

Coping Strategies Employed by Adolescents with Gambling Problems

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Background: This study explored the relationship between coping styles, gambling behaviours and substance use amongst adolescents. **Method:** Five hundred and eighty-seven students, aged 12 to 17, volunteered to participate and completed all scales. Participants completed a gambling screen (DSM-IV-J), coping scale (CISS), and a questionnaire developed to assess types and patterns of gambling behaviours (GAQ). **Results:** The results suggest that those youths who gamble excessively exhibit coping styles that are more emotion based, avoidant, and distraction-oriented. **Conclusions:** The results suggest a need to teach high-risk youth more effective active coping strategies in order to minimise their potential for engaging in addictive behaviours. Such efforts should form a substantial part of school-based prevention initiatives.

Keywords: Coping and adaptive behaviours; gambling problems; adolescence

Introduction

There is ample evidence that gambling has become a popular leisure activity among today's youth who are engaging in a wide diversity of gambling activities (Derevensky, Gupta, & Dickson, in press; Jacobs, 2000; National Research Council, 1999). Similar to adults, most adolescents gamble responsibly, primarily for purposes of entertainment and recreation, and without experiencing serious problems. Nevertheless, there is a small but significant proportion of youth who gamble excessively and experience serious negative psychological, social, legal and financial costs (Derevensky et al., 2003a).

There is substantial reason to suggest that disordered gambling amongst youth, similar to other addictive behaviours, is a multidimensional condition involving bio-psycho-social determinants including a physiological predisposition, environmental stressors, social and familial influences, psychological processes, and individual personality characteristics (Derevensky et al., 2003b).

Despite the fact that the field of juvenile gambling is still in its infancy, there are a number of psychosocial correlates that have been associated with adolescent pathological gambling and the negative sequelae associated with excessive gambling (for comprehensive reviews see Derevensky et al., in press; Hardoon & Derevensky, 2002; Stinchfield & Winters, in press). Problem and pathological gambling amongst adolescents has been shown to result in increased delinquency and crime, disruption of familial relationships and decreased academic performance (Gupta & Derevensky, 1998; Wynne, Smith, & Jacobs, 1996). In addition, there is ample clinical evidence to suggest that these youth have poor coping and adaptive behaviours when faced with stressful situations or adversity (Gupta & Derevensky, 2000; Nower, Gupta, &

Derevensky, 2004). Yet, studies investigating the interplay between adolescent stress and psychopathology have demonstrated that stressful experiences alone are insufficient to explain negative mental health outcomes during adolescence (Compas, Orosan, & Grant, 1993). Rather, how one copes with adversity and stress seems to be the important mediator in reducing mental health problems.

Coping processes that are used in response to stressful experiences may be particularly important in understanding psychopathology during adolescence. Coping and adaptive behaviours are cognitive and behavioural strategies used to mediate specific internal and/or external demands. Moreover, such coping efforts have been divided into those intended to act directly on the stressor (*task-oriented* or *problem-focused coping*) and those intended to regulate emotional states associated with or resulting from stressful life events (*emotion-oriented coping*) (Endler & Parker, 1990; Folkman & Lazarus, 1985). Emotion-oriented coping includes strategies such as ruminating, daydreaming, and emotional responses to stress, while task-oriented coping refers to direct, active attempts at mediating stress and anxiety, either behaviourally or cognitively (Endler & Parker, 1990; Folkman & Lazarus, 1985).

While these coping efforts may be either *active* or *avoidant* (Ebata & Moos, 1991), there is considerable evidence that behaviours eliciting active coping, including problem solving and positive cognitions, result in more positive outcomes (Compas, Malcarne, & Fondacaro, 1988; Sandler, Tein, & West, 1994). In contrast, the use of avoidance and emotion-oriented coping strategies have been consistently linked to higher mental health problems, anxiety, somatic problems and depression in children and adolescents (Ebata & Moos, 1991; Endler & Parker, 1990; Sandler et al., 1994).

The role of coping in the development of gambling dependence has been speculated upon but not

empirically measured among youth. Blaszczynski and McConaghy (1989) have argued that pathological gambling can best be conceptualised as a maladaptive coping strategy used to deal with stress and/or depression. Taber, McCormick and Ramirez (1987) provided evidence, based on a retrospective study of 44 probable pathological gamblers, that depression and anxiety were higher in individuals who experienced severe life stressors than in those who experienced minor stressors. In 9 of the 10 individuals reporting severe life stressors, the stressors predated the onset of pathological gambling. Adding to this literature, McCormick (1994) examined the coping skills of 1129 adult patients in a substance abuse treatment facility. Patients with both a gambling and substance abuse problem differed in their coping skills from those with only a substance abuse problem. The comorbid substance abusing gamblers reported significantly more escape/avoidance coping strategies, *distancing* coping strategies and *confrontative* coping strategies that are consistent with a pattern of impulsive, avoidant behaviour.

It is important to note that current models of addiction relapse emphasise the importance of coping and suggest that individuals lacking effective coping resources to manage situational demands are at greater risk for returning to their addictive pattern of behaviour (Brown et al., 1995; Marlatt, 1985). Investigations examining adolescent relapse for substance abuse further support the significant role of effective coping strategies (Myers, Brown, & Mott, 1993).

If excessive gambling is in fact a form of maladaptive coping (Blaszczynski & McConaghy, 1989; Gupta & Derevensky, 2000), then adolescent pathological and problem gamblers need particular assistance in developing alternative, adaptive coping strategies. The current study seeks to extend our current knowledge and to empirically assess whether the coping strategies and styles employed by adolescent problem and pathological gamblers is in fact different. Such results will strongly impact our prevention initiatives.

Method

Participants

Participants included 587 adolescents (220 males, 367 females), ages 12–17; ages 12–13 ($N = 186$), 14–15 ($N = 191$), and 16–17 ($N = 210$). Adolescents were selected from four middle-class, English secondary schools in the greater Montreal region agreeing to participate in the study. Parental letters of consent were distributed and students willing to participate did so on a voluntary basis. The participants completed a self-administered battery of instruments assessing gambling behaviour, severity of gambling related problems, and coping styles and strategies.

Measures

Gambling Activities Questionnaire (GAQ) (Gupta & Derevensky, 1996). The GAQ assesses four general domains related to gambling behaviour: Descriptive information, including prevalence, types of activities, wagers, social milieu; cognitive perceptions (not reported here), including participants' perceptions of the amount of skill and luck involved in various gambling and non-gambling tasks (7-point Likert scale); familial

history, including parental gambling behaviour and substance use; and comorbidity with other addictive and delinquent behaviours. The questions within each section domain are discrete, analysed individually, and no cumulative scores are calculated.

Coping Inventory for Stressful Situations (CISS) (Endler & Parker, 1990). The CISS is a self-report measure designed to assess coping behaviours adolescents engage in when reacting to difficult, stressful, or upsetting situations. Questions include items such as 'schedule my time better', 'try to go to sleep', 'feel anxious about not being able to cope', 'get angry', 'see a movie', and 'work to understand the situation'. The scale utilises a 5-point Likert frequency scale ranging from 'not at all' to 'very much'. The CISS has 48 items, 16 items in each of the three subscales; task-oriented, emotion-oriented, and avoidance-oriented coping. The avoidance scale is further comprised of two subscales: distraction and social diversion. The normative mean score for each of the CISS subscales is 50, with a standard deviation of 10. The CISS has strong internal consistency (coefficient alphas for task, emotion, and avoidance subscales were .90, .87, and .85 for males, respectively; and .90, .88, and .83 for females, respectively).

DSM-IV-J (Fisher, 1992). This 12-item, 9 category instrument is a screen for pathological gambling during adolescence, modelled after the DSM-IV (APA, 1994) criteria for adult pathological gambling. Items endorsed in each of the 9 categories are given a score of 1, with a score of 4 or greater being the scoring criteria for probable pathological gambling. This instrument taps into the following dimensions associated with pathological gambling: progression and preoccupation, tolerance, withdrawal and loss of control, escape, chasing, lies and deception, illegal acts and family/school disruption. Fisher (1992), testing the utility of this screen with a population of young fruit machine players, concluded that the DSM IV-J is an effective discriminator of pathological gambling in adolescents. Further studies support its validity (Derevensky & Gupta, 2000).

Procedure

All measures were group administered to the students in classrooms and/or school cafeteria by several research assistants. Students were provided the directions for each instrument according to the test manual and participants were informed that their responses would remain anonymous and confidential. Teachers were not present during the administration of the questionnaires to ensure confidentiality and research assistants were present at all times to answer questions. Students required approximately 30 minutes to complete the instruments.

Results

Gambling classification

Based upon gambling frequency (GAQ) and the severity of gambling-related problems (DSM-IV-J) adolescents were grouped into one of four groups: Non-Gambler (NG) ($N = 119$) - those adolescents reporting not gambling during the past year; Social Gambler (SG) ($N = 417$) - adolescents reporting gambling during the past year and endorsing a maximum of two gambling-related problems on the DSM-IV-J (0, 1, or 2); Problem

Gambler (PG) ($N = 13$) - reporting gambling and endorsing three gambling related problems on the DSM-IV-J (score = 3); and Probable Pathological Gambler (PPG) ($N = 38$) - adolescents meeting the established criteria for pathological gambling (≥ 4 problems on the DSM-IV-J).

General findings pertaining to gambling behaviour

Of the total sample, 79.7% of adolescents reported having gambled during the past year, with 25.7% reportedly gambling at least once per week. The DSM-IV-J criteria for probable pathological gambling were met by 6.5% of the sample. Additionally, 3.9% of all adolescent gamblers reported having stolen money in order to gamble, whereas 26.3% of probable pathological gamblers reported having stolen money to finance their gambling activities.

Males were more likely to gamble than females, with 90% of males and 73% of females reporting having gambled in the past year, $\chi^2(1, N = 587) = 22.97, p < .0001$. Males (46%) were also twice as likely to gamble on a regular basis (weekly) than females (22.2%), $\chi^2(1, N = 466) = 29.45, p < .0001$. Further, gender differences are highly evident with respect to pathological gambling, with 12.7% of males and 2.7% of females meeting the criteria for pathological gambling using the DSM-IV-J, $\chi^2(1, N = 587) = 22.45, p < .0001$. Within the group of probable pathological gamblers, 2 of the 10 females (20.0%) and 8 of the 28 males (28.6%) reported stealing money for gambling purposes. A reliable chi-square analysis could not be performed due to a small cell size ($N = 2$).

Developmentally, rates of gambling involvement show some variability but were not statistically significant across age groups, with 74.7% of youth age 12-13, 79.6% of 14-15-year-olds, and 84.3% of 16-17-year-olds reporting having gambled in the past year, $\chi^2(2, N = 587) = 5.58, p > .05$. Prevalence rates of probable pathological gambling, based on the DSM-IV-J criteria, were 4.8% for 12-13-year-olds, 5.2% for 14-15-year-olds, and 9.2% for 16-17-year-olds, $\chi^2(2, N = 587) = 3.79, p > .05$. Stealing for gambling purposes was reported by 2.2% of 12-13-year-olds, 4.0% of 14-15-year-olds, and 5.1% of 16-17-year-old gamblers, $\chi^2(2, N = 454) = 1.78, p > .05$. Among those meeting the criteria for probable pathological gambling, stealing money for gambling purposes was reported by 11.1% of

12-13-year-olds, 30% of 14-15-year-olds, and 31.6% of 16-17-year-old students, $\chi^2(2, N = 38) = 1.41, p > .05$.

Clinical interpretation of the response patterns on the DSM-IV-J

An analysis of the items endorsed on the DSM-IV-J by the 38 probable pathological gamblers provides clinically useful information concerning the most frequently reported gambling-related problems by youth gamblers (Table 1). The most frequently endorsed item by the probable pathological gamblers on the DSM-IV-J refers to chasing gambling losses. Preoccupation with gambling activities, spending school lunch or bus money for gambling activities, and gambling in order to escape problems were also highly endorsed. Of particular interest is the finding that almost half of the probable pathological gamblers indicated having missed school for gambling purposes at some time.

Gambling and coping

In order to test the hypothesis that problem and probable pathological gamblers would obtain significantly higher levels of maladaptive coping than non-gamblers and social gamblers, a $4 \times 3 \times 2$ multivariate analysis of variance (MANOVA) with the Type III sequential adjustment for nonorthogonality was performed, including gambling group (gambling severity), grade, and gender as fixed variables and the CISS subscales as the dependent variable. The Box's M statistic was significant ($p < .0001$) thereby rejecting the null hypothesis that the observed covariance matrices of the dependent variables was equal across groups. Although this is an indication of a violation of the assumption of equality across groups, it has been argued that the Box's M test is overly sensitive and that the results of the MANOVA are valid in light of the high observed power coefficients (Stevens, 1996; Tabachnick & Fidell, 1996). In the case of a significant Box's M statistic, Tabachnick and Fidell (1996) recommend using the more conservative Pillai's criterion to evaluate multivariate significance in the situation of unequal N 's, which was significant for group ($p = .04$).

Group differences on the CISS: Gambling

Means and univariate analyses reveal a significant effect of group on three of the five CISS subscales:

Table 1. Responses endorsed to each DSM-IV-J item by probable pathological gamblers

Item on the DSM-IV-J	Endorsement rate
After spending money on gambling activities do you play again another day to try and win your money back (more than half the time)?	81.6%
Do you often find yourself thinking about gambling activities at odd times of the day and/or planning the next time you will play?	76.3%
In the past year have you spent your school dinner money, or money for bus fares, on gambling activities?	55.3%
Do you ever gamble as a way of escaping problems?	55.3%
Do you lie to your family or friends or hide how much you gamble?	52.6%
In the past year have you taken money from someone you live with, without their knowing, to gamble?	52.6%
Do you find that you need to spend more and more money on gambling activities?	52.6%
Do you become restless, tense, fed up, or bad tempered when trying to cut down or stop gambling?	47.4%
In the past year, have you missed school to participate in gambling experiences (5 times or more)?	44.7%
In the past year have you stolen money from outside the family, or shoplifted, to gamble?	34.2%
In the past year have you gone to someone for help with a serious money worry caused by participation in gambling?	28.9%

Table 2. Mean performance scores on the CISS across level of gambling involvement

CISS subscale	Non-gambler	Social gambler	Problem gambler	Probable pathological gambler	Univariate <i>F</i> (3, 536)
Task	50.22 (8.06)	49.60 (9.18)	47.62 (9.09)	49.41 (7.77)	0.98
Emotion	48.34 (10.95)	48.50 (10.54)	54.62 (8.43)	57.15 (10.90)	3.49*
Avoidance	46.84 (10.84)	49.01 (11.47)	50.85 (11.22)	58.44 (9.81)	4.29**
Social diversion	47.30 (10.73)	48.63 (10.22)	49.62 (10.55)	53.38 (9.45)	1.93
Distraction	47.09 (10.22)	49.36 (10.77)	51.23 (10.46)	59.06 (7.92)	5.27***

Note: For each of the CISS subscales $M = 50$, $SD = 10$. Values enclosed in the parentheses represent standard deviations.

* $p < .05$; ** $p < .01$; *** $p < .001$.

emotion, avoidance, and distraction (Table 2). Problem and probable pathological gamblers yielded the highest mean scores on the emotion, avoidance, and distraction subscales. Tukey HSD post hoc analyses indicate that probable pathological gamblers were found to score higher on emotion, avoidance, and distraction-oriented coping than non-gamblers and social gamblers. It is important to note that individuals in the probable pathological gambling group are slightly higher than the norm on these three subscales. Problem gamblers did not differ significantly from the non-gambler and social gambler groups on these three subscales. No significant main effect for gender or grade was found for the CISS subscales. As well, no significant gender \times group interaction or group \times grade \times gender interaction was found.

Discussion

A large number of adolescents (79.7%) were found to be taking part in gambling activities; a finding consistent with similar adolescent surveys (Gupta & Derevensky, 1998; Wynne et al., 1996). In addition, consistent with findings of previous research, males were more likely to gamble than females (90% vs. 73%), with a small but substantial number of adolescents (6.5%) meeting the criteria for pathological gambling. While somewhat higher than results previously reported in Quebec (Gupta & Derevensky, 1998), these findings are within the range reported by other researchers (National Research Council, 1999; Shaffer & Hall, 1996; Wynne et al., 1996). Youth aged 16–17 showed the highest rates of pathological gambling, with 9.2% meeting the DSM-IV-J criteria. This is probably due to their ease of accessibility, the legal age for all forms of province controlled gambling (e.g., lottery, Video Lottery Terminals (VLTs), casino) being 18 years. While it is noteworthy to mention that the rate of pathological gambling in the current study is slightly higher than the rate of 4.7% reported in a survey of Montreal adolescents (Gupta & Derevensky, 1998), given the widespread proliferation of electronic gaming machines such as VLTs and the availability of multiple gambling venues, the present findings tend to support the view that increased exposure to legalised forms of gambling have contributed to the increased rates of problem gambling (Jacobs, 2000). Nevertheless, the significance of this finding must be interpreted with caution given the small sample size of the current study.

The findings revealed that disordered gambling amongst adolescents is associated with a host of negative consequences. In particular, results suggest that

excessive gambling involvement leads adolescents towards similar problems experienced by adults, including large debts, financial difficulties, criminal behaviour, and use of illicit substances. Obtaining money to gamble tends to be a primary concern for adolescents who are regular gamblers. Approximately 30% of the adolescent probable pathological gamblers reported stealing money for gambling purposes, compared to 2% of social gamblers. The finding that over 80% of probable pathological gamblers chased their losses is worrisome given that such losses tend to perpetuate their gambling involvement, eventually leading to even more serious monetary problems.

As expected, problem and probable pathological gamblers are considerably more likely to drink alcohol, use illicit drugs, and smoke cigarettes than non-problem gamblers. These results are consistent with other researchers who found a high degree of comorbidity between pathological gambling and substance abuse disorders (e.g., Spunt et al., 1995; Winters & Anderson, 2000).

It is noteworthy to mention that the truancy rate of adolescents with severe gambling problems (44.7%) is much higher than the rate of 7.9% reported in an earlier survey of adolescents (Gupta & Derevensky, 1998). Another important finding is that over 75% of probable pathological gamblers reported being plagued by a preoccupation with planning their next gambling venture. Consequently, for these youth their academic success may be seriously jeopardised. Even while in class, many adolescent and young adult problem gamblers report having trouble focusing on academic tasks (Gupta & Derevensky, 2000).

The current finding that specific maladaptive coping styles are associated with excessive involvement in gambling helps in our understanding of youth problem gamblers. More specifically, probable pathological gamblers were found to use more emotion (i.e. rumination) and distraction-oriented coping skills than both non-gamblers and social gamblers. Such findings corroborate similar results suggesting both rumination coping (Higgins & Endler, 1995) and avoidance coping (Billings & Moos, 1981; Higgins & Endler, 1995; Menaghan, 1982) are maladaptive strategies for dealing with stress. Contrary to expectations, no differences in coping skills were noted between problem gamblers and either non-gamblers or social gamblers. In light of the fact that these youth do not meet the established criteria for pathological gambling, it is possible that their healthier coping styles may have protected them from falling into the patterns of addictive behaviour, despite their intensive involvement with gambling activities. No

gender or developmental differences were noted with respect to coping skills.

The findings suggest that coping patterns may mediate the relationship between several risk factors and the development of an addiction. In particular, it is suggested that among the individuals who are experiencing both physical and emotional distress, those who tend to respond to problematic situations by engaging in ruminative and distraction-orientated activities may be more likely to develop an addiction. On the other hand, individuals who approach daily problems and stressors in a more task-oriented manner may be shielded from the development of an addiction.

These results have serious implications for the development of adolescent prevention and treatment programmes and provide a fruitful avenue for future research. In particular, the results seem to suggest that preventive methods and treatment programmes should incorporate coping enhancement strategies designed to broaden the coping repertoire of adolescents. Particular attention should be paid toward teaching adolescents more appropriate strategies and means of dealing with stress related problems. Adolescents would clearly benefit from learning to utilise more task-oriented coping behaviours and less emotion or distraction-oriented coping behaviours. Several researchers have demonstrated that individuals with depressive symptomatology use more emotion-oriented coping behaviours than psychologically healthy individuals (Billings & Moos, 1984; Endler & Parker, 1990). Given that a number of researchers have reported the presence of depressive symptoms among adult gamblers (Becoña, Lorenzo, & Fuentes, 1996; Blaszczynski, McConaghy, & Franckova, 1990) and most recently also among adolescents (Gupta & Derevensky, 1998, 2000) and young adults (Nower et al., 2004), the coping strategies by which adolescents deal with their already existing depression may be crucial (Gupta & Derevensky, 1998, 2000) as a negative relationship between depressive symptomatology and task-oriented coping has been reported (Mitchell & Hodson, 1983).

Several methodological limitations of the present study should be noted. First, since this study is cross-sectional, it supports no inferences about causality. Although it is plausible that specific maladaptive coping skills lead adolescents to gambling involvement, it is also likely that continuing gambling involvement impedes the development and implementation of adaptive coping strategies. As such, future research should take the form of longitudinal studies to illuminate the causal connections between coping styles and gambling behaviour amongst adolescents. The fact that all instruments included self-report measures raises issues of the reliability of the results. Future research should seek to obtain corroborating information and multiple outcome measures where possible.

Adolescent gambling involvement represents a major public health problem that continues to pervade our society at an increasingly alarming rate without showing signs of abating. Although our understanding of the factors underlying youth gambling problems remains in its infancy, considerable evidence indicates that it is a multidimensional disorder with several psychosocial and environmental correlates. Additional research is needed to better understand how specific risk factors

interact to predispose an individual to an addiction and to more clearly identify those protective factors thought to diminish the risk of serious gambling and gambling-related problems.

Acknowledgements

This study was supported by a research grant from the Social Science Humanities Research Council of Canada awarded to Jeffrey Derevensky.

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