-12.

Lesieur, H. R. (1992). Compulsive gambling. *Society, 29*(4), 43-50.

Lesieur, H. R. (1998). Costs and treatment of pathological gambling. *Annals of the American Academy of Political Social Science, 556*, 153-171.

Lesieur, H. R., & Klein, R. (1987). Pathological gambling among high school students. *Addictive Behaviors, 12*, 129-135.

Lesieur, H. R., & Rothschild, J. (1989). Children of Gamblers Anonymous members. *Journal of Gambling Behavior, 5*, 269-281.

Loeber, R., Stouthamer-Loeber, M., & White, H. (1999). Developmental aspects of delinquency and internalizing problems and their association with persistent juvenile substance use between ages 7 and 18. *Journal of Clinical Child Psychology, 28*, 322-332.

Maden, T., Swinton, M., & Gunn, J. (1992). Gambling in young offenders. *Criminal Behavior and Mental Health, 2*, 300-308.

Magoon, M. E., & Ingersoll, G. M. (in press). Parental modeling, attachment, and supervision as moderators of adolescent gambling. *Journal of Gambling Studies.*

Mark, E. M., & Lesieur, H. R. (1992). A feminist critique of problem gambling. *British Journal of Addiction, 87*, 549-565.

Messerlian, C., Derevensky, J., & Gupta, R. (2004). A public health perspective for youth gambling: A prevention and harm minimization framework. *International Gambling Studies, 4*, 147-160.

Messerlian, C., Derevensky, J., & Gupta, R. (2005). Youth gambling problems: A public health perspective. *Health Promotion International, 20*(1), 69-79.

Meyer, G. (1997). *Pathological gambling and criminal behavior.* Paper presented at the International Conference on Gambling and Risk Taking, Montreal, Quebec, Canada.

National Research Council. (1999). *Pathological gambling: A critical review.* Washington, DC: National Academy Press.

Nower, L., Gupta, R., & Derevensky, J. (2000, October). *Coping and gambling: The relationship of stress-coping styles, impulsivity, sensation-seeking, and substance use among youth gamblers.* Paper presented at the annual meeting of the National Council on Problem Gambling, Philadelphia, Pennsylvania.

Potenza, M. N., Steinberg, M. A., McLaughlin, S. D., Wu, R., Rounsaville, B. J., & O'Malley, S. S. (2000). Illegal behaviors in problem gambling: Analysis of data from a gambling helpline. *Journal of the American Academy of Psychiatry and the Law, 28*, 389-403.

Smith, G., Wynne, H., & Hartnagel, T. (2003). *Examining police records to assess gambling impacts: A study of gambling-related crime in the city of Edmonton.* Edmonton, Canada: Alberta Gaming Research Institute.

Ste-Marie, C., Gupta, R., & Derevensky, J. (2002). Anxiety and social stress related to adolescent gambling behavior. *International Gambling Studies, 2*, 123-141.

Stinchfield, R., & Winters, K. C. (1998). Gambling and problem gambling among youth. *Annals of the American Academy of Political and Social Science, 556*, 172-185.

Vitaro, F., Brendgen, M., Ladouceur, R., & Tremblay, R. E. (2001). Gambling, delinquency, and drug use during adolescence: Mutual influences and common risk factors. *Journal of Gambling Studies, 17*, 171-190.

Westphal, J. R., Rush, J. A., Stevens, L., & Johnson, L. J. (1998). Gambling behavior of adolescents in residential placement in northwest Louisiana. *Southern Medical Journal, 91*, 1038-1041.

Winters, K. C., & Anderson, N. (2000). Gambling involvement and drug use among adolescents. *Journal of Gambling Studies, 16*, 175-198.

Winters, K. C., Stinchfield, R. D., Botzet, A., & Anderson, N. (2002). A prospective study of youth gambling behaviors. *Psychology of Addictive Behaviors, 16*, 3-9.

Winters, K. C., Stinchfield, R., & Fulkerson, J. (1993a). Patterns and characteristics of adolescent gambling. *Journal of Gambling Studies, 9*, 371-386.

Winters, K. C., Stinchfield, R., & Fulkerson, J. (1993b). Toward the development of an adolescent gambling problem severity scale. *Journal of Gambling Studies, 9*, 63-84.

Wood, R. T. A., & Griffiths, M. D. (1998). The acquisition, development, and maintenance of lottery and scratchcard gambling in adolescence. *Journal of Adolescence, 21*, 265-273.

Wynne, H., Smith, G., & Jacobs, D. (1996). *Adolescent gambling and problem gambling in Alberta.* Edmonton, Alberta, Canada: Alberta Alcohol and Drug Abuse Commission.

Yaffee, R. A. (1997). Commentary: A methodological critique of Kearney et al.'s (1996) "Casino gambling in private school and adjudicated youngsters: A survey of practices and related variables." *Journal of Gambling Studies, 13*, 85-90.

Yeoman, T., & Griffiths, M. (1996). Adolescent machine gambling and crime. *Journal of Adolescence, 19*, 99-104.