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YOUTH GAMBLING PROBLEMS: A HARM REDUCTION PREVENTION MODEL

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Despite the growing popularity of the harm reduction/harm minimization approach for adolescent alcohol and substance abuse, a harm reduction approach for the prevention of youth gambling problems has only recently been explored. A universal, selective, and indicative prevention framework used in harm reduction health paradigms for adolescent substance and alcohol abuse is applied to youth gambling problems. A risk-protective factor model is used as a conceptual basis for designing a harm reduction prevention program. This framework points to the developmental appropriateness of the harm reduction approach for youth with gambling problems.

Keywords: Youth gambling problem; Harm reduction; Adolescents

While gambling is often perceived as an adult behavior, recent research has shown that it is a popular activity amongst youth and that adolescents remain at high risk and are vulnerable for the development of serious gambling-related problems (Shaffer and Hall, 1996; National Research Council, 1999; Jacobs, 2000; Hardoon and Derevensky, 2002). Current prevalence rates of adolescents with severe gambling problems range between 4 and 8%, approximately two to four times that of adults, with another 10–15% of youth gambling excessively and being at-risk for the development of a serious gambling problem (National Research Council, 1999; Jacobs, 2000).

Similar to other addictive behaviors, youth with severe gambling problems have been shown to have a lower self-image, engage in multiple delinquent and criminal behaviors, have higher rates of depression, frequently indulge in other substances, have poor school performance, and experience disrupted peer, familial and social relationships (Hardoon and Derevensky, 2002). Adolescents have been reported to engage in every legal and illegal form of gambling in spite of laws prohibiting them from doing so (Jacobs, 2000). While research in the field of youth gambling is in its infancy, the devastating consequences to the individual with a gambling problem and the individual's family and peers have been found to be pervasive. The prevalence

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rates of adolescent gambling and the widespread proliferation and availability of gambling venues imparts an obligation to devote considerable attention to the development of effective science-based prevention programs and responsible social policy (Derevensky *et al.*, 2003).

Traditional prevention efforts addressing adolescent risky behaviors (e.g., alcohol, substance use, and tobacco use) have been streamed into prevention efforts aimed toward nonusers (primary prevention), screening for potential problems (secondary prevention), and treatment (tertiary prevention). The question of whether the traditional approach of promoting nonuse or abstinence for alcohol and drug use (Poulin and Elliott, 1997; Beck, 1998; Marlatt, 1998), and more recently for preventing problem gambling, as an adequate means of preventing problems has been increasingly questioned (Dickson *et al.*, 2004).

Harm reduction programs as an alternative approach to traditional models of prevention have targeted a number of high-risk activities including alcohol consumption, sexual activity, and substance use (for a historical overview of the development of harm reduction see Erickson, 1999 and Marlatt, 1996). However, the harm reduction approach has not been fully embraced as a universal approach to address all problem and health-related behaviors. For example, the harm reduction approach has been viewed as inappropriate in preventing tobacco use, based upon the findings that smoking is not an activity in which an individual can engage in, at any level, safely (Berridge, 1999; Single, 2000).

Although few prevention initiatives currently exist for problem gambling (see Derevensky *et al.*, 2001 for a review of programs), the increasing widespread use of the harm reduction approach in the field of alcohol and substance abuse raises the possibility of its utility in preventing gambling problems as well. Concomitant with theoretical and empirical evidence of common risk and protective factors across adolescent risky behaviors (Galambos and Tilton-Weaver, 1998; Jessor, 1998; Loeber *et al.*, 1998; Dickson *et al.*, 2000) and the subsequent science-based movement to design prevention initiatives that target multiple risk behaviors, it is conceivable that prevention of gambling behaviors among adolescents would benefit from this approach as well.

PREVENTION APPROACHES: ABSTINENCE *VERSUS* HARM REDUCTION

As an overarching framework, harm reduction strategies (also referred to as harm minimization) seek to help individuals without requiring abstinence from an activity that may result in short-term or long-term harm. This framework is predicated upon the assumption that it is difficult to prevent individuals from participating totally in a particular risky behavior (Baer *et al.*, 1998).

If one accepts harm reduction as a health paradigm in lieu of, or as an interim step toward an abstinence model, harm reduction can best be conceptualized as a mental health approach that remains value-neutral and supports strategies that aim to reduce harmful negative consequences incurred through involvement in risky behaviors. While government regulated gambling is a legal activity for adults in many jurisdictions, underage youth are often prohibited by law from accessing legalized gambling venues; which is more consistent with an abstinence approach. However, research clearly indicates that early gambling experiences amongst children and adolescents

occur in both nonregulated forms of gambling (i.e., card playing for money, wagering on sports events, etc. among peers and family members), as well as all forms of legalized and regulated gambling (e.g., lottery, bingo, casinos, horse racing, etc.) (Gupta and Derevensky, 1998a; National Research Council, 1999; Jacobs, 2000). As Dickson *et al.* (2004) suggested, this highlights both the paradox and the confusion as to which primary prevention approach to promote; abstinence or harm reduction. Is it realistic to expect youth to stop gambling when research has revealed 70–80% of adolescents report gambling in the past year (Gupta and Derevensky, 1998a; National Research Council, 1999; Jacobs, 2000; Shaffer and Hall, 2001)?

In response to this dilemma, it can be argued that it is unrealistic to expect youth to stop gambling completely given the widespread acceptance of gambling as a legitimate form of entertainment (Azmier, 2000), the exceedingly difficult tasks of regulating access to gambling activities organized amongst themselves (e.g., card betting, sports betting, wagering on personal games of skill, etc.), and monitoring government regulated forms of gambling. It is also important to acknowledge that similar to alcohol use most youth gamble in a responsible manner without developing any significant behavioral or health-related problems.

Why Harm Reduction for Adolescent Problem Gambling Prevention?

A number of plausible reasons suggest that the harm reduction paradigm may be a useful approach to the prevention of adolescent problem behaviors associated with socially acceptable risky activities including gambling.

GAMBLING AS A SOCIALLY ACCEPTABLE ACTIVITY

Gambling, or gaming as the industry prefers to describe their business, has become a socially acceptable activity and has rid itself of many of its former negative stereotypes. Today, gambling is often viewed positively in movies, I used to raise funds for worthwhile causes, and is also frequently engaged in within the home, school, and/or church; and as such is often perceived as a harmless form of entertainment (Derevensky *et al.*, 2003). As parents (and school officials) frequently fail to see the negative sequelae associated with youth gambling, parents are less likely to talk to their children about responsible gambling than about responsible drinking or the effects of smoking. As such, youth tend to be less informed about gambling than other risky behaviors (Gupta and Derevensky, 2000). Finally, when engaged in infrequently and responsibly, gambling does not carry the same potential health risks and consequences as cigarette, alcohol, and drug use, which possibly makes the promotion of abstinence less critical (Korn and Shaffer, 1999).

A CONTINUUM OF HARM

Gambling participation, very much like drug or alcohol use, falls upon a continuum ranging from nongambling to controlled responsible gambling to uncontrollable gambling participation. Individuals involved in uncontrollable gambling are often

referred to as pathological gamblers (APA, 1994), and they exhibit the same lack of control and decision-making capacities as those dependent upon alcohol or drug use.

Just as the World Health Organization (1996) supported the position that alcohol problems lie on a continuum that necessitate a wide range of prevention alternatives, it is reasonable to advocate that the approaches to preventing problem gambling need to vary in order to be sensitive to unique populations (e.g., ethnic groups and adolescents). While pathological gamblers may *not* be viable candidates for a harm reduction approach and likely require more intensive therapeutic treatment (Gupta and Derevensky, 2000), individuals toward the beginning of the gambling continuum are capable of making informed choices by weighing the perceived personal benefits of gambling against detrimental consequences. As such, a harm reduction approach would be most applicable to those gamblers who engage in this behavior on a more social level. Furthermore, given the time necessary to develop a pathological gambling problem (a progressive disorder), the harm reduction approach appears to have important elements that may be beneficial to most adolescents.

The significant variance in the potential for harm resulting from socially acceptable risky activities differentiates gambling and alcohol consumption from activities such as tobacco, heroine, and cocaine use, which have been shown to result in significant harm regardless of the level of use. Furthermore, research on risk and protective factors (Cicchetti and Toth, 1997; Jessor, 1998) offer an important reminder that the cause of such variance results from the interaction of present risk and protective factors operating within complex person–environment–situation interactions (see Dickson *et al.*, 2002). Thus, it can be argued that the continuum of harm is associated with a number of different risk profiles and that harm reduction appears to be a useful means in which to prevent pathological gambling amongst adolescent gamblers who are at low risk for progressing to more problematic gambling.

ADOLESCENT EXPERIMENTATION

Although a harm reduction prevention approach appears most applicable for youth who are at low risk for developing a gambling problem, when the knowledge about adolescence and the developmental trajectory of youth's involvement in high-risk behaviors is considered, a harm reduction model appears to be suitable for even those youth who may be at moderate or high risk for developing a gambling problem. Accordingly, research undertaken to examine patterns of problem behaviors over the life span suggests that most adolescent problem behaviors including delinquency (Moffitt, 1993), alcohol problems (Zucker *et al.*, 1995), substance use (Baer *et al.*, 1998), and multiple problem behaviors (Loeber *et al.*, 1998) are generally limited to the period of adolescence and do not necessarily lead to significant long-term psychosocial or physical problems (in contrast to a path of life-long persistent problem behaviors). This has led several researchers (e.g., Erickson, 1993; Baer *et al.*, 1998) to suggest that there may be a prominent role for prevention initiatives that seek to limit the harmful consequences of problem behavior until the onset and course of problem behavior has run its term, rather than aiming to change the course per se.

More recently, neurological research on motivational circuitry and the brain's later maturing regulation of impulsive reward-attainment has led to the hypothesis that normative neurological development contributes to adolescent impulsivity as a

transitional trait-behavior (Chambers and Potenza, 2003) and youth's heightened risk for involvement in high-risk behavior. Not surprisingly, the characteristics of neurological development during adolescence correspond to the time-limited developmental trajectory of most adolescent problem behavior.

Thus, taking into account what is known about adolescent experimentation, approaching prevention by recognizing that most youth gamble and supporting less harmful gambling behavior may be a way for promoting prevention strategies without inciting adolescent experimentation into rebellious attitudes and risky gambling behaviors. It is also likely that messages that are sensitive to the adolescent's stage of development will be more openly received by youth problem gamblers who have been historically difficult to reach for treatment (Gupta and Derevensky, 2000; Derevensky *et al.*, 2003).

DESIGNING PROGRAMS USING THE RISK-PROTECTIVE FACTOR MODEL

Prevention programs based upon the risk-protective factor model seek to prevent or limit the effects of risk factors (those variables associated with a high probability of onset, greater severity, and longer duration of major mental health problems) and increase protective factors (conditions that improve an individual's resistance to risk factors and disorders). In doing so, it is believed that children will become more resilient (positive coping within the context of significant adversity) (Luthar *et al.*, 2000). A particular strength of the risk-protective factor model is that it allows prevention specialists to create, evaluate, and refine harm reduction prevention programs (HRPPs) based upon changes in risk and protective factors shown to account for changes in targeted behavior, attitudes, etc. (Coie *et al.*, 1993). Although prevention program evaluation using the risk-protective factor model is not without flaw, the conventional means of HRPP evaluation has been plagued by methodological difficulties (Strang, 1993; Kalant, 1999) and has failed to generate further knowledge of the developmental course of adolescent high-risk behavior. However, evaluating a program's effects on targeted risk and protective factors may inform our knowledge about the development of adolescent risk behavior and help prevention experts design more appropriate prevention and intervention programs (see Dickson *et al.*, 2002 for comprehensive reviews).

Despite the complexities of using the risk-protective factor model (see Coie *et al.*, 1993; Dickson *et al.*, 2002), this model can be used as the theoretical basis of harm reduction because of its role in science-based prevention, its empirical validity in current trends in adolescent risk-behavior theory (Jessor, 1998), and its role in empirically-supported theory of intentional behavioral change, which has been used to understand the *initiation* of both health-protective behaviors (e.g., healthy eating and exercise) and health-risk behaviors such as gambling. The harm reduction model is also consistent with the *modification* of problem behaviors including excessive alcohol use and problem gambling (DiClemente *et al.*, 2000).

Empirical evidence supports the design of HRPPs that target risk and protective factors and promote responsible engagement in risky behaviors. For example, patterns of adolescent alcohol use (Gliksman and Smythe, 1982) and personal and social control mechanisms associated with substance use (Boys *et al.*, 1999) point to the possibility of achieving controlled involvement in risky behaviors. Similar findings have been noted

in the study of adolescent gambling such that the majority of adolescent gamblers do not experience significant negative consequences (Azmier, 2000; Gupta and Derevensky, 2000).

A Conceptual Framework for Harm Reduction Prevention: Preparing Youth to Gamble Responsibly

Given the high degree of comordity between youth gambling problems and alcohol abuse (Winters and Anderson, 2000) and their similarity of risk factors (Dickson *et al.*, 2000), the harm reduction paradigm seems a plausible approach for dealing with gambling problems. Nevertheless, it is crucial to ensure that the design and implementation of such harm reduction prevention initiatives be consistent with current empirical knowledge of effective science-based prevention (see Coie *et al.*, 1993 for a review of the principles of prevention science). As described above, one such science-based model for program design, implementation, and evaluation is the risk-protective factor model. Furthermore, current research efforts appear to be pointing to the utility of designing programs aimed at preventing multiple-problem behaviors (Galambos and Tilton-Weaver, 1998). However, the effectiveness of combining harm reduction strategies for some activities (e.g., gambling and alcohol consumption) while promoting abstinence strategies for others (e.g., risky sexual activity, illicit drug use) has yet to be empirically tested despite the general acknowledgment that prevention efforts need to be science-based (Brounstein *et al.*, 1999).

UNIVERSAL HRPP STRATEGIES AND TARGETING RISK FACTORS FOR PROBLEM GAMBLING

Universal strategies are prevention efforts received by all adolescents, regardless of whether an individual is at no, low, or high risk for problem gambling. Descriptions of current universal HRPPs in the field of substance abuse indicate that the objectives of increasing knowledge and teaching good decision-making skills are necessary to reduce a number of risk factors associated with increased risk of substance and alcohol abuse. The list of risk factors include values and attitudes toward use (Colder and Chassin, 1999), low perceived life chances (Bachman *et al.*, 1991), expectations of social benefit (Kline, 1996), and poor coping skills (Colder and Chassin, 1999; Sullivan and Farrell, 1999). Likewise, the design of universal HRPPs that target youth problem gambling will involve strategies that limit known risk factors of youth problem gambling. Recent research has focused upon the identification of the risk factors associated with adolescent problem gambling (Dickson *et al.*, 2002).

Although prevention programs that specifically target gambling may be in themselves useful, the examination of the commonalities of risk factors for problem gambling and other addictive behaviors also provides sufficient evidence for the incorporation of gambling into more general addiction and adolescent risk behavior prevention programs. However, while risky behaviors share many common risk factors, some are more suitable for harm reduction (alcohol consumption and gambling) while others are not, suggesting that a general mental health prevention program would be most effective if it were to incorporate elements of both abstinence and harm reduction principles.

Delaying Age of Onset

Whether HRPPs are designed specifically for problem gambling or incorporated into a general mental health curriculum targeting multiple high-risk behaviors, the need for merging abstinence and harm reduction prevention approaches is exemplified by the apparent contradiction that arises when the principles of the harm reduction paradigm are applied to adolescents. Research clearly highlights that the age of onset of gambling behavior represents a significant risk factor, with the younger the age of initiation being correlated with the development of future gambling-related problems (Wynne, Smith and Jacobs, 1996; Gupta and Derevensky, 1998a; National Research Council, 1999; Jacobs, 2000; Dickson *et al.*, 2002). This finding strongly suggests that delaying the age of onset of gambling experiences would be fundamental in a successful prevention paradigm, which fits better under the umbrella of abstinence, and does not adhere to the principles of the harm reduction approach.

Prevention experts and treatment providers cannot advocate for a value-neutral stance (e.g., accepting the adolescent's decision to engage in gambling) toward involvement in risky activities while conveying the expectation that youth are required to adhere to legal prohibitions. Given that the prevention programs are often implemented by classroom teachers, each bringing his/her own beliefs and values to the message conveyed, how this incongruence is addressed varies. Nonetheless, HRPPs need to communicate the message that the legal age limits for gambling (as well as for alcohol) are in place for the purpose of allowing time for preparing youth to approach such activities with responsible values, attitudes, knowledge, and behaviors. Legal age limits convey the risky nature of activities and limit particular contexts and forms of gambling that often involve numerous high-risk activities. For example, the casino environment generally exposes youth to smoking, alcohol consumption, and the potential of propagating fantasy images of high-rollers and instant money. Thus, differences between unstructured (e.g., betting between friends) and formal/structured gambling (e.g., betting at the blackjack table and slot machines) need to be openly discussed.

HRPP UNIVERSAL STRATEGIES AND ENHANCING RESILIENCY FOR THE PREVENTION OF YOUTH PROBLEM GAMBLING

One of the central goals of science-based prevention initiatives is to promote resilience. As such, HRPPs should include developmentally appropriate components that enhance salient protective and resource factors. Despite the lack of emphasis on resilience in current HRPPs, both resource factors (those operating independent of risk status) and protective factors (those which interact with risk status) contribute to one's resilience and need to be considered in the design and implementation of effective youth gambling HRPPs. It is important to emphasize that protective factors targeted in HRPPs interact with the risk factors of problem gambling (e.g., high-perceived benefits of gambling and low-risk perception) to buffer the cumulative effects of these risks, disrupt the mediational chain through which particular risk factors operate or prevent the initial occurrence of the risk factor altogether. The importance of enhancing resilience is further highlighted by the unavoidable situation that most HRPPs

are universal, giving rise to the possibility that high- and low-risk youth may have differential benefits upon receiving the program.

Although there are currently few studies on protective mechanisms, or more generally on resiliency for youth with respect to problem gambling, similar protective factors have been found to influence a multiple number of health and developmental outcomes in the presence of various stressors (Rutter, 1987, 1990; Derevensky *et al.*, 2001; Dickson *et al.*, 2003). Thus, it is likely that the common protective factors found for a number of problem behaviors will be operative in the process of resiliency to problem gambling as well. Protective factors promote general health by helping adolescents accomplish stage appropriate tasks while helping alter the life trajectories toward the onset or maintenance of problem gambling. HRPPs need to include strategies that can be expected to help adolescents accomplish stage-related tasks and thereby ensuring that the harm reduction approach is developmentally appropriate.

One issue that surfaces when teaching youth responsible gambling behavior is: How to address youth who do not have responsible gambling as their goal and are not motivated to behave responsibly. For such youth, there is an increased likelihood that social gambling will escalate into problem gambling. Considerable theoretical and empirical research on attitudes and motivation (e.g., Azjen and Fishbein, 1980; DiClementi and Prochaska, 1998) has been undertaken to understand the importance and development of values. For example, perceived benefits of risk-taking have been found to be more important than the costs that may be incurred by unsafe sex (Parsons *et al.*, 2000) substance use, and dangerous driving (Benthin *et al.*, 1993; Parsons *et al.*, 1997). These findings raise a critical question for prevention experts. How can youth be encouraged to value 'responsible' gambling and, more generally, to value healthy behaviors?

In response to this dilemma, motivational interviewing (MI) (Miller and Rollnick, 1996) in the framework of harm reduction has been receiving more attention in the prevention literature. Masterman and Kelly (2003) reviewed the promising role of motivational interviewing in primary prevention programs for adolescent drinking, noting its specific advantages for working with adolescents and its complimentary nature to harm reduction approach. MI should likely be considered for the broad range of adolescent high-risk behaviors.

A second constraint to promoting gambling resiliency by increasing adolescents' decision-making skills and knowledge about gambling lies in the emphasis on instructing youth to use cost-benefit analyses. Cost-benefit analyses, which require youth to compare negative and harmful consequences, has been criticized for its subjective definition of harm and the problematic nature of defining harm by one's own value system and perception of harm (Strang, 1993; Kalant, 1999). Some youth, for example, may argue that the benefits of binge drinking (e.g., relieving stress, social-time) outweigh the potential risks (e.g., physical accidents resulting from lowered inhibitions and increased risk-taking).

A final constraint to be considered for the promotion of resilience in gambling prevention programs is the unfortunate reality that *health* and *responsible* behavior have in the past been presented as objectives or ideals toward which youth are encouraged to strive and are therefore extrinsic to oneself. For example, numerous evaluations of abstinence-based school alcohol and drug prevention programs and policies (Brown *et al.*, 1997) highlight how easily ideals can be negated by youth as being too far removed from the realities of life.

In consideration of several constraints, HRPPs need to incorporate means that offer youth opportunity for cognitive and affective exposure to responsible behaviors and for testing their validity. Research on the importance of rites of passage during adolescence (Bushnell, 1997; Schuck and Bucy, 1997) and mentoring (Thompson and Kelly-Vance, 2001) may inform efforts to design strategies in HRPPs toward achieving this goal. Finally, the task of promoting resilience points to the need to explore the possibility of placing HRPPs for problem gambling into a more general mental health curriculum.

CONCLUDING REMARKS

Today's youth will be tomorrow's adults having easy access and widespread availability to multiple forms of legalized gambling. The introduction of harm reduction prevention initiatives to help youth become less vulnerable to the risks of a gambling problem is timely. Supported by research pointing to the critical task of targeting risk and protective factors in multiple domains, mental health programs have capitalized upon collaborative efforts among families, schools, social services, and communities toward the development of effective prevention programs (Brounstein *et al.*, 1999). The school curricula is moving toward student collaborative models enhancing multiple protective factors while educational reform is shifting focus from merely promoting academic growth and success to promoting psychosocial development and responsible behaviors.

Other more visible adolescent problems have prompted significant social policy recommendations and legislation (e.g., cigarette smoking, alcohol and substance use and abuse, increased rates of suicide) while issues of youth gambling problems have been largely ignored. Only recently have health professionals, educators, and public policy makers acknowledged the need for the prevention of problem gambling. A review of the current literature found that most pathological gambling prevention programs lack a strong theoretical orientation and have been implemented without being empirically evaluated (Derevensky *et al.*, 2001). Nevertheless the harm reduction approach merits serious consideration as a preventative measure. There is a general assumption that while individual policies and programs may be helpful, they must be positioned within a more cohesive policy framework in order to be maximally effective. Governments that continue to reap the benefits of gambling revenues, either through taxes on corporate revenues or through state sponsored lottery corporations, should not take the issue of gambling lightly. Our youth remain particularly vulnerable to the lure and excitement of gambling and require our attention, concern, and efforts. This is an important social and public health policy issue that will continue to grow.

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