

Evaluation of a Prevention Program for Pathological Gambling Among Adolescents

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Many adolescents gamble, some gamble regularly and 2% to 5% suffer from pathological gambling (Jacobs, 1989; Ladouceur & Mireault, 1988; Lesieur & Klein, 1987). This study evaluated the efficacy of a pathological gambling prevention program conducted in five high schools in the Quebec City area. Based on an alcohol prevention program (Rhodes & Jason, 1988), it included the following components: the legality of gambling, the commercial nature of the activity, automatic gambling behaviors, pathological gambling and coping skills. Nine junior and senior classes participated in the program (N = 134) and nine equivalent classes served as a control group (N = 155). It was predicted that experimental subjects would increase their knowledge of gambling and pathological gambling, decrease their frequency of gambling and change their attitudes toward gambling. A six month follow-up confirmed the maintenance of newly acquired information toward gambling. Results confirmed the efficacy of the program in improving knowledge and skills for controlling gambling behavior at the end of treatment. The clinical implications of prevention programs for pathological gambling are discussed.

KEY WORDS: Evaluation; gambling; adolescents.

Researchers have recently evaluated the prevalence of gambling behavior among adolescents. Jacobs (1989) reported that 5% met the DSM-III criteria and that 8% gambled at least once a week. The highest prevalence rates were found in New Jersey: Lesieur and Klein (1987) reported that 32% of the 892 students surveyed gambled at least once a

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week and that 5.7% were pathological gamblers. In Québec, Ladouceur and Mireault (1988) identified 1.7% as pathological gamblers and 24% as regular gamblers in a study of 1,612 high school students. Arcuri, Lester and O'Smith (1985) reported that 64% of 332 Atlantic City high school students had participated in casino gambling in the last year. This result is surprising given that this population was under the legal age of 21 years for gambling in casinos! According to Lesieur and Klein (1987), adolescents gamble mainly on card games (49%), in casinos (46%), and on sport events or on lotteries (45%). Ladouceur and Mireault (1988) noted that in Quebec, the large majority of adolescents gamble on lotteries (60%), sport events (45%), and on card games (36%). In England, adolescents prefer slot machines (81%) followed by card games (53%) (Ide-Smith & Lea, 1988). The preferred gambling activities are the ones most available and legal constraints do not hinder young people from gambling.

These data demonstrate that gambling behaviors are already present in a large proportion of adolescents. More disturbing is the prevalence of pathological gambling at this age, which is higher than among adults. Although pathological gambling is an addiction similar to alcoholism, it was not officially recognized until 1980. Gamblers were defined as individuals who suffer from "a chronic and progressive failure to resist impulses to gamble, and gambling behavior that compromises, disrupts or damages personal, family or vocational pursuits" (APA, 1987, p. 324). Volberg and Steadman (1988) reported 2.6% of adult pathological gambler in New Jersey versus 5% among adolescents (Jacobs, 1989). Ladouceur (1991) found 1.4% pathological gamblers out of 1000 adult respondents in Québec, versus 1.7% among an adolescent population (Ladouceur and Mireault, 1988). There is a consensus among clinicians that practically all pathological gamblers began gambling during adolescence. Dell, Ruzicka and Palasi (1981) reported that 37% started betting before the age of 10, 47% between 11 and 18 and only 14% after the age of 18. A mean age of 13 years was reported for the first gambling experience. Adolescence is a critical period for the development of gambling behavior. These data suggest that it is imperative to develop prevention programs for pathological gambling among adolescents.

Existing prevention programs for adolescents suggest that school appears to be the best environment (Bond & Compas, 1989; Reinherz, 1982). Wodarski (1989) suggested that preventive interventions among adolescents should include two components: the transfer of relevant information and the development of skills to cope with high risk situations. To date, no prevention program exists for gambling. A first step is the development of knowledge and skills for controlling gambling behavior. Ladouceur and

Mireault (1988) found that many adolescents lacked information about gambling and problems related to pathological gambling. The present program, adapted from Rhodes and Jason (1988), includes information and strategies for coping with gambling behavior. It was predicted that students participating in the program would increase their knowledge of gambling and pathological gambling, would decrease the amount of money gambled and the frequency of gambling, and would change their attitudes towards gambling.

METHOD

Subjects

Five schools were randomly selected in the Quebec City area (a little more than half million population). Five junior and four senior classes were included in the experimental group. Nine matched classes served as a control group. Classes were chosen according to their schedule to participate in the study. A final sample of 289 subjects completed the study at posttest and follow up (134 experimental and 155 control subjects). The mean age was 16 years. Two research assistants with three years of experience in the psychology of gambling were responsible of the whole program.

Procedure

The program included three 75 minute sessions conducted over a 3 week period. Evaluations were conducted at the beginning of treatment, at the end, and at the six month follow-up. Control subjects were only submitted to the evaluations. Small group activities, video tapes and quizzes were used.

Content of the Program

The program was divided into six units:

1-Overview of the gambling scene and discussions of its legal aspects: The program leader explained the objectives of the program, specified legal and illegal gambling activities in Quebec and the potential consequences of gambling. During discussion, the program leader solicited the opinion of the students and corrected their misconceptions.

2-The business of gambling: This unit demonstrated that gambling is a business that survives to the detriment of gamblers. In small groups, the participants were required to invent a gambling activity. The discussion emphasized how gambling activities are beneficial to the person who conducted or owned the game.

3-Automatic behaviors: This unit focused on the constant increase in money wagered as the frequency of gambling increases (Ladouceur, Tourigny & Mayrand, 1986; Ladouceur & Gaboury, 1988). In addition, the search for strategies to beat the odds, and the predominance of irrational beliefs held by the gambler. Earlier studies have clearly shown that more than 80% of subjects' verbalizations during gambling are erroneous and develop an illusory control over the game (Gaboury & Ladouceur, 1989). Participants were shown a video-tape of a gambler verbalizing his self-statements while playing video-poker. A discussion was held on automatic behaviors, their impact on gambling behavior and the importance of identifying them for subsequent modification.

4-Pathological gambling: This version presented different dimensions of pathological gambling and its consequences. The participants watched a video-tape describing a group of pathological gamblers relating their personal experiences. The experimenter then explained the common characteristics of pathological gamblers, the diagnostic criteria and the consequences of this disorder.

5-Control strategies: This module outlined the strategies available for controlling gambling behavior. The program leader identified motivation to gamble and modeled coping skills to avoid gambling.

6-Quiz: Information presented during the program was summarized while the negative consequences of excessive gambling were clearly delineated. In small groups, the students participated in a quiz on gambling related questions.

Dependent Variables

A questionnaire was used to assess participants' gambling behaviors (frequency of gambling, types of gambling, amount of money bet, presence of DSM-III-R diagnostic criteria for pathological gambling, propensity of those around them toward gambling), their knowledge about gambling and their attitudes (positive or negative appraisal of certain beliefs related to gambling). The diagnostic criteria were based on the South Oaks Gambling Screen developed and used by Lesieur and Klein (1987) and proved to be a reliable and valid instrument in our earlier work (Ladouceur, 1991).

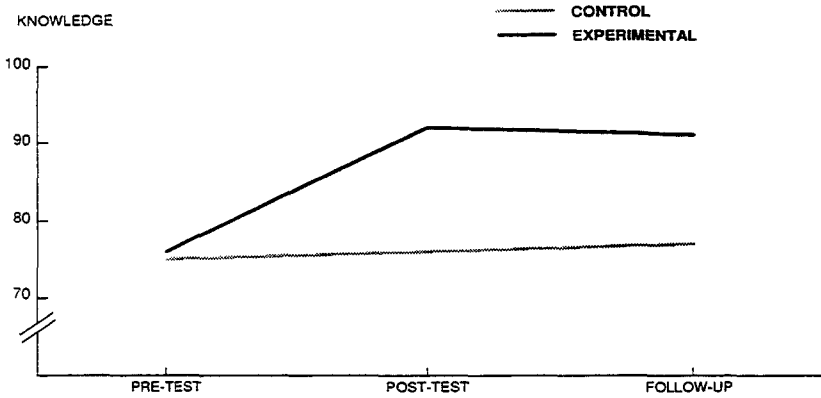


Fig. 1. Knowledge about gambling reported at pretest, posttest, and follow-up.

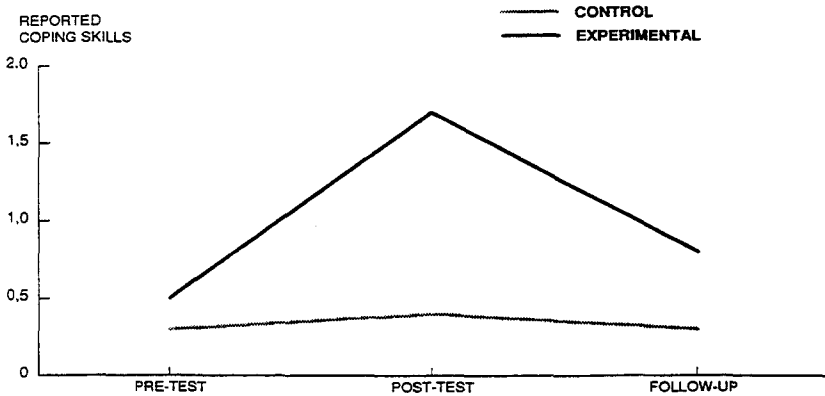


Fig. 2. Number of coping skills reported at pretest, posttest, and follow-up.

RESULTS

The descriptive statistics indicated that 63.5% of the participants had gambled at least once in the last six months and 21% reported gambling at least once a week. The most popular activities were lotteries (48%), card games (41%) and betting on sporting events (23%). Subjects spent an average of \$8.50 per month on gambling. Important sex differences were found: males spent an average of \$12.94 per month while females spent an average of \$3.33 per month. In reference to DSM-III-R criteria, 28 students (only one female), or 6.7% of the sample were pathological gamblers.

A 2 (group) \times 3 (assessment time) analysis of variance for repeated measures (ANOVA) revealed that experimental subjects improved their knowledge toward gambling compared to the control group ($F(2, 5) = 23.5$, $p < .05$; see Figure 1). This improvement was maintained at the 6 month follow-up. Also, the experimental group reported significantly more skills for coping with gambling than the control group ($F(2, 5) = 67.7$, $p < .01$). Although the experimental group performed better than the control group at posttest, a Tukey test revealed that this difference was not significant at follow-up (see Figure 2). The analyses of variance conducted on gambling behavior and attitude toward gambling were non-significant. Finally, 77% of the students evaluated the program as interesting or very interesting. For 52% of the participants, the most informative element of the program was the "gambling can become excessive or pathological and cause serious problems; that gambling can become a disease or an addiction."

DISCUSSION

The frequency of gambling behavior found in the present sample is similar to that reported by Ladouceur and Mireault (1988). However, the gambling preferences differed slightly. Lotteries remained in first place, with cards coming a close second followed by betting on sport events. Among those who gamble at least once per week, video-poker was third in order of preference. The availability of video-poker machines in Quebec has increased in the last few years. This may explain its frequency as a gambling activity with 5% of students playing the machines at least once per week. This phenomenon is similar to the popular "Fruit Machines" in England with which young gamblers are becoming compulsive (see Moody, 1989). Also, the prevalence of pathological gambling was significantly higher than what was found earlier (see Ladouceur & Mireault, 1988). Two factors may explain this difference. First, while the DSM-III criteria were used in the previous study, the present one is based on DSM-III-R. Second, the availability of video-poker machines is much higher now than five years ago. This change in the gambling scene is certainly responsible, at least in part, for the increased in the prevalence of pathological gambling among adolescents.

The prevention program improved knowledge about gambling and coping skills. Unfortunately, skills in coping with gambling were not maintained at follow-up. Without intensive practice and feedback, such skills may be subject to extinction. Furthermore, the program did not significantly affect gambling behavior or attitudes. Increased knowledge, therefore, is not sufficient to modify behavior and attitudes, at least not in the short

term. That is not to say that the transfer of information was not beneficial. The students appreciated the program and were surprised to learn that gambling can become an addiction. Many adult pathological gamblers in treatment reported never having imagined the potential problems before experiencing them. While difficult to assess, it is possible that improving knowledge about gambling could have significant long term effects. Being sensitized to the problem and the steps to take, a young person may seek help sooner if they start having problems in controlling their gambling activities or if they become aware of a similar problem among family members or friends.

The present prevention program could be improved in the following ways. The link between the information presented and the behavioral consequences could be made more clearly and explicitly by increasing subject participation. In this way, the implication of the teacher could have an impact. Such prevention efforts could be integrated in prevention programs for alcohol and drug abuse.

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