

The “Light Drugs” of Gambling?

Non-problematic Gambling Activities of Pathological Gamblers

Abstract

Our aim was to investigate whether harmless gambling activities exist for pathological gamblers. A total of 169 recently quit pathological gamblers were recruited by media announcements. Respondents were asked at baseline to report any gambling activities not causing them problems as well as those causing problems. The gambling activities were categorized as follows: lottery, scratch tickets, bingo, betting or games card games with friends/family, horse racing, raffle, casino games, and video lottery terminals. Only a small proportion (16%) of respondents reported not having any non-problematic gambling activities, 45% reported one, 28% two, 10% three, and 1% four non-problematic activities. Further, involvement in most of these activities were unrelated to both baseline and follow-up gambling problem severity (NODS, SOGS), depression level (CES-D), frequency of gambling, and extent of gambling losses. However, some exceptions were observed in case of involvement in casino (higher NODS and SOGS scores and gambling-related losses) and bingo games (higher gambling-related losses). These findings provide some support for the idea that pathological gamblers who wish to give up harmful gambling can continue involvement in some types of gambling and that this is a 'good enough' goal for pathological gamblers; complete abstinence may not be necessary.

Keywords: pathological gambling, abstinence goals, controlled gambling, harmfulness of gambling, longitudinal design, treatment

Introduction

When evaluating the effectiveness of treatment programs for pathological gamblers, defining success is a crucial but difficult task. Should only complete abstinence be considered as success or controlled gambling, too? Which treatment goals contribute to better outcomes? Although the abstinence versus moderation dilemma is well researched in the substance addiction field (Finney & Moos, 2006; Foxx, Brown, & Katz, 1981; Glasgow, Morray, & Lichtenstein, 1989; Hodgins, Leigh, Milne, & Gerrish, 1997; King & Tucker, 2000; Lozano, Stephens, & Roffman, 2006), much less is known about gambling in this regard.

While the abstinence-based treatment approach is still the most common among gambling treatment programs, an increasing number of experts (Brown, 1988; Dickerson & Weeks, 1979; Ladouceur, 2005; Rankin, 1982) and a growing body of empirical research (Blaszczynski, McConaghy, & Frankova, 1991; Dowling & Smith, 2007; Dowling, Smith, & Thomas, 2009; Ladouceur, Lachance, & Fournier, 2009) suggest that controlled gambling is a realistic alternative to complete abstinence. Accepting this approach, however, requires the comprehensive examination of what types and intensity of gambling might be seen as adaptive or functional for (problem) gamblers.

An understanding of the riskiness or harmfulness of different gambling activities can also help policy makers to formulate responsible regulatory decisions regarding the prevention of gambling-related harms. Similar to chemical substances with greater addictive potential, it seems reasonable to prohibit or restrict forms of gambling inherently more harmful, that is those gambling activities having the strongest dependence- and relapse-provoking potential (Williams, West, & Simpson, 2012).

When trying to evaluate the hazardousness of different gambling activities, previous studies have used an epidemiological approach by (1) either examining the occurrence of the given gambling type among pathological gamblers (versus in the general population) or (2) examining the ratio of pathological gamblers among those involved in the given activity (Binde, 2011). The results of these investigations are instructive to policy makers concerning effective regulation of different types of gambling (Williams et al., 2012); however, they are less helpful for pathological gamblers and clinical professionals in helping them to decide whether to choose an abstinence- or a moderation-based goal to eliminate the harms of gambling, and if the latter what should it exactly mean.

In the alcohol field, abstinence is clearly defined as complete cessation of all forms of alcohol. Moderation goals involve some consumption of alcohol. With other drug treatment, abstinence is typically defined as complete cessation of all psychoactive substances, although the use of psychoactive prescription medications or tobacco is sometimes permissible. In the gambling field, there is less consensus. Gamblers Anonymous prescribes strict abstinence from all forms of gambling (Sumitra & Miller, 2005). Some treatment providers recommend, at minimum, cessation of problematic forms of gambling with close monitoring of involvement in non-problematic forms. Abstinence, in these cases, is defined by gambling type and technically allows some controlled gambling. Some programs allow participants to reduce their involvement in types of gambling that have caused them problems to non-problematic levels (Ladouceur, 2005; Robson, Edwards, Smith, & Colman, 2002).

Although controlled gambling may provide an alternative to those with less severe gambling problems and to those who are reluctant to consider complete abstinence, moderation as a treatment or self-help concept raises further questions to be answered. It should be clarified,

for instance, whether controlled gambling is a question of quantity or rather quality? Are there gambling activities that should be eliminated completely by any means because of their riskiness while others are relatively easy-to-control? To the best of our knowledge, to date no study has investigated empirically whether pathological gamblers who have recently quit their problematic gambling are capable of engaging in other forms of gambling without negative consequences.

Secondary analyses were conducted on a study of relapse prevention among pathological gamblers who had recently “quit” gambling (Hodgins, Currie, el-Guebaly, & Diskin, 2007).

Although participants were recruited because they perceived themselves as having quit gambling, upon more detailed assessment many were continuing to gamble on some activities that they perceived as non-problematic. Therefore, the primary aim of the present study was to investigate, in a longitudinal design, whether gambling activities perceived as non-problematic can be indeed harmless for recently quit pathological gamblers as measured by widely accepted indicators of gambling pathology and general mental health. Does involvement in gambling activities that are perceived as harmless compromise overall outcome for people wanting to quit or to maintain remission from pathological gambling? Our secondary goal was to observe whether any trend emerged concerning the perception of different gambling activities as problematic or non-problematic.

Methods

Sample and procedure

The present data derive from a previous study aiming to investigate the effectiveness of extended relapse prevention bibliotherapy to problem gamblers (Hodgins et al., 2007). The results of the previous analyses showed that despite the general improvement of the whole sample during the one-year follow-up period, there was no evidence that receiving periodic relapse-prevention

booklets led to improved outcomes on any of the outcome variables compared to those not receiving this kind of support.

When recruiting the sample, media announcements (press releases, paid advertisements, flyers) were employed to involve persons who had recently quit gambling and who were interested in receiving relapse prevention materials through the mail. Both urban and rural areas were targeted across Canada. Interested individuals called a toll-free number and were provided with information about the study by a research assistant. Inclusion criteria were as follows: over age 17, met DSM-IV lifetime criteria for pathological gambling, the goal of quitting at least problematic gambling, no gambling for a minimum of two weeks (despite access to money and gambling), and no involvement in treatment or Gamblers Anonymous at study baseline.

Altogether 227 inquiries were made by pathological gamblers over a one-year recruitment period. Sixty-one individuals were not eligible for the study, most often due to current treatment involvement (24%) or insufficient length of abstinence (18%). The final sample size of the study was 169; Table 1 presents the participants' demographic and gambling characteristics.

Both initial and follow-up telephone assessments were conducted by a research assistant. Interviews were designed to be as brief as possible in order to minimize the research contact with participants. Follow-up assessments were conducted 6 and 12 months after the initial assessment. The follow-up rate was 86% at 6 months and 84% at 12 months. No differences were found in demographic or gambling variables between those followed and lost (Hodgins & Makarchuk, 2003).

Table 1 about here

Instruments

Sociodemographic characteristics (gender, age, educational level, marital and employment status) and several simple indicators of gambling involvement were assessed. These included the length of problem gambling, length of abstinence, type(s) of gambling causing problems before quitting ('What types of gambling are causing you problems?'), gambling activities perceived as non-problematic ('Types of gambling not causing problems'), number of days gambled, and amount of money spent on gambling. Gambling frequency and expenditure were assessed using a timeline followback procedure (Hodgins & Makarchuk, 2003). At baseline, frequency and expenditure were assessed for the two months prior to when the participant quit gambling and were summarized as a monthly average. Similarly, at the 6 and 12 month follow-ups, gambling was assessed for each month since the last assessment. Monthly average frequency and expenditure values were calculated for months 3 to 6, 7 to 9 and 10 to 12 (Hodgins & Makarchuk, 2003).

The more complex indicators included two questionnaires, namely the National Opinion Research Center DSM Screen for Gambling Problems (NODS, Gerstein et al., 1999; Hodgins, 2004) and the South Oaks Gambling Screen (SOGS, Lesieur & Blume, 1987; Stinchfield, 2002). The NODS showed suboptimal internal consistency at baseline but had an adequate alpha-value at the one-year follow-up (Cronbach's alphas of .58 and .72, respectively), while for the SOGS alpha values were satisfactory for both of these time points (.71 and .89, respectively). Finally, general mental health of participants was measured by the Center for Epidemiological Studies Depression Scale (CES-D, Radloff, 1977), which had very good internal consistency in the present sample (an alpha value of .94 at both baseline and one-year follow-up). These questionnaires were administered only at baseline and at the one-year follow-up assessment.

Analyses

First, participant responses concerning gambling types, both problematic and non-problematic, were recoded subsequently to form interpretable categories with an acceptable sample size. The following eight categories were created from the original answers: lottery (e.g., 'lotto', 'sports select', '649'), scratch tickets, bingo, betting and card games with friends or family members (e.g., 'betting', 'games with friends', 'pool games'), horse racing, raffle, casino (e.g., 'slot machines', 'Las Vegas', 'keno', 'casino'), and video lottery terminals. The complete coding table with all the original answers and the final categories is available as supplemental online material for this article. Besides those expressing involvement in a certain gambling activity (yes or no), a further, aggregated dichotomous variable was also created assigning a value to each participant based on whether (s)he reported any non-problematic activities or not (zero or some). Finally, since the distribution of the variable expressing gambling-related financial losses was strongly skewed, it was log-transformed prior to analyses. However, when describing the results we used the original, non-transformed data for better interpretability.

Basic descriptive statistics were used to evaluate the frequency distribution of different gambling types and the general linear model procedure was used to investigate, using each gambling activity as an independent variable in a separate model, whether involvement in a certain activity perceived as non-problematic predicted the outcome variables (number of days gambled, money spent on gambling, NODS, SOGS, and CES-D scores). Participants who reported a given type of non-problematic gambling activity were compared to those who did not report any kind of non-problematic gambling (n=27). Since gender, age, and educational attainment were not independent from the main independent and the outcome variables, these sociodemographic characteristics were controlled throughout the multivariate analyses. Eta

squared values were calculated to express effect size. When conducting the analyses regarding the follow-up data, baseline values of the dependent variable were also controlled for in each case (e.g., for baseline SOGS score when investigating if scratch ticket use predicts follow-up SOGS score).

Results

Frequency of reported problematic and non-problematic gambling activities

Concerning participation in non-problematic gambling activities, our data show that involvement in types of gambling perceived as harmless is common, even among those with the stated goal of wanting to quit gambling. Only 16% (n=27) of our sample reported not having any sort of gambling involvement, while 45% (n=76) of them reported involvement in one, 28% (n=48) in two, 10% (n=17) in three, and 0.6% (n=1) in four gambling activities perceived as non-problematic.

When examining the different categories of gambling activities in terms of their perception by the participants as problematic or non-problematic, the results revealed that most categories (seven out of eight) were reported both as problematic and as non-problematic (by different persons). As Figure 1 shows, the only exception was the use of video lottery terminals, which was only mentioned as a problem type (and was reported by 81% of the sample as a problem before quitting). However, even concerning the other activities, a relatively strong pattern of convergence emerged in the responses whether a given activity was reported as either harmful or harmless. That is, casino games were generally seen as harmful, while the other gambling activities as harmless with horse racing in the middle, in which case the opinions were quite balanced.

Figure 1 about here

Relationships with gambling indicators at baseline

No differences were found on any of our outcome measures at baseline between those who reported some (any types of) non-problematic gambling activities versus those who did not report any non-problematic gambling activities. Among the specific gambling types, only casino activities perceived as non-problematic were significantly related to any of the outcome measures at baseline; namely, those who reported involvement in casino games had higher SOGS scores ($F=3.99$, $p=.054$, $\eta^2=.114$, $M_{\text{estimated marginal}}$: 13.47 vs. 10.69). Every other indicator of non-problematic gambling – playing lottery, scratch tickets, bingo, card games with friends; involvement in horse racing and raffle tickets use – were unrelated with all of the outcome variables.

Relationships with the outcome variables at follow-up

Again, no difference was found on any of our outcome measures at any of the follow-up measurement points between those who reported some non-problematic gambling activities versus those who did not report any. In addition, no difference was observed between those who reported lottery, scratch or raffle ticket use, games with friends or family members, and horse racing versus those who did not report any non-problematic gambling activities. However, bingo use was significantly related with higher gambling-associated financial losses at one year follow-up ($F=4.47$, $p=.040$, $\eta^2=.092$, $M=-\$375$, $SD=561.6$ vs. $M=-\$63.9$, $SD=148.1$). Further, both NODS ($F=6.96$, $p=.014$, $\eta^2=.211$, $M_{\text{estimated marginal}}$: 6.70 vs. 4.0) and SOGS ($F=7.42$, $p=.012$, $\eta^2=.229$, $M_{\text{estimated marginal}}$: 10.18 vs. 5.61) scores were higher at 12-month follow-up among those who reported involvement in casino games, perceived as a non-problematic gambling activity.

Finally, those involved in casino games also had higher gambling losses at the six-month follow-up ($F=4.54$, $p=.042$, $\eta^2=.144$, $M=-\$3,049.4$, $SD=6,420.2$ vs. $M=-\$1,382.3$, $SD=4,140.1$).

Discussion

The primary aim of the present study was to shed light on the question of whether abstinence from all types of gambling is more beneficial for quit pathological gamblers than controlled gambling. Specifically, we investigated if involvement in gambling activities perceived as non-problematic was indicative of poorer clinical outcomes. Our results, which were derived from the prospective investigation of 169 recently quit pathological gamblers, demonstrated that involvement in gambling activities perceived as non-problematic by the participants generally did not predict worse outcomes as assessed by widely used gambling severity and depression scales, and time and money spent on gambling.

The only exceptions to the above findings were with respect to bingo and casino games. Concerning the first gambling category, it is noteworthy that playing bingo predicted only one out of the 14 investigated outcome variables (amount of money spent on gambling in the last 3 months of the one-year follow-up period). In contrast, more indicators of harmful gambling were already significantly related to the involvement in casino activities, which is consistent with previous findings indicating that these games are often strongly connected to a pathological level of gambling (Rönnerberg et al., 1999; Wardle et al., 2007; Welte, Barnes, Wieczorek, Tidwell, & Hoffman, 2007; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2004; Wiebe, Cox, & Falkowski-Ham, 2003).

The secondary aim of this study was to examine trends in the perception of gambling activities as problematic or non-problematic. The fact that gambling activities perceived as non-problematic by some were viewed as a problem source by other pathological gamblers seems to

support the idea that the gambling activities examined here are not necessarily inherently harmless or harmful. They can be both harmful and harmless at the individual level and the pathological gamblers participating in the present study usually seemed to be capable of accurately deciding whether a given behaviour was problematic for them or not. That is, our results also suggested that reports of non-problematic gambling activities from pathological gamblers cannot be seen merely as signs of poor insight and lack of acknowledgment of problems. However, it is worth noting that this inference cannot not be generalized to all problem gamblers since our respondents were gamblers who were motivated enough to successfully quit pathological gambling. Other gamblers, being in other stages of change (Hodgins, 2001; Petry, 2005) and having less self-awareness, might be less conscious about the harmfulness of their gambling activities.

Another important aspect of examining the harmfulness of gambling activities lies at the societal or policy level. Although we have argued for individual differences with respect to whether a certain type of gambling is harmful or not, when considering possible community level implications of our results, it is important to be mindful of the convergence found in the perceptions of harm for each gambling type. For most gambling activities, there was general consensus among participants about whether it was problem causing (i.e., video lottery terminals, casino) or non-problematic (i.e., playing lottery, scratch tickets, bingo, games with family members or friends, and raffle). The exception was horse racing, whereby the reports were relatively balanced for both labels. These results are consistent with the findings of a recent review of epidemiological studies, which reported that casino games and electronic gambling machine use have the strongest connection with pathological gambling, whereas different kinds of lotteries have the weakest connection, and horse racing and other kinds of sport betting were

in the middle (Binde, 2011). From this point of view, our results provide support for policy recommendations that suggest the limitation of availability and addictive features of electronic gambling machines and casino games (Williams et al., 2012).

Limitations of the present study should also be noted. First, although the overall sample size in this investigation was relatively large according to the standards of the gambling field, the number of participants was low in many of our analyses of separate gambling activities (e.g., casino activities were reported only by nine people as non-problematic), which makes difficult to show less obvious trends. When conducting the *a posteriori* categorization of the gambling types, obtaining appropriate sample sizes per category was a main goal, which might have resulted in questionable formulation of categories (e.g., hockey pool was coded as 'betting or card games with friends or family' although it would also have been plausible to combine them with horse racing under the term of 'sports betting').

Further, different types of gambling activities were reported only at baseline. Thus, we cannot be sure whether the involvement in these reported activities was constant, increasing, decreasing or variable throughout the follow-up period. In addition, participants were not asked about the intensity of their separate gambling activities. That is, it also cannot be known from our data how much of the negative outcomes of gambling (cf. Bingo and casino games) could be attributable to the intensity and not the type of gambling activity. It also should be mentioned that although the 12-month time lag is commonly applied in follow-up studies, this time period is not long enough to draw conclusions on the long-term effects of controlled gambling. We also do not have information whether our respondents received any treatment during the follow-up period, which might also be an important confounder. It should also be noted that the low internal consistency of the NODS at baseline limits the reliability of the data concerning

gambling involvement as measured by this instrument. These limitations suggest that the present study should be viewed as a preliminary report on non-problematic gambling activities of recovering pathological gamblers.

Although with the restriction that our results are based on quit pathological gamblers, we can conclude that the findings of the present study provide some support for the idea that pathological gamblers who wish to quit (or intend to remain in remission) can continue involvement in some types of gambling. Although the support from family members or financial matters among other factors might also influence the adequate choice of treatment goals, our results seem to suggest that eliminating problem causing gambling activities might be a 'good enough' goal for pathological gamblers; complete abstinence from all gambling activities is not necessary. If confirmed by further studies, this characteristic of pathological gambling would be an attribute that distinguishes it from the substance-related disorders of the addiction spectrum. In addition, our results also suggest that limiting the availability of casino games and electronic gambling machines, increasing public awareness of the risks associated with these types of gambling activities, and developing moderation-focused treatments that specifically target these problematic types of activities might be useful tools to decrease the harms pathological gambling can cause to individuals, their surroundings and society as a whole.

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Table 1. Demographic and gambling characteristics of the sample (N=169)

| | M (SD) / N (%) |
|--------------------------------------|----------------|
| Gender | |
| Male | 98 (58.0) |
| Female | 71 (42.0) |
| Age | 41.7 (10.3) |
| Marital status | |
| Never married | 28 (16.6) |
| Married or common-law | 93 (55.0) |
| Divorced/separated | 44 (27.6) |
| Widowed | 4 (2.4) |
| Years of education after high school | 2.1 (2.4) |
| Employment Status | |
| Full-time | 118 (69.8) |
| Part-time | 20 (11.8) |
| Unemployed/disability/retired | 27 (16.0) |
| Homemaker | 3 (1.8) |
| Student | 1 (0.6) |
| Length of problem gambling (months) | 94.5 (91.8) |
| Length of abstinence (days) | 54.0 (167.4) |
| NODS – baseline | 7.9 (1.8) |
| SOGS – baseline | 11.3 (3.3) |
| CES-D – baseline | 41.6 (16.0) |

| | |
|---|-------------------|
| Number of days gambled per month – baseline | 9.0 (7.6) |
| Money (in CAD) spent on gambling per month – baseline | 1,959.6 (3,228.3) |
| NODS – 1-year follow-up | 4.6 (3.1) |
| SOGS – 1-year follow-up | 7.4 (4.8) |
| CES-D – 1-year follow-up | 34.6 (14.0) |
| Number of days gambled per month – 1-year follow-up | 7.9 (14.1) |
| Money (in CAD) spent on gambling per month – 1-year follow-up | 2,137.5 (6,842.8) |

NODS=National Opinion Research Center DSM Screen for Gambling Problems; SOGS=South Oaks Gambling Screen; CES-D=Center for Epidemiological Studies Depression Scale; at baseline, number of days gambled and money spent on gambling as average values refer to a two-month period prior quitting gambling, while at follow-up, they refer to a 3-month period before the one-year assessment. The original source of these data is the article published by Hodgins and his colleagues (2007).

Figure 1. Proportion of participants reporting gambling types as problematic and non-problematic activities (N=169)

